

# Ideopolis: Knowledge City Region

## Dublin Case Study

Dr Brendan Williams and Dr Declan Redmond



***“A visitor to Dublin, so lively and cosmopolitan today, would find it hard to believe that only a few decades ago it was gloomy and depressed.”***

The Economist



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### 1. Towards a Knowledge City in Dublin: The Evolution of Dublin and its Economic Role

#### Introduction

The city of Dublin has experienced rapid growth over the last 15 years, much of it based on knowledge-intensive industries. This report examines the growth of Dublin and assesses the progress Dublin has made towards becoming a 'knowledge city'. It argues that Dublin has made substantial strides, and is now working to manage the consequences of the economic and physical growth of the city. The report also discusses the impact of Irish national policy on Dublin, and suggests that strong regional policy in Dublin is vital for the growth of the nation.

The Work Foundation commissioned Brendan Williams and Declan Redmond of the Department of Geography at University College Dublin to write this report. The research and interviews upon which it is based

include ongoing work for Irish government departments and specific EU projects on Economic competitiveness and spatial distribution of development activity carried out over the period 2000-2005.

Section 1 examines in brief the evolution of Dublin's economic structure. Section 2 focuses in detail on the development of policy with respect to the creation of a knowledge economy. Section 3 analyses some of the main problems that Dublin faces with regard to urban management and the provision of key infrastructure. Section 4 examines some of the key quality of life issues that face the capital city. Section 5 reflects on some of the key issues for the future of Dublin with regard to achieving a knowledge city with a high quality of life.

#### About the Ideopolis project

The Work Foundation conducted a year-long research project looking at the concept of the Ideopolis – a sustainable knowledge city that drives growth in the wider city-region. Based on literature reviews, data analysis and UK and international case studies, the research highlights nine drivers of an Ideopolis. This case study forms part of the evidence base for the project. It uses the Ideopolis framework and nine drivers to assess to what extent the city is an Ideopolis and what challenges the city faces in the future if it is to be economically successful and sustainable in a knowledge economy.

#### About this case study

Dublin is one of four international case studies that form part of the evidence base for the project, alongside Munich, Lisbon and Boston. It focuses on the strengths and weaknesses of Dublin, and the consequences of these for economic success and quality of life in the city, providing lessons for policymakers in other cities.

This case study is organised into the following sections:

- Evolution of Dublin and its Economic Role
- Enterprise Policy Framework for a Knowledge City
- Managing Growth
- Maintaining Quality of Life
- Future Issues

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### **Historical Development of Dublin**

The city of Dublin has always dominated Ireland in administrative, economic, political, social and cultural terms. It functions as the seat of National government and the majority of the headquarters of national banks, industries and organisations are located in the city.

Originally founded in late 9th Century AD by Viking settlers as a port, it was consolidated into a trading port and urban settlement by the Anglo Norman's conquest after 1170, the invaders drawing Ireland into the political and economic sphere of Britain.

The city grew slowly and in an organic fashion until the Georgian Period (c.1720 - 1810). During this era, Dublin flourished as a major city of the British Empire, with a rapidly expanding population, large port and emergent powerful urban professional class, many of British origin. Much of the Georgian architecture of the modern city centre dates from this period. The Act of Union with the United Kingdom in 1801 abolished Home Rule and the Irish Parliament. Ireland and particularly Dublin languished in relative economic decline throughout the 19th century. The region's lack of exploitable natural resources meant that the industrial revolution, which transformed many metropolitan areas, left Dublin largely untouched into the 20th century.

The war of independence and subsequent formation of an independent Irish state restored capital city functions to the city. Stagnant economic conditions with modest levels of industrial and enterprise development accompanied by high levels of emigration from Ireland and after World War II, meant only modest growth and development, with the city's first period of sustained growth occurring in the 1960s (MacLaran, 1993). By the 1970's this period gave way to recession and job losses as the opening of national trade to international

competition saw the largely protected local manufacturing base suffer major closures. Unemployment peaked at 18% during the 1980s with much higher rates in poorer Dublin districts and large-scale dereliction in many city districts including the central area.

However, since the late 1980s the regional economy has gone through a phase of sustained economic growth that has greatly impacted on the city's development with a major level of physical regeneration in central areas followed by significant outward expansion of the city in an often-dispersed manner.

### **Dublin: A Changing Economy**

The Dublin economy has evolved through three phases. The first phase involved basic manufacturing using local resources for local consumption. Dublin's economy in this phase produced food, textiles and beverages for local consumption and export.

The second phase saw more advanced industry largely created by foreign direct investment (FDI) from the US. This involved the development of a modern enterprise base assisted greatly by the attraction of significant levels of inward investment and branch plants (factories producing for the Irish or European markets, but with little high value production and with profits being sent abroad). These plants were often dispersed nationally, rather than being concentrated in the Dublin region.

The final transition and third phase is to an economy based on innovation. Recent policy is directed towards a Knowledge Economy approach with the targeting of specific growth sectors and the objective of building on the relatively low levels of research, development and innovation towards levels that will promote and sustain economic growth.

This section highlights a number of the key economic and labour market trends that form

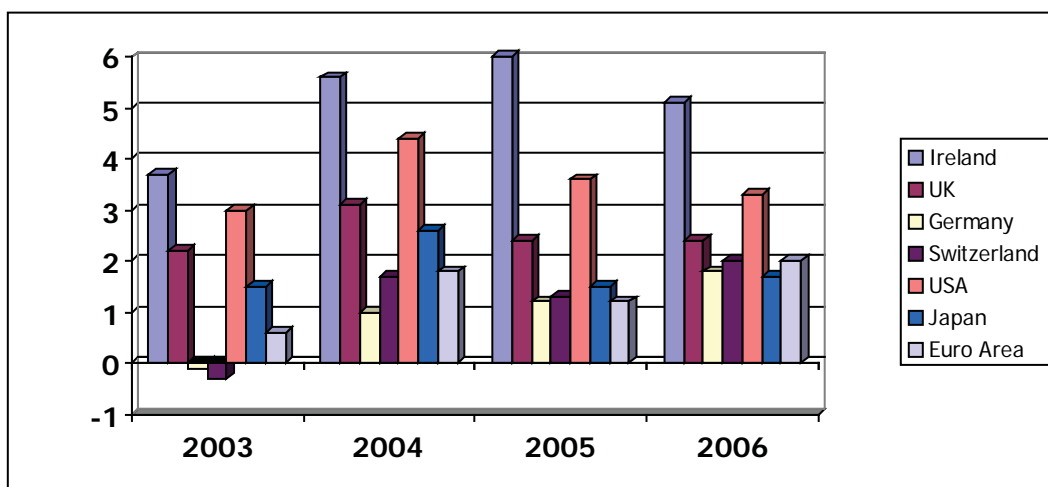
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the backdrop to the analysis presented later in this report. Figure 1 compares real economic growth in Ireland with other nations. The high growth rates achieved over the past decade

are well-known and current forecasts from government and private agencies suggest a continuation of high growth (Clinch, Convery and Walsh, 2002).

**Figure 1 - Real GDP Growth**



Source: Industrial Development Authority

Such growth has led to significant changes in the industrial and employment structure of the country and the Dublin region in particular. Table 1 (on the next page) examines changes in Dublin's labour force compared to other regions. It highlights the above average increase in the size of the labour force in the Dublin region (essentially the city area) while the Mid-East region, which is now essentially a part of the travel to work area of Dublin, has seen extremely high levels of growth. The two regions, which effectively contain the metropolitan area and its hinterland, now comprise over 40% of the national labour force, a share that is likely to increase<sup>1</sup>.

Table 2 (on the next page) examines the employment structure of the Dublin region from 1971 to 2002 and demonstrates the

major shift from manufacturing and industrial employment to an employment structure based predominantly on services. The decline in industrial employment in Dublin is quite noticeable, with a corresponding increase in service employment. The rise in service employment is particularly noticeable in the Mid-East region – an area closely linked through employment and travel to work patterns with Dublin, and in many respects part of the city-region. Overall, these tables confirm the decline in industrial jobs and the rapid rise and now dominance of service jobs. They also demonstrate the rise of service-type employment in what we term the Greater Dublin Area (although industrial employment actually increased in the Mid-East area in this period).

<sup>1</sup> See Appendix A for more detailed tables on employment structure.

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**Table 1– Labour Force by Region (000's) and Regional Shares (%), 1971-2002**

Region	1971	1981	1991	1996	2002	% Share		% Change 1971-02
						1971	2002	
<b>Dublin</b>	<b>330.4</b>	<b>398.9</b>	<b>436.0</b>	<b>484.1</b>	<b>555.3</b>	<b>29.5</b>	<b>30.8</b>	<b>68.1</b>
<b>Mid-East</b>	<b>78.2</b>	<b>102.7</b>	<b>124.2</b>	<b>146.3</b>	<b>194.4</b>	<b>7.0</b>	<b>10.8</b>	<b>148.6</b>
South West	170.9	188.5	202.1	223.2	257.5	15.3	14.3	50.7
South East	120.0	132.8	145.7	159.7	186.8	10.7	10.4	55.7
Mid-West	99.5	111.0	119.9	131.1	152.6	8.9	8.5	53.4
Midlands	65.4	71.3	74.8	82.1	99.5	5.8	5.5	52.1
West	115.7	121.9	128.9	142.8	166.8	10.3	9.3	44.2
Border	139.4	143.9	151.3	164.6	188.1	12.5	10.4	34.9
State	1119.5	1271.1	1382.9	1534.0	1800.0	100.0	100.0	60.9

Source: Drudy (2004)

**Table 2– Employment Change in the Dublin Region, 1971-2002 (000's)**

Region	Industrial Employment					Change 1971-2002	% Change 1971-2002
	1971	1981	1991	1996	2002		
Dublin	122.0	113.3	88.5	89.4	90.6	-31.4	-25.7
Mid-East	25.9	34.1	30.0	37.5	50.2	24.3	93.8
Total	322.8	365.9	313.3	354.1	411.4	88.6	27.4
Service Employment							
Dublin	187.8	242.9	265.7	316.9	414.8	227.0	120.9
Mid-East	28.8	43.7	61.0	78.8	121.5	92.7	321.9
Total	459.0	585.3	677.6	819.2	1132.8	673.7	146.7

Source: adapted from Drudy (2004)

### Achieving Quality of Life: A Key Challenge

For the greater part of the twentieth century Dublin and other parts of Ireland suffered from an absence of economic growth and opportunity. During such periods the major focus of policy makers was in stimulating economic growth to combat high unemployment and emigration levels. This contributed to relatively advanced enterprise

creation, education and training programmes and organisational structures. Since the 1990's, with rapid economic growth and increasing employment levels, quality of life issues have been seen as increasingly important. This is occurring as population increases and economic growth place strains on infrastructure and services.

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Table 3 shows the rapid rise in population in the Dublin region in both absolute and relative terms. The Dublin and Mid-East regions represent in effect the metropolitan area and its hinterland. We can see that overall the region now accounts for almost 40% of the national population, with rapid population growth evident in the suburban and hinterland areas.

As Dublin moves towards a knowledge-driven economy, quality of life issues are seen as increasingly important to the creation and maintenance of new knowledge and innovation driven economic growth in the region. 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. The pursuit of sustainable economic development has become a more complex policy objective rather than the previous, more limited employment growth strategies. As the expansion in economic activity has happened more recently in Dublin than other city-regions, there has been less time to adjust to economic success, meaning quality of life issues and infrastructure delivery should be short-term priorities.

**Table 3 - Populations by Region in Ireland 1961-2002**

Region	1961	1971	1981	1986	1991	1996	2002
<b>DUBLIN</b>							
Population	719.0	852.2	1003.2	1021.4	1025.3	1058.3	1122.8
Regional Share (%)	25.5	28.6	29.1	28.9	29.1	29.2	28.7
<b>MID-EAST</b>							
Population	187.0	200.0	287.0	313.7	325.2	347.4	412.6
Regional Share (%)	6.6	6.7	8.3	8.9	9.2	9.6	10.5
<b>DUBLIN REGION</b>							
<b>Population</b>	<b>906.0</b>	<b>1052.2</b>	<b>1290.2</b>	<b>1335.1</b>	<b>1350.5</b>	<b>1405.7</b>	<b>1535.4</b>
<b>Regional Share (%)</b>	<b>32.1</b>	<b>35.3</b>	<b>37.4</b>	<b>37.8</b>	<b>38.3</b>	<b>38.8</b>	<b>39.2</b>
<b>STATE</b>							
Population	2818.3	2978.2	3443.4	3537.1	3626.1	3626.1	3917.2
Regional Share (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Drudy (2004)

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### 2. Enterprise Policy Framework for a Knowledge City

#### Introduction

Economic development policy in Ireland has evolved from a general attempt to boost employment to a more focussed enterprise development strategy. Until the 1960s, the central objective was to industrialise an economy that was largely stagnant and dependent on agriculture. Until 1971, and with a few exceptions, Ireland's population remained predominantly rural. Its small local market and physical distance from other countries militated against attempts to develop export markets. Policy towards economic development tended to focus on marketing Ireland to industry based in other countries. The government offered an extensive package of incentives to attract industry to Ireland, including low corporation tax rates, specific taxation relief on exports, remission of local authority taxes and the provision of advance accommodation. Despite the success of these early strategies, however, new industry locating in Ireland at the time was not specific to any particular sector. Government agencies did not discriminate between economic sectors, as the priority was to create employment at almost any cost.

#### A New Direction: Towards a Knowledge Economy

The failure of previous economic policy became apparent in the 1980s. Multi-national firms in rural areas tended to cease operations due to the uncompetitive position of their location. Problems included low skill levels in the local labour force, poor telecommunications and transportation infrastructure. Foreign firms were generally branch-plant, with their operation in Ireland characterised by low-skill assembly and low wages. Competition from the emerging economies in Asia and other locations severely compromised the economic viability of many

traditional manufacturing sectors, including textiles and the assembly of basic components. Policy analysts began to recognise that for Ireland to capture new investment, new strategies would be needed including a broader range of sectors than assembly-based manufacturing activity. The importance of inter-firm linkages, high quality infrastructure and higher-level educational facilities were recognised as crucial factors for attracting new inward investment.

The economic recession of the 1980s saw unemployment in Ireland reach 18% with large numbers of plant closures in traditional industries. These problems brought about a major shift in enterprise policy. From the beginning of the 1990s, following the Culliton Report (1992) on Industrial Policy, the direction of policy toward enterprise was fundamentally altered in a number of respects, including:

- Re-focusing of emphasis in marketing Ireland to industry at a higher level on the value-added chain, in particular sectors characterised by rapid growth and high skill levels.
- Recognition of the importance in attracting new growth sectors (e.g. ICT, Pharmaceuticals and Financial Services) to Ireland in order to maintain and enhance its competitive position.
- Development of state support for the Small to Medium Size Enterprise (SME) sector in Ireland, in order for this sector to gain from multiplier effects and "spin-off" benefits from Foreign Direct Investment (FDI) firms.
- Recognition of the vital importance of a reliable and efficient telecommunications and transportation infrastructure in attracting new investment and the importance of the proximity of new industry

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to universities and further educational institutions.

Repositioning Ireland in the global marketplace as a high skill, low taxation, and low cost gateway for FDI to European Union markets with minimal regulatory and planning restrictions.

### **Progress in Research and Development**

The success of these policies was evident, in part, in the rapid economic growth of the 1990s. However, it is only in recent years that policy makers have begun to identify the importance of developing strategies that facilitate the creation of economic clusters, sectoral specialisations and the concept of urban regions as gateways for international business and enterprise. Current enterprise policy attempts to respond to changes in the global economy by accommodating the requirements of industrial firms and other enterprises (innovation, media, etc.). Policy in relation to developing physical clusters of similar and related economic activity, therefore, has evolved during a period of strong economic growth and has been market-driven in character.

The options for enterprise development are limited by Ireland's position as a relatively small economy and the island nature of the country, which makes transport to other parts of Europe relatively expensive. The logical choices for sectoral specialisation for Ireland are those areas of the knowledge economy where Ireland's location and access issues are not critical problems. Particular attention has been paid to sectoral specialisation and the identification of both areas which have prospects of strong growth and match the talents or abilities of Irish workers.

The policy document, *Technology Foresight Ireland (TFI)* was of particular importance in developing the industrial strategy of the country. Published in 1999, the report was the work of eight broad expert panels brought together under the guidance of the Irish Council for Science, Technology and Innovation<sup>2</sup>. TFI identified knowledge as one of the main drivers of prosperity and well-being and argued that Ireland needs to evolve rapidly towards a knowledge-based society. The report identified a key weakness in the lack of a world class research institution of sufficient scale to provide a critical mass of research and development in new economic sectors.

The National Development Plan for 2000-2006 was heavily influenced by the TFI report (1999). This report devised possible scenarios around the development of the IT and Biotechnology sectors in Ireland and recommended courses of action for policymakers. Specific reference is made to facilitating the development of a Biotechnology Cluster, which would be based on the development of strong links between the third level colleges and industry, agriculture and the financial services sectors with the following links seen as necessary:

- A strong academic base with high quality R&D output, some of which should be developed to world-class standards.
- The right environment for the commercialisation of innovation.
- An adequate labour and knowledge pool.
- An adequate base of ancillary firms that can support and service the biotechnology sector.
- An appropriate industry infrastructure.

<sup>2</sup> The eight sectors were: chemicals and pharmaceuticals, information and communication technologies, materials and manufacturing processes, health and life sciences, natural resources (agrifood, marine, forestry), energy, transport and logistics, construction and infrastructure.

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- A positive government policy towards the sector.
- Protection of intellectual property.
- Availability of equity and finance.

The TFI report recommends that the above factors be implemented for the successful development of a biotechnology cluster in Ireland. The report also notes that if a critical mass of activity is achieved, the cluster will become self-sustaining and the necessity for positive government intervention will recede with time. The report notes, however, that positive and targeted government intervention is vital in acting as a catalyst in the creation of a biotechnology cluster in Ireland.

### **Innovation Policy in Ireland**

Innovation policy in Ireland is directed by Forfas, the enterprise agency, and is formulated by the Irish Council for Science, Technology and Innovation (ICSTI), an agency operating under the aegis of Forfas. As Ireland is a small, open and export-oriented economy, the nation is heavily dependent on foreign direct investment. The industrial and economic future well being of Ireland is heavily dependent on the development of an innovation-driven economy. Investment in research, related human resources and the application of new technology would enable Ireland to attract high quality foreign direct investment (FDI).

The need for innovation is recognised by the current National Development Plan 2000-2006, which aims to significantly upgrade the innovation capacity of the Irish economy through the provision of both hard and soft infrastructure and by generating linkages between existing Third Level institutions (Higher Education Institutions) and industry sectors engaged in innovation (Forfas/ICSTI, 2000).

In recent years, research and innovation performance in Ireland has been moving towards the European average, albeit from a low base. Forfas estimated 2004 spending on research and development (R&D) in Ireland at 1.43% of Gross Domestic Product which represented an increase from the 2002 level of 1.35% compared with OECD averages of 2.24% (Forfas, 2005).

Figure 2 and 3 on the next page show the level of expenditure on research and development in Ireland between 1996 and 2005. While these figures do not capture investment in a knowledge society, they show that expenditure has increased significantly over the past decade. However, R&D spending in Ireland remains relatively low compared to international levels. Figure 3 displays the expenditure on R&D as a percentage of GDP for Ireland against the OECD and EU 25. While in absolute terms expenditure has increased, it has done so at a time when GDP has expanded significantly. This has resulted in R&D expenditure of on average 1.3% of GDP over the past decade, still some way off the OECD average.

There is concern at this low rate of spending within the government, and expenditure on R&D has begun to be targeted at the higher education sector. In the most recent budget, for example, a €1.2bn investment package was announced which will fund capital investment and research funding for universities over the period 2006-2010. Overall, however, it must be concluded that such investment is playing catch-up with other nations.

The report by Florida and Tinagli (2004) on the rise of the creative class, suggests that Ireland has seen the highest growth rates in the numbers employed in the knowledge economy, although from a low base. While the thesis of the creative class is a controversial one, clearly

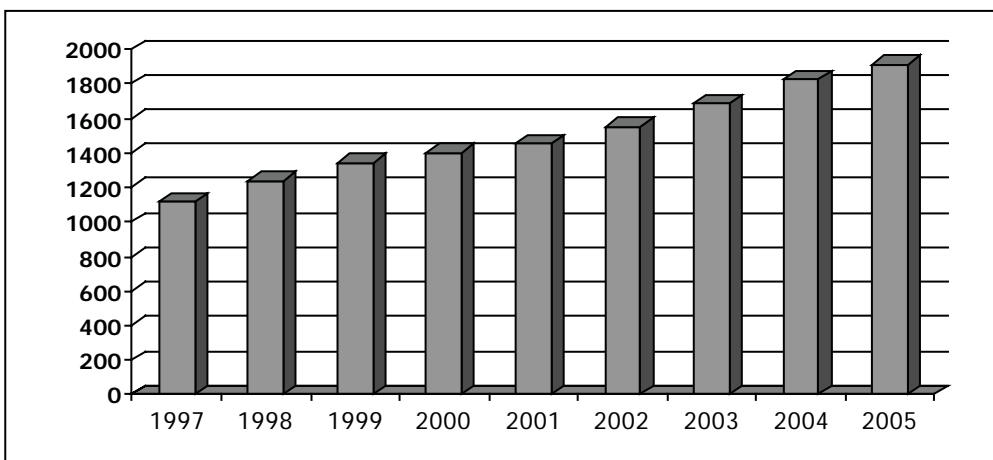
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the figures do report on a reality of increased knowledge-based industries developing in Ireland and as associated change in occupation structure. A much less reported aspect of

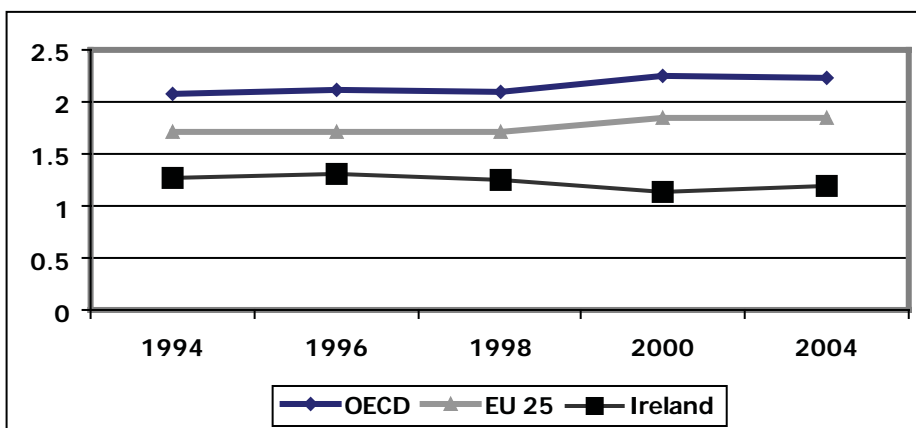
these findings, however, shows that Ireland ranks relatively poorly in the “tolerance” of its society, something Florida argues is important in producing a true knowledge economy.

**Figure 2 - Gross Expenditure on R& D in Ireland 1996-2005 (€m)**



Source: Forfas (2005)

**Figure 3 - Gross Expenditure on R&D as a % of GDP**



Source: Forfas (2005)

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### **Regional Aspects of Irish Industrial Policy**

In recent years, the Dublin and Mid-East regions have experienced high levels of economic growth at the relative expense of less accessible regions, particularly in the West and Border Regions. This bias has been recognised in the National Development Plan 2000-2006, in which industrial policy aims to attract more industry to the peripheral areas in order to reduce depopulation, emigration and economic stagnation.

### **Telecommunications Policy and Economic Clusters**

The accessibility of broadband telecommunications networks by industry and services is considered essential to maintaining the competitive position of Ireland in the global marketplace. The *Information Society for Ireland: Strategy for Action* report informed current telecommunications strategy and recommended the establishment of a limited number of designated broadband service areas across Ireland with guaranteed service availability at internationally competitive prices. The telecommunications strategy has also involved the acceleration of a programme of "rolling-out" optical fibre networks to high-density areas of manufacturing and services (i.e. economic clusters). Two locations of concentrated investment in telecommunications for the facilitation of sector clustering in the Greater Dublin Area are the National Digital Park and the Digital Media Hub.

### **Experiences in Dublin's Knowledge Economy**

Recent economic growth in Dublin has been driven largely by growth sectors such as financial services and ICT. This section looks at the experiences of these two sectors, focussing on the reasons behind their decision to locate in Dublin and the problems the sectors face in the city.

### **Example 1: The Information, Technology and Communications Sector in Dublin**

As part of the Gemaca II Study (2002), 500-1000 people were interviewed about the ITC sector in Dublin (Source: Williams and Shiels, 2003). Like many knowledge sectors, this industry is dominated by foreign firms that invest in the city. In common with other sectors, there has been a shift in the emphasis of these firms, as they become more embedded in the local environment and gradually become higher value organisations. The sector has seen considerable growth, and has a pattern of development around the edges of the city. Key characteristics include:

- Operations in Ireland have now moved beyond being 'branch plant' operations, now they are being used as regional bases for manufacturing, distribution and marketing. However, research and development remains primarily in the source country.
- The ITC sector is highly concentrated in Dublin, and, to a lesser extent, the smaller urban centres in Ireland.

Reasons for locating in Dublin (and Ireland) include:

- The main reasons for locating in Dublin are the benefits of the proximity to ancillary/supplier services, ease of access to a large skilled workforce and access to a good transport infrastructure, including an international airport.
- The ITC sector internationally appears to be consolidating in a few geographical locations, including Ireland. The main motivation for this is the reduction of costs and overheads.
- The culture of work in Ireland was seen as more entrepreneurial, creative and less hierarchical than other countries.

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- Dublin was seen as the only location in Ireland with the required infrastructure and critical mass.
- Low corporation tax rates were seen as important for firms locating in Dublin.
- Aggressive marketing by the Irish inward investment agency was important in attracting firms and making them aware of opportunities in the city.

There were two main problems for firms in Dublin. Transport and access difficulties were seen as the most important constrain on operations in the sector. International links were good, but the internal road system was congested and this congestion was worsening. A lack of affordable housing was also identified. House price inflation has led to increased wage demands for employees and longer commuting times for individuals unable to afford accommodation in Dublin.

### **Example 2: The International Financial Services Centre (IFSC)**

The financial services industry has also been important for economic growth in the country, with growth largely confined to Dublin (Williams and Shiels, 2003). The successful development of the financial services is regarded as a flagship project in the general urban renewal in the Dublin region. It is of particular interest as an example of infrastructure-induced development that is now showing signs of having attained the critical mass needed to sustain the long-term future of the sector in Dublin.

In 1986 the Custom House Docks Development Authority was established and granted flexible planning and financial powers in order to secure the redevelopment of the area, which was a large derelict city port area previously owned by Dublin Port and Docks Board. By 1992, development involved the completion

of the IFSC and ancillary office space totalling 40,000m<sup>2</sup> at a cost of £120 million (152 million Euros).

By 2003 employment at the IFSC was 12,000 with similar numbers employed indirectly in professional and support services (Dorgan, 2003).

A series of interviews were conducted looking at views of why firms located in the Dublin IFSC. These included:

- The international business culture in Dublin
- General environment of Dublin
- Nature of the custom built facility
- Modern IT infrastructure
- Regulatory environment
- Strong domestic political support
- Competitive cost base, assisted through low tax and 'urban renewal incentives'
- Local economic linkages, or face-to-face contact with clients and a large pool of specialised labour
- Air access to the rest of the world.

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### **The Knowledge Economy and Society: Key Issues**

This section considers some of the main issues regarding competitiveness and the future economic prospects of the Dublin Region. In order to clarify the issues that are likely to influence Dublin's future, it is essential to identify and categorise the major underlying external forces that are of influence today and that will have a major role in shaping the future.

Box 1 illustrates some of the main issues identified as being external factors that may impact on competitiveness and the generation of a knowledge economy in Dublin. Some

of the key issues identified include the long-term changes in the EU and how Ireland may respond. With the advent of the EU 25, markets are opening which generate opportunities but also threats. Likewise, labour migration has opened up and Ireland has already seen the immigration of approximately 150,000 Polish nationals. While the knowledge economy has expanded and will continue to do so in all likelihood, it is also the case that a significant amount of the labour market may need to involve the creation of low paid and low productivity jobs.

#### **Box 1 External Factors**

- Future for and nature of employment: replacement of the "job for life" by contract work
- EU 25 increases competition but also opportunities
- The growth of low paying and low productivity jobs appears to be an integral feature of the modern urban economy
- Consumerism and materialism in booming economic conditions
- Defence and security both internally and externally
- Evidence that economic growth, alongside rapid technological change, may become less employment intensive i.e. "jobless growth"
- International multiple conglomerates and multinational corporations of GNP size
- Mobility of industry and few "loyalty" roots
- Improved transportation: speed, frequency and reliability
- Concerns of Global Environmental issues
- The emerging issues of natural resources and energy

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Box 2 shows some of the strengths that will allow Dublin to maintain and increase its competitive position and also its knowledge economy. Being an English-speaking city with a high level of educational participation and attainment is a real strength. Government policy around third level education (university sector) is seeking a radical realignment which will make the sector respond more flexibly to the changing needs of industry. As stated earlier, the university sector is to receive additional

funding aimed at R&D. It is also clear that Ireland's model of economic development, which emphasises a social partnership approach, is seen as being crucial to economic success. Although recently this model has been criticised, the Government are currently in negotiations over a new national agreement. The continuation of the low corporation tax remains a major incentive for the attraction of inward investment.

### Box 2 Key Strengths

- English-speaking European national capital city with membership of EU
- High level of education and training of both national and non-national inhabitants of Dublin
- Literary cultural legacy, arts, entertainment etc
- Youthful age profile re: labour supply
- Low corporate tax rate at around 12.5%
- Conducive Time Zone location for East-West economic and financial markets
- International airport and potential for growth of airport
- Size of the city (relative to other urban areas) in Ireland
- Stable democracy aided by Peace process in Northern Ireland
- Developed social partnership systems with economic and social priorities and spending agreed by partnership negotiations including national pay agreements
- Improving port facilities combined with more reasonable docking charges
- The first generation in Ireland with meaningful quantum of inherited wealth
- Low unemployment
- Well-educated, computer-literate workforce
- Availability of finance/capital with highly developed financial services cluster
- Positive investment sentiment and reputation for policy flexibility and responsiveness
- Improving environment whereby urban renewal is reducing the amount of derelict sites

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Box 3 examines some of the potential barriers to the fuller development of Dublin as a knowledge city. While investment in R&D has increased significantly over the past ten years, it is clear that from a comparative perspective additional investment is needed if Ireland is to further develop and compete with other nations and cities. More local problems in Dublin relate to the major infrastructure deficit particularly with regard to public transport. A recent

survey of 600 businesses by the Chambers of Commerce of Ireland reveals quite high levels of dissatisfaction with transportation in Ireland and Dublin in particular (Chambers Ireland, 2005). The majority of respondents complained of losses due to congestion and problems of the workforce being late. It is clear that investment in public transport is needed for long term environmental and economic sustainability.

### **Box 3 Barriers to Becoming a Knowledge City**

#### **General**

- Peripheral position, access costs, European land 'bridge' problem
- Congested transport infrastructure
- Patchy record of investment in research and development and the creation of an enterprise culture - a need exists to facilitate the creation of a "synergistic" innovative milieu in Ireland - particularly in the electronics and biotechnology sectors
- Elements of political corruption in urban development and planning processes- as demonstrated in recent tribunals
- High non-pay costs in areas such as energy and waste treatment

#### **Industry and Skills**

- Current labour market shortages in high skill areas, e.g. software graduates
- Restrictive information flows in property market: issue of access to public records
- Irregular and non-matching spatial boundaries of main public Service-providers
- Skills shortages and the advent of a migrant labour force-
- Evidence suggests that high owner occupancy rates of housing inhibit labour mobility
- Undeveloped local taxation system and political resistance to a conventional norm
- High cost of utilities - Gas, ESB, etc. Petrol costs are high by US standards
- Poor management and capitalisation resource base: indigenous SMES and industry
- Over-reliance on Foreign Direct Investment
- Dublin's dominance of Ireland as a the dominant city in Ireland - urban imbalance creates pressure for counter development

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### 3. Managing Growth?

#### Introduction

One of the main arguments of this report is that while policy developments to encourage R&D and a knowledge economy have been well developed, the ability of government agencies and local urban management systems to cope with rapid growth are inadequate. The buoyant economy has generated considerable urban growth and development in Dublin but problems in some areas, particularly transport provision, threaten quality of life in the city. The current planning and development system works mainly at local authority level. However, the emerging infrastructure and quality of life issues require a response at a regional and national level.

#### Growth in Dublin

The population of the Dublin City and County area (known as the Dublin region) was 1,122,821 in 2002, representing 29% of the national population of 3,917,203 (Central Statistics Office, 2002). The outward spread of development, particularly Dublin-based residential housing demand, has created a wider Greater Dublin functional urban area, the Greater Dublin Area (GDA), which includes some surrounding counties. The GDA has 1.53 million inhabitants, representing 40% of the National population (CSO, 2002).

Growth has been disproportionately in the GDA. 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 country comes to this region (CSO, 2002).

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 (Williams, 2000). This region and other major urban centres such as Cork and Galway have remained the location of choice for significant inward investment. One aim of national government policy is to achieve a wider dispersal of such development.

Growth in the Dublin region has substantially addressed the problems of employment opportunities in the city. However, persistent pockets of deprivation and areas with above average unemployment levels cause concern. The solutions for these problems are likely to be in training/retraining, education and community development programmes rather than further boosting economic activity levels.

It is increasingly evident that Dublin's infrastructure and services has been placed under an increased strain servicing the enhanced demands experienced. Recent experience in terms of the planning and development of the expanding metropolitan areas highlight the issues and problems involved in such expansion.

Since the mid 1990s, Ireland and Dublin have developed rapidly, with annual GNP growth rates in excess of 7%. Increased consumer spending, manufacturing output, service provision and housing demand have resulted in a significant expansion of development activity (Williams and Shiels, 2000). A consolidated core with a rapidly expanding edge city (settlements around the periphery) are developing. This is

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shown by the significantly expanded commuter belt, which by 2006 has extended up to 100 kilometres from the centre of Dublin.

### **Development in the Dublin Region 1994-2000**

Problems of housing affordability are clear when regional data is examined. The GDA 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 GDA experienced 47% growth in employment, compared to 36.4% for the remainder of Ireland, indicating that the provision of employment in the GDA is disproportionately greater than for the rest of the country.

But new housing is not growing at the same rate as the population. Between 1999 and 2000 the number of new housing built in the Dublin region declined 6.7% from 10,035 in 1999 to 9,405 in 2000. This compares poorly to the nation as a whole in which the number of newly built houses increased by 7.1%.

As housing becomes less affordable within the GDA, house buyers are pushed out to peripheral and Outer Leinster locations where prices are lower. 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).

### **Dublin Regional Expansion 2000-2006**

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

growth. This has created problems in terms of housing, access, infrastructure and services, which has constrained development. Such problems are a result of failure to invest in and plan adequate infrastructure and services but are often simplistically represented as a function of city size.

A sprawl type pattern of development has recently become established in the GDA. GPEP analysis of CSO and Housing statistics show that its population growth continued to increase as the region's share of national population increased from 38.8% to 39.2% between 1996 and 2002. In the key age group for future housing demand, those over 15 years of age, the region also experienced a higher growth rate, at 13%, compared to the national rate of 11.7%. New housing completions as a share of national housing completions still accounted for only 33.2% of new housing completions nationally over the period 2000-2004. An upswing in supply levels only became established in 2005-2006. These trends point to a continuation of supply deficiencies in Dublin until the very recent period.

This lack of housing supply near the core economic areas has increased demand in the peripheral areas. 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 trend to increased supply in the outer Dublin area is at an advanced stage and the dispersed pattern is already well established.

### **Commuting**

Existing settlement trends in the Dublin region are unsustainable with commuting activity spreading up to 100KM from the city. These trends are linked to the long-term under-supply in the housing market, with demand estimated in recent years at 15,000+ units per annum

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while supply levels remain static at 9-10,000 per annum until recent years. Congestion, housing affordability and social problems, alongside weakened economic competitiveness result from the absence of a satisfactory response. The population of Dublin City and County area shows growth of 6.1% in the 2002 census. The deflection of Dublin population into the Leinster area is evidenced by levels of growth in Kildare and Meath of over 20% and Westmeath of 13.8%. In the Dublin urban region, city-centre regeneration has reversed the previous population loss, however decline is occurring in many parts of suburban Dublin. Examples include districts such as Beaumont (-12%), Fingas South D (-17.5%) and Ludford, Ballinteer (-12.3%). Existing public and community infrastructure is underused, while attempts are made to provide similar schools, roads and other requirements at enormous cost for new dispersed communities.

### 4. Maintaining Quality of Life

While the measurement of quality of life issues can be often subjective there is a clear need for forms of benchmarking that allow this issue to be discussed in an evidence-based way. On the important issue of access to employment and levels of income, Ireland and Dublin have progressed towards upper international levels in recent years. The National Competitiveness Council compiles and analyses relevant data on such issues for Ireland in its Annual Competitiveness Reports (ACR) (Forfas, 2006). This shows that the income per capita in Ireland is amongst the highest in the world with the most recent relevant Gross National Product per capita at €25,704 in 2004. The ACR cites that on a broader set of social indicators assessing quality of life and environmental sustainability in a composite index (such as the UN Human Development Index), the performance of Ireland is mixed. They received a strong rating in terms of life expectancy and income per capita and lower ratings in areas of measures of environmental sustainability. Overall, Ireland's position in this index moved upwards to 8th position in 2005. More recent surveys, as reported in the Economist, suggest that Ireland has the highest quality of life in the EU.

#### Quality of Life in Dublin

Most information on quality of life is reported on a national basis and it is difficult to obtain robust information at a local level. However, ongoing research in the School of Geography, Planning and Environmental Policy at UCD by Brereton, Clinch and Ferreira, does provide such information. The initial findings of this research, as yet unpublished in peer-reviewed publications, are nonetheless revealing. It confirms the overall picture of high levels of satisfaction nationally, but also shows that Dublin has a lower quality of life than elsewhere

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in Ireland. The reasons for this are shown in the quotes below:

*“The fact that the increased incomes of Dubliners do not compensate for the adverse effects of economic growth and development on their city shows it’s no good being paid more if you spend more time getting to work, sitting in traffic and pay more for a smaller home in a cramped area with poor amenities.”*

*“The overall objective of economic growth should be to improve quality of life and although incomes in Dublin have grown rapidly, they have not compensated Dubliners for factors like increased traffic congestion, living closer together in more confined spaces, increased costs of living and lack of amenities. These factors lead to lower levels of happiness in Dublin.”*

Source: Sunday Times, 10th July 2005

[http://www.timesonline.co.uk/article/0,,2098-1685633\\_1,00.html](http://www.timesonline.co.uk/article/0,,2098-1685633_1,00.html)

The results of this research confirm much of the media-driven commentary over the past few years. Reports from the European Commission (2004) Urban Audit Perception study provide some additional and interesting comparative information. The survey, carried out in early 2004, compared several aspects of life across 31 EU cities through a survey of residents in each city. Reflecting the economic buoyancy of the country, Dublin ranked first out of all 31 cities as being the easiest city in which to obtain a job. Conversely, however, it ranked 27th out of 31 in terms of the difficulty of obtaining good housing and an affordable price, reflecting the increased problems of affordability in the city.

### Quality of Life in Dublin – Key Issues

Following on from the results of Clinch et al, this section explores in more detail some of the issues that underlie the perceived lower quality

of life in Dublin as compared to the rest of the country. These are clearly important issues with respect to the long-term ability of Dublin to attract knowledge industries and the creative class. Failure to deal with such issues may, in the long run, lead to serious problems with regard to the sustainability of the city.

### Transport, Congestion and Infrastructure Provision

Compared with many EU cities of a similar size, most analysts agree that Dublin has a serious under-provision of public transport. With the rapid growth of the past decade, the problems that this has generated have increased considerably, to the extent that traffic congestion is causing major problems for both business efficiency and overall mobility.

Some of the key issues are:

Traffic congestion and travel times

- Undeveloped Public Transport system compared to similar sized urban areas in EU
- Port access and sustained growth of HGV traffic in the city centre - delays in implementation of Port Access Route
- Long delays and cost overruns in construction and completions of infrastructure projects
- Limited physical land-supply/growth potential in East, South, North directions
- Sewage disposal/treatment and fresh water limitations to zoned building land, particularly in the Fingal and North Dublin areas
- Insufficient quantity of zoned serviced land for housing.

### Housing affordability and competitiveness

There are mixed views on the impacts of the buoyant residential property market. While some analysts take a fairly sanguine view of

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house price escalation and its impacts, others are more pessimistic (Norris and Redmond, 2005; Fahey and Nolan, 2004; National Economic and Social Council, 2004). Overall, however, the balance of the argument suggests that house price escalation has generated significant problems of affordability with a number of obvious and some less clear consequences. First, the evidence suggests that first-time buyers have affordability problems, with clear implications for the labour market and knowledge-based industries. One of the problems in Dublin has been a relative undersupply of new housing in the city and, as a consequence, the dispersion of new house building into adjoining areas. This has happened rapidly, with new housing being developed in an arc of 90km around Dublin. While the location of jobs remains predominantly in the built-up area of the city, the development of a spatially dispersed pattern of development has led to a Dublin housing market that in reality extends well beyond the city confines. In turn, this has generated a complex pattern of commuting to Dublin from towns and villages in adjoining areas.

Some of the key issues are:

- As evidence from the enterprise sector interviews, the housing shortage is seen as eroding the competitive position of Dublin
  - Economic and population growth in both the Dublin and Mid-East Regions is outstripping the supply of new housing, contributing to rapid and large price increases and a consequent decline in affordability
  - As net immigration continues to increase and demographic trends indicate a surge in the first-time house-buyer age category due to the 1970s “baby boom” the supply of new housing is a critical and pressing issue
- Lack of decisive action on the growing housing shortage by local authorities with outdated county plans
  - County councils, in their growth strategies, appear to have been planning in isolation, effectively ignoring the “Metropolitan Interest” as part of the Dublin Commuter Zone
  - Lack of co-ordination between the local authorities is evident - Regional Authorities need greatly increased regulatory and statutory powers.

### **Governance and management**

A recurring theme in the analyses of Dublin’s issues and problems suggests that the key problems of transport and infrastructure deficits and affordability, lie partly in the serious lack of robust and effective governance and management structures. From central to local government, it is suggested, there is an inability to plan for and deliver basic infrastructure such as public transport, sewage, and water supply. The Government has recently introduced a Critical Infrastructure Bill, which is intended to fast-track major projects such as public transportation infrastructure and waste management facilities.

Some of the key issues are:

- Underdeveloped management techniques in the urban planning and development processes
- Poor overall co-operation and integration between the Government and relevant groups (locals with experience of the problems) and agencies in tackling the growing unemployment problem in Europe
- Subsidiarity and limitations to local democracy: the undeveloped Regional role

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- Historic lack of initiative on urban policies which to date have been predominantly tax driven with little attention paid to re-integrating activities such as housing, work, business, education and training, transportation, recreation, etc.

and negative reaction to this growing wave of “refugees” and “asylum seekers”.

### **Social cohesion and social integration**

Official organisations are keen to portray Ireland as being a young and modern European state that is secularised, tolerant and pluralistic. In particular, Dublin is portrayed as a modern European city, a popular place for others to visit, an exciting and cultured city that is deeply cosmopolitan. However, immigration into the country is testing these assumptions. From the late 1990s onwards, as the economy boomed, Ireland became an attractive destination for labour migrants. The addition of the accession states to the EU in May 2004, has led to quite substantial immigration from Poland, for example. Official sources estimate that up to 150,000 Polish nationals have arrived in Ireland since May 2004 and that almost 100,000 of these are living in Dublin. This pattern of immigration is further complicated by the arrival of asylum seekers since the late 1990s and the, historically at least, sudden presence of African and Chinese people on the streets. In EU terms Ireland (Republic) has mostly been a net exporter of people with a population that was mainly white and adhered formally to the Catholic faith.

Key issues include:

- Very high levels of immigration - over 300,000 people have migrated to Ireland in recent years
- Possible waning of enthusiasm for continuing EU integration
- Small but increasing base of multinational peoples and the increasing racial tensions

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### 5. Future Issues

Given its evolution as a centre for culture, administration and services, the logical progression for Dublin's future is towards becoming a modern knowledge city. The political, business and administrative environment for attracting and assisting enterprise development is strong by international standards. However, to achieve this progression, significant improvements are needed in the capacity of the institutions that control the planning system and manage the expansion of the city.

Recent economic growth and the expansion of employment in the city have led to regeneration in the centre of the city and significant development outwards from the city in a dispersed pattern. This presents some challenges for environmental sustainability of the developments and problems with quality of life. Of particular concern are the infrastructure

deficits which new development plans are beginning to address. Transport infrastructure in particular is a major concern for both quality of life of residents and the operations and expansions of the new economy growth sectors.

Dublin maintains considerable attractions for further growth in the knowledge intensive economic sectors, with political, economic and labour force factors favouring such growth. The challenge of competing with other cities, particularly those in emerging economies, provides a major impetus to Dublin's businesses, development agencies and social partners to improve. In addition the expanding population, with raised living standards and expectations, is increasing its demands for improved services and infrastructure. It is clear that strategic responses at a broad regional level are essential in achieving such change..

#### Findings

- The success of Dublin and Ireland's moves towards a full employment Knowledge economy over the period 1990 to the present has been based upon sector specialisation and appropriate strong supporting measures.
- The growth in new economy sectors such as financial services and IT has cushioned the decline of traditional manufacturing.
- In Dublin the new employment in such high growth sectors combined with urban regeneration measures have contributed to a substantial urban expansion.
- The national labour force has grown to 2 million with a rate of unemployment less than 5% and a dependence on immigration of labour in sectors such as hospitality and construction with immigrants now constituting 10% of the labour force.
- Infrastructure provision has lagged behind economic development trends.
- The spatial pattern of development is widely dispersed in the Dublin region giving rise to concerns as to environmental sustainability and transportation issues.
- There is evidence of the success of the cluster type approach to the development of new business sectors such as International Financial Services. This success may be attributed to the particular features of the integrated policies involved in the development of the IFSC.

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Dublin is now entering a key period in its evolution towards a knowledge-based city. Its progression to an international business centre with a diverse economic base and major strengths in the knowledge-based sectors now requires the consolidation of its general urban development framework.

A major challenge for Dublin is to ensure that urban environmental management structures

are improved to ensure that the quality of life of the population is maintained. In particular, for both residents and business interests, the improvement of infrastructure provision, especially in the transport area is vital. Key issues emerging from the Dublin case study which merit attention and further research are laid out below.

### **Key issues for the future**

- The Irish Economy would seem to be entering a “step-change”, whereby the level of economic growth is so great that it is pushing long-term economic cycles into a higher level than previously experienced.
- International competitive pressures are very strong for Irish business as its cost base is no longer attractive compared to emerging economies in Central Europe and Asia.
- This competitive pressure which had previously affected traditional manufacturing is now being experienced in the higher end sectors of the knowledge economy including Financial Services and IT.
- The change towards a Knowledge City in Dublin is recognised as central to all relevant policy makers and economic interests.
- A major increase in research, development and innovation will be necessary to sustain the current levels in economic activity.
- This step-change will need to be recognised by policy-makers, and by local planning authorities.
- Immigration is also contributing generally to increased household formation and housing demand as well as offsetting the negative fallout of a reduced birth rate.
- Occupancy rate of housing is declining indicating that more dwellings will need to be provided for fewer occupants -this will compound the current and housing affordability problems.
- All current economic fundamentals point to both interest rates and inflation remaining stable.
- The issue of Partnerships and exploring the potential for their application, in Ireland, of a Programmatic Approach to Research Funding; Competitiveness and Cohesion Programmes.
- The medium-term challenges will include new strategies for competitive positioning including economic survival.

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### Appendix A

**Table A1– Industrial Employment by Region, 1971-2002 (000's)**

Region	1971	1981	1991	1996	2002	Change 1971-2002	% Change 1971-2002
<b>Dublin</b>	<b>122.0</b>	<b>113.3</b>	<b>88.5</b>	<b>89.4</b>	<b>90.6</b>	<b>-31.4</b>	<b>-25.7</b>
<b>Mid-East</b>	<b>25.9</b>	<b>34.1</b>	<b>30.0</b>	<b>37.5</b>	<b>50.2</b>	<b>24.3</b>	<b>93.8</b>
South West	48.6	55.7	48.4	52.8	64.1	15.5	31.9
South East	31.3	40.5	36.1	41.4	50.3	19.0	60.7
Mid-West	25.6	33.4	29.1	35.3	40.9	15.3	59.8
Midlands	16.1	21.8	18.1	21.8	26.4	10.3	64.0
West	17.9	27.5	26.4	31.9	41.4	23.5	131.3
Border	35.4	39.6	36.3	44.0	47.5	12.1	34.2
State	322.8	365.9	313.3	354.1	411.4	88.6	27.4

Source: Drudy (2004)

**Table A2– Service Employment by Region, 1971-2002 (000's)**

Region	1971	1981	1991	1996	2002	Change 1971-2002	% Change 1971-2002
<b>Dublin</b>	<b>187.8</b>	<b>242.9</b>	<b>265.7</b>	<b>316.9</b>	<b>414.8</b>	<b>227.0</b>	<b>120.9</b>
<b>Mid-East</b>	<b>28.8</b>	<b>43.7</b>	<b>61.0</b>	<b>78.8</b>	<b>121.5</b>	<b>92.7</b>	<b>321.9</b>
South West	65.3	79.9	92.1	112.9	153.1	87.8	134.5
South East	43.0	49.5	58.7	71.6	101.8	58.8	136.7
Mid-West	35.4	44.0	52.5	62.4	87.5	52.1	147.2
Midlands	21.7	26.5	31.3	37.0	55.7	34.0	156.7
West	34.0	44.6	54.9	67.9	95.3	61.3	180.3
Border	43.1	52.4	61.4	71.7	103.1	60.0	139.2
Total	459.0	583.3	677.6	819.2	1132.8	673.7	146.7

Source: Drudy (2004)

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