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Government**

Spatial Planning Unit

National Spatial Strategy

The Irish Urban System and its Dynamics

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in association with
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EXECUTIVE SUMMARY

Objective and Method

The objective of the study of the Irish Urban System and its Dynamics is to define and describe the system of cities and towns, including the economic and social functions of urban settlements of different sizes and to define the urban fields of cities and towns of population 5000+.

For purposes of the study, urban centres are regarded as those with a population of 1500 or greater in 1996. The set of urban centres is illustrated on Fig. 1.1.

Brady Shipman Martin undertook the study in association with NUI Maynooth and Fitzpatrick Associates. It involved the collation and analysis of a range of data on the size, functions and fields of urban centres, together with a review of previous studies of the urban system.

European Perspective

In European terms, Ireland has a relatively low rate of urbanisation and lies outside of the heavy concentration of urban centres in England, Belgium, the Netherlands and western Germany. Whilst Dublin is a European capital city, it is of relatively modest size, having less than half the population of Birmingham or Manchester, less than a third that of Milan and less than a quarter that of Madrid.

Hierarchy and Distribution

Dublin is much larger than any other urban centre and dominates the economic and social life of the country to an overwhelming degree. In 1996, the Dublin Metropolitan Area had 31% of the national population. This strongly 'primate' character of the urban system is its most distinctive feature.

The other principal cities, Cork, Limerick, Galway and Waterford, are relatively small compared to Dublin; the aggregate population of these centres being only 38% that of Greater Dublin.

There is a good size distribution of urban centres below 40,000 in population. However, there is a bias in their geographical distribution towards the east and the south-east. In particular, there is strong clustering of urban centres in the 10,000 to 39,999 category in the east and south-east of the country. Some of these centres, such as Bray, Swords, Malahide, Leixlip, Celbridge and Greystones, have grown very rapidly in recent years and are now part of the Dublin Metropolitan Area. Other centres in this size category have also been influenced by the economic and employment growth of the Dublin region, including Dundalk, Drogheda, Naas, Droichead Nua, Navan, Mullingar, Tullamore, Carlow and, probably to a lesser extent, Athlone.

Four of the centres in the 10,000 to 39,000 population category, Tralee, Sligo, Killarney and Letterkenny, are located in relatively isolated parts of the country, where they are the most important towns and act as 'sub-regional' centres.

The relatively well developed urban structure of the east, south and south-east is contrasted to the less developed structure to the west and north-west of a line that runs approximately from Limerick to Dundalk. Here urbanisation levels are lower than for the rest of the country and there are fewer large towns. As a consequence, many smaller centres provide a level of function far greater than their population would indicate.

The distribution of centres below 10,000 in population is more evenly spread across the country, but there is a greater density of all urban settlement sizes in the east and south.

Nearly half of all urban centres of 5,000 population and over are located on or near the coast.

The urban structure of Northern Ireland is characterised by a greater density of larger urban settlements than the Republic and with a less primate hierarchy.

Changes in Hierarchy and Distribution

There has been a continuous increase in the share of the national population residing in the aggregate urban areas, reaching a level of 58% in 1996.

With some exceptions, the larger urban centres have generally shown more consistent growth than the smaller centres. The highest levels of growth occurred in centres over 10,000 in population, but many centres in the 5,000 to 9,999 category also grew significantly, especially in the 1971 to 1981 period.

There has been a concentration of growth in the Greater Dublin Area and, to a lesser extent, in the vicinity of the other main cities. The rapid growth of commuter settlements in the hinterlands of the major cities, especially Dublin, is a feature of the past two decades.

Urbansiation in the west has been strongly influenced by the growth of Galway but has also been associated with the development of sub-regional centres, such as Letterkenny, located at relatively remote distances from Dublin.

Some urban centres, notably in the border, midlands and north Munster areas, recorded a continual decrease in population in the period 1981-96. These centres broadly correspond with rural areas, which are experiencing a marked process of change associated with the re-structuring of agriculture. Examples include Monaghan, Ballinasloe and Thurles.

Urban Functions

Consideration of the functions (specific activities or services such as retailing, education, finance, etc.) of the urban centres over 5,000 in population indicated that they may be classified as (Fig. 6.1):

- Those with a level of function significantly higher than their population level would indicate. These are mainly market centres, providing goods and services to rural hinterlands. Letterkenny, Monaghan, Thurles, Castlebar and Enniscorthy are examples.
- Those with a level of function broadly in keeping with their population levels. These include the major cities as well as centres such as Ennis, Clonmel, Carlow and Portlaoighse.
- Those with a level of function significantly lower than their population level would indicate. These are mainly commuting centres, within the sphere of influence of the larger cities, especially Dublin. Examples include Balbriggan, Malahide, Leixlip and Swords, as well as Carrigaline and Cobh. Shannon is also in this category, explained by its lack of established hinterland.

A small number of centres have a high level of specialised function. Killarney, with its concentration of tourism and leisure facilities, is an example.

Urban Fields

Each function of an urban centre has an associated field or catchment, representing the area that it serves. The extent of these fields varies from function to function, with higher level functions generally having a more extensive field. The urban fields of centres of 5,000 population and over were examined as part of the study.

There is a relatively dense distribution of urban fields in the east and south, reflecting the number and distribution of cities and towns of over 5,000 population in that part of the country. Many of these fields merge into each other.

In the west and north-west, larger urban centres are more widely spaced and their fields are more widely separated. Smaller centres, such as Roscommon or Carrick-on-Shannon, consequently serve some of the functions normally associated with larger centres.

Spread of Urbanisation into the Countryside

There is a significant level of urbanisation occurring outside of the formal boundaries of urban centres, with many areas, especially close to cities and towns, exhibiting markedly urban characteristics. This process of urbanisation is spreading into the wider countryside. The extent of 'urban Ireland' is, therefore, greater than indicated by consideration of the cities and towns alone.

Components of the Urban System

Consideration of the characteristics of the urban system allows the identification of sets of urban centres of 5,000 and over in population which have relatively well-defined relationships with each other. These are shown on Figure 7.8 and include Dublin, which has a strong relationship with a set of urban centres in the Greater Dublin Area and in County Louth, and a number of sets in the south and west. For example, a Planning, Land-Use and Transportation Study, embracing Limerick, Ennis, Nenagh and Shannon, is currently in preparation, indicating that these centres have a defined relationship in terms of strategic planning.

Sets of urban centres with less defined relationships, except at a relatively local level, occur in the midlands, the border area and the south-east. These are also shown on Fig. 7.8. In the south-east, there are, however, some sets of established relationships based around Waterford and Wexford.

1 INTRODUCTION

Study Context

- 1.1 This study is one of a series commissioned by the Spatial Planning Unit of the Department of the Environment and Local Government as background research to the National Spatial Strategy. The studies form Stage 2 in the four-stage approach to the National Spatial Strategy and involve the description and analysis of the spatial structure and functioning of Ireland. The aim of Stage 2 is to establish the information basis for the subsequent preparation of the strategy.
- 1.2 Brady Shipman Martin led the study team, which also incorporated the National University of Ireland Maynooth and Fitzpatrick Associates. The study of the Irish Urban System and its Dynamics is closely related to the study on the Irish Rural Structure and Gaeltacht Areas, led by Fitzpatrick Associates and involving many of the same team members including the National University of Ireland Maynooth and Brady Shipman Martin. The two studies were prepared in parallel.

Study Team Members

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Study Objectives

1.3 The objectives of the study, as set out in the Brief, are:

- To define and describe the Irish Urban System at national level and its articulation at regional and sub-regional level.
- To define and describe the economic and social functions of urban settlements of different sizes and the nature of the interactive linkages - hierarchical, complementary, competitive - with other settlements of greater, equal and smaller size.
- To define the urban fields of cities and towns of population 5000+ in terms of employment, retailing, educational, health, cultural and other social services; agricultural services; and public administration.
- In relation to the above, to express in cartographic form, as far as possible, the data and the analysis findings.

Approach

1.4 The approach to the study involved the following stages:

1. Literature review on the Irish urban structure.
2. Statistical analysis of Census of Population data.
3. Mapping of results of statistical analysis.
4. Gathering and collation of data on functions of urban centres.
5. Analysis of data on urban functions.
6. Review of core quantitative analysis from parallel study on the Irish Rural Structure and Gaeltacht Areas to identify urban characteristics on a DED basis.
7. Consideration of urban fields and functional areas
8. Integration, synthesis and reporting.

Meaning of Urban Centres

- 1.5 For purposes of this study, urban centres are regarded as those with a population of 1500 or greater in 1996. Generally, smaller centres are regarded as rural. Unless stated otherwise, the population figures and other characteristics of the towns and cities described refer to the Census of Population definitions, including, where relevant, the suburbs and/or environs. The set of urban centres is illustrated on Fig. 1.1.

Data Sources

- 1.6 Detailed data on the population of urban centres are available from the Census of Population and extensive use is made of this source in the report. However, consistent and comprehensive data on other aspects of urban centres are not so readily available. In particular, data on the functions of settlements are not readily available. However, detailed information on school populations was provided by the Department of Education and Science and Bus Eireann provided information on school transport routes. Information on other functions was derived from the Golden Pages directory, the IPA Diary 1999-2000, various websites and the Department of Agriculture and Food.

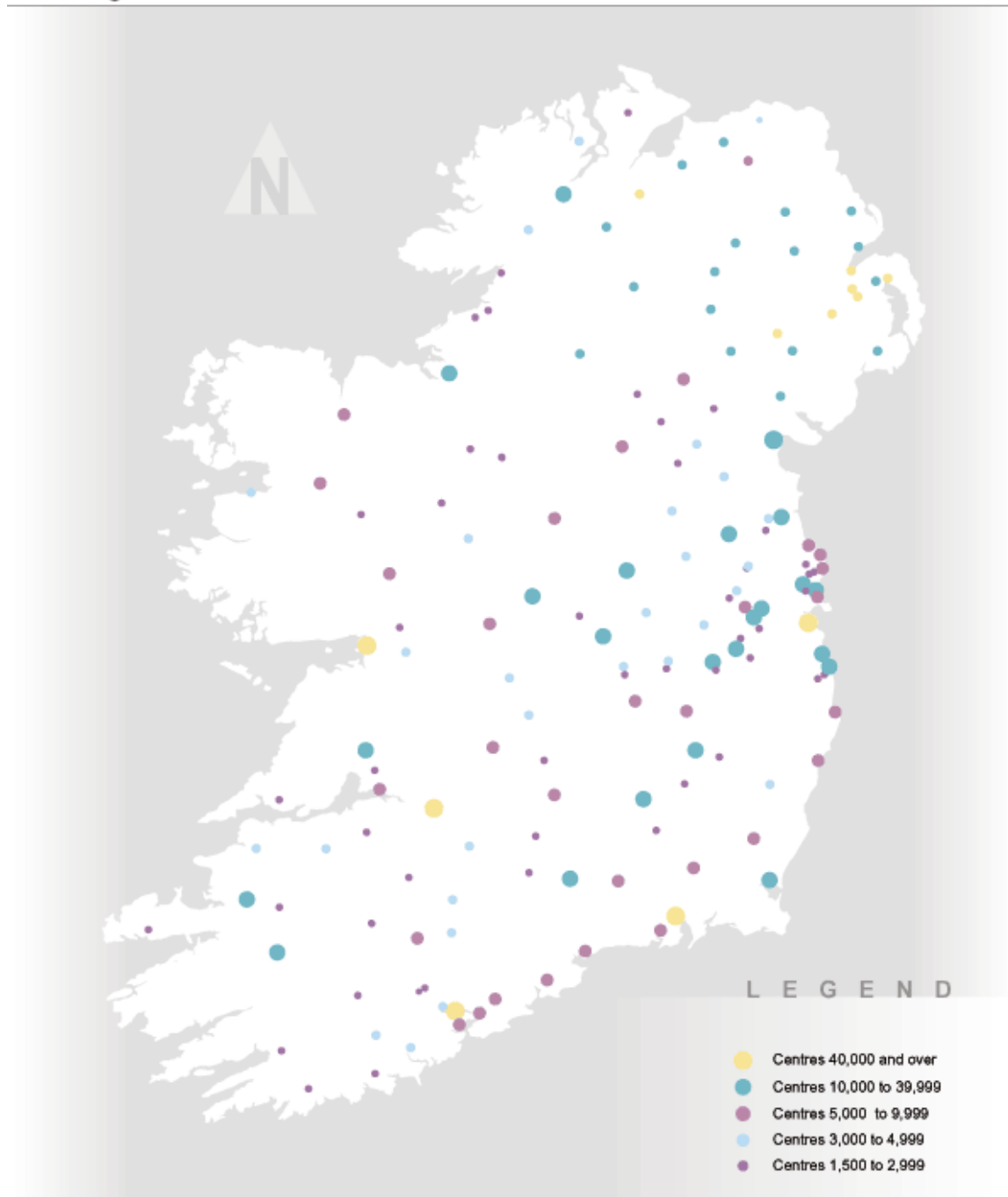
Report Structure

- 1.7 The figures for the relevant chapters are given immediately after the text for the chapter. Where possible, tables are incorporated into the text. However, in some instances it has been necessary to include them with the figures. Some lengthy tables are given in the Appendices.

Acknowledgements

- 1.8 Brady Shipman Martin wishes to acknowledge the great assistance given by its partners on this project, the National University of Ireland Maynooth and Fitzpatrick Associates, and to thank the individual team members for their dedication and support. We also wish to thank all those who assisted in providing information during the course of the study, including the Department of Education and Science, the Department of Agriculture and Food, Forfas and Bus Eireann, and the members of the Spatial Planning Unit of the Department of the Environment and Local Government.

Figure 1.1 - Urban Centres 1996



2 CONTEXT

Urban Systems

- 2.1 The spatial structure of an urban system may be defined as the pattern taken by the distribution of cities and towns in a defined area. The spatial settlement structure of a region is a result of the interaction between historical, political, social, technological and geophysical conditions.
- 2.2 The setting of cities and towns in an area, their spacing and the differences in their sizes correlated to those in their urban functions present some regularities that have been noted, analysed and classified in studies and models.
- 2.3 Cities are characterised by the fact that they are of supra-local importance. This is a result of the specific functions of the city in the regional or supra-regional context. The number and range of these supra-local functions creates a hierarchy of cities.
- 2.4 The concept of the city or town as the centre or focus of a region is a classical perspective that has been theoretically formulated by Christaller's Central Place Theory. Central Place Theory attempts to explain the size and distribution of settlements within an urban system, in which marketing is the most important urban function. The working assumption of the theory is that all systems of urban places are arranged in space in a hierarchical manner based on population size and service function complexity.
- 2.5 The range and threshold concepts classify functions (i.e. goods or services) as lower- or higher-order services. Lower order services have very limited ranges and thresholds while higher-order services have large ranges and thresholds. At each level every central place contains all the functions available at the lower levels, so that there is a nested group of market areas of lower-order places that it serves. The Christaller measure of centrality is a numerical expression of the degree to which a town serves its surrounding region.
- 2.6 Cities and city regions with functions of national, European or global importance have more complex and more abstract relationships with their catchments than regional centres. The importance of a national or international city is based on specialised political, financial or other functions rather than the supply of central goods and services to a region. The internationality of cities has, therefore, more to do with functional specialisation than with hierarchies of goods, services and catchment areas

- 2.7 Functional specialisation also explains the creation and role of certain cities and towns at a sub-national and regional level. Functional specialisation, at international, national or regional level, may include:
- Important political functions;
 - International administrative functions;
 - One or few dominant sectors, such as specialised services or manufacturing;
 - Cultural and tourist activities.
- 2.8 Particular conditions may also play an important role in the creation and development of specialised urban centres. These may include:
- Location in a border region;
 - Excellent infrastructure conditions, especially major transportation nodes;
 - Location within the commuter belt of a metropolitan area ('dormitory towns').
- 2.9 The concept of urban networks embraces a non-hierarchical organised system of horizontal communicative and co-operative relations between a set of urban centres. In general networks can be characterised by the aim to use synergetic effects such as functional division, exchange of experience and mutually beneficial spatial location. The urban centres participating in a network may be intra- or inter-regional.
- 2.10 Many of the urban centres in Ireland may be viewed primarily as central places or market towns, providing goods and services to rural hinterlands. These centres tend to have a wider range of functions and a greater level of provision, for example in terms of the number and size of retail outlets, than corresponds to their population size. Many of the centres also have important secondary functions in administration, manufacturing, etc.
- 2.11 Dublin is the only urban centre in Ireland where the range of political, financial and administrative functions, coupled with its cultural and tourist importance, gives it a claim to international significance.
- 2.12 Urban centres in Ireland with specialised functions include tourism resorts such as Killarney, manufacturing centres such as Shannon (also an important transport centre) and administrative centres, such as Lifford. However, all of these also have other significant functions and Ireland does not have any highly specialised 'company' towns or research centres. A feature of recent decades, in particular, has been the rapid growth of commuter settlements, especially around Dublin, but also around the other major cities.
- 2.13 The concept of urban networks is only now formally developing in Ireland.

Urban Systems in Europe

- 2.14** Table 2.1 and Fig. 2.1 shows the position of Dublin and Cork relative to a selection of European cities. These data refer to the legally defined city (in Ireland, the County Boroughs) and thus do not necessarily reflect the extent of the actual urban area. The limitations of considering just the legally defined cities is well illustrated by the relative position of Manchester.
- 2.15** Table 2.2 shows the position of Dublin relative to the wider territorial units of a selection of European cities. The wider territorial unit embraces the principal city and adjoining administrative areas, broadly corresponding to the built-up urban area. However, the data should be used with care, as administrative and urban areas are defined differently from country to country. In some cases the population data correspond to all people who have their main place of residence in the city. In other cities data correspond to de facto population where persons are present within the city boundaries on the night of the census and all persons arriving in that area in the following morning, not having been enumerated elsewhere. Other data correspond to persons recorded in the municipal registers. The data also originates from different years extending from 1991 to 1997.
- 2.16** Despite difficulties with the data, it is clear that, in European terms, even the larger Irish cities are relatively small in scale.
- 2.17** The spatial distribution of urban centres in Europe, of 10,000 population or more, is shown on Fig. 2.3. The heavy concentration of urban centres in England, Belgium, the Netherlands and parts of Germany is very evident. The distribution of major urban centres in Ireland corresponds to that in Scandinavia and, to a lesser extent, Scotland and the Iberian peninsula.
- 2.18** The size of the largest cities, such as London, Paris, Madrid, Barcelona, Berlin, Rome, Naples and Milan is also evident from Fig. 2.3. In France, in particular, the primacy of Paris over the other cities is clear, whilst countries such as Germany, Spain and Italy have less primate structures, even though the largest cities are among the largest in Europe.
- 2.19** The urban hierarchy of Ireland, as compared to that of Germany, Italy and Spain, is indicated on Fig. 2.4. In each case, the largest urban centre in the country is shown as 100%, with the four next largest urban centres shown in proportion. This chart again illustrates the primacy of Dublin in the urban hierarchy of Ireland.

Current Trends

- 2.20 The European urban system has altered and in many cases evolved or transformed since the advent of the European Economic Community. The principal economic, socio-cultural and political changes occurring in Europe and which are major factors in the transformation of the European urban system are summarised below.

Economic

- An economy with a labour force mainly in rural employment and which has become an economy mainly employed in industrial and service sectors.
- Primary industries and mechanical technology in national production relations has become focused on service industries and electronic technology in global production relations.
- Fordist mass production work organisation has switched to flexible specialisation and technological innovation,
- National champion and multinational oligopolies have become transnational production and globalisation of the economy.

Socio Cultural

- Cultural communities focused around the village and the city has changed to spread of universal values across all areas, encouraging multiple roles and identities for individuals.
- A relatively young age profile and a major source of emigration flows to a net receiver of significant immigration flows and increasing numbers of pensioners and older people.
- A traditional social structure based on mixed residence, large family and male workforce to a more open society with increasing participation of women, mobility and individualisation.
- Low levels of income and consumption to increasing affluence but also increasing economic polarisation and social inclusion.

Political

- A Europe of nation states, often in conflict to via the cold war to an integrated Europe, enlarging eastwards.
- A struggle for welfare policies focused on general social rights and needs to a struggle for a more flexible policy responding to multiple and specialised social and cultural claims.
- A politics of class struggle and massive social movements around relations and distributive issues to issue based politics around consumption qualities and concern for the environment.
- Expanding public sector budgets to austerity policies and severe pressures on public sector budgets.
- Primacy of national government intervention and international co-operation to resurgence of the locality, multi-level governance and strong trends for global regulation.

Source: Study Program on European Spatial Planning: Theme Study 2, Towards New Urban-Rural Partnership in Europe; 2.1 Main Trends Shaping the European Territory, 2000.

European Spatial Development Perspective

- 2.21 The European Spatial Development Perspective ESDP (adopted in 1999) is intended to act as a policy framework identifying the spatial impacts of the sectoral policies of the EU and member states. Its aim is to gradually achieve a spatial balance designed to provide a more even geographical distribution of growth across the territory of the EU aiming at cohesion.
- 2.22 Long term spatial development trends in the EU are influenced by three factors:
- the progressive economic integration and related increased co-operation between the member states;
 - the growing importance of local and regional communities and their role in spatial development; and;
 - the anticipated enlargement of the EU and the development of closer relations with its neighbours.
- 2.23 The report proposes a number of spatially orientated policy options under three spatial development guidelines which are an expansion of those agreed in 1994. These include:
1. Development of a polycentric and balanced urban system and strengthening of the partnership between urban and rural areas. This involves overcoming the outdated dualism between city and countryside.
 - Polycentric and Balanced Spatial Development in the EU
 - Dynamic, Attractive and Competitive Cities and Urbanised Regions
 - Indigenous Development, Diverse and Productive Rural Areas
 - Urban Rural Partnership
 2. Promotion of integrated transport and communication concepts which support the polycentric development of the EU territory and are an important pre-condition for enabling European cities and regions to pursue their integration into the EMU. Parity of access to infrastructure and knowledge should be realised gradually. Regional adapted solutions must be found for this.
 - Polycentric Development Model: A Basis for Better Accessibility.
 - Efficient and Sustainable Use of the Infrastructure.
 3. Development and conservation of the natural and the cultural heritage through wise management. This contributes both to the preservation and deepening of regional identities and the maintenance of the EU in the age of globalisation.
 - Creative Management of Cultural Landscapes
 - Creative Management of the Cultural Heritage

- 2.24 The main policies of the ESDP may be summarised into the following three areas;
- Achieving dynamic, attractive and competitive towns and cities, together with complementary and co-operation between them, the sustainable development of cities, partnership between towns and the countryside and the diversification of rural areas.
 - Better accessibility, more efficient and sustainable use of infrastructure and the diffusion of innovation and knowledge.
 - Conservation and development of natural heritage, the sound management of water resources and the conservation and creative management of cultural landscapes and of urban cultural heritage.
- 2.25 Traditionally polycentric referred to the development of alternative global centres of power mainly London and to some extent Paris. Europe has a number of sub-global cities performing global functions in specialised fields - Rome (culture), Milan (fashion), Frankfurt or Zurich (banking) etc. The ESDP adopts the principle of polycentricity, which is the dispersal of economic development from congested urban regions to other urban centres in less developed regions hence creating spread effects in that area. Europe consists of a central capital region and a large amount of gateway capital regions. Gateway Capital regions are generally recognised as being equipped with good access and transfer structures to other Member States.
- 2.26 The ESDP supports the principle of polycentricity on the assumption that it will tap into the potential of regional capitals within the 200,000-500,000 population range and smaller county towns in the 50,000-20,000 range. The main agents required to secure its success include accessibility coupled with investment in key high-level service infrastructure and good environmental quality thus permitting the expansion and competitive marketing of cities as places for inward investment and relocation. The success of this strategy may be accompanied by a limited amount of concentration to even smaller rural towns within the sphere of influence.

Tables

Table 2.1: Population of Selected European Urban Centres

Centre	Population
Cork	127,187
Lille	172,138
Bordeaux	217,871
Graz	240,179
Strasbourg	251,554
Nantes	265,000
Oporto	302,472
Cardiff	318,282
Nice	342,766
Bari	353,417
Toulouse	358,290
Florence	380,058
Lyon	425,000
Manchester	427,693
Edinburgh	450,200
Gothenburg	454,519
Dresden	456,102
Leipzig	457,173
Liverpool	463,708
Copenhagen	476,751
Dublin	481,854
Bradford	482,859
Helsinki	532,053
Malaga	549,135
Stuttgart	560,925
Rotterdam	592,745
Sargasso	601,674
Glasgow	611,660
Essen	612,690
Frankfurt	652,324
Genoa	653,529
Lisbon	663,394
Seville	697,485
Amsterdam	718,119
Stockholm	718,462
Leeds	727,476
Palermo	740,940
Valencia	746,683
Marseilles	799,849
Turin	919,602
Cologne	1,014,910
Birmingham	1,020,589
Naples	1,038,342

Table 2.1: Population of Selected European Urban Centres (*continued*)

Centre	Population
Munich	1,321,557
Milan	1,340,451
Barcelona	1,508,805
Vienna	1,613,240
Hamburg	1,707,247
Rome	2,801,389
Madrid	2,866,693
Berlin	3,458,763

Table 2.2: Population of Selected European Urban Centres - Wider Territorial Units

Unit	Population
Strasbourg	422,849
Toulouse	495,431
Nantes	546,000
Bordeaux	658,738
Stuttgart	866,631
Helsinki	905,555
Marseilles	962,634
Seville	983,662
Dublin	1,058,264
Lille	1,067,761
Oporto	1,113,112
Lyon	1,134,693
Rotterdam	1,146,108
Copenhagen	1,172,884
Stockholm	1,197,713
Valencia	1,344,436
Liverpool	1,413,441
Lisbon	1,611,598
Glasgow	2,266,564
Frankfurt	2,470,215
Manchester	2,571,849
Birmingham	2,630,642
Barcelona	2,904,941
Naples	2,909,244
Milan	3,540,060
Madrid	4,404,398

Figures

Figure 2.1: Population of Selected European Urban Centres

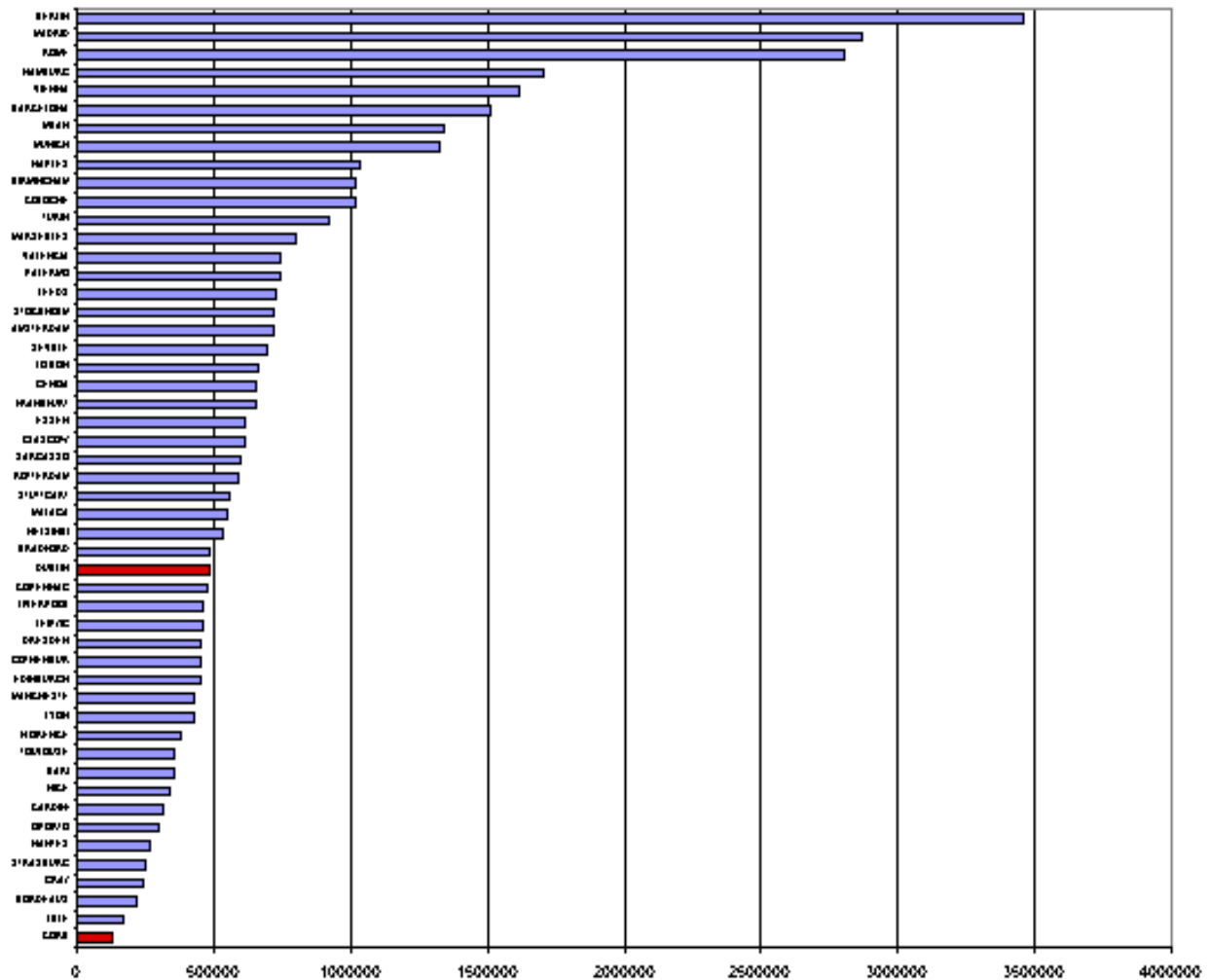


Figure 2.2: Population of Selected European Urban Centres - Wider Territorial Units.

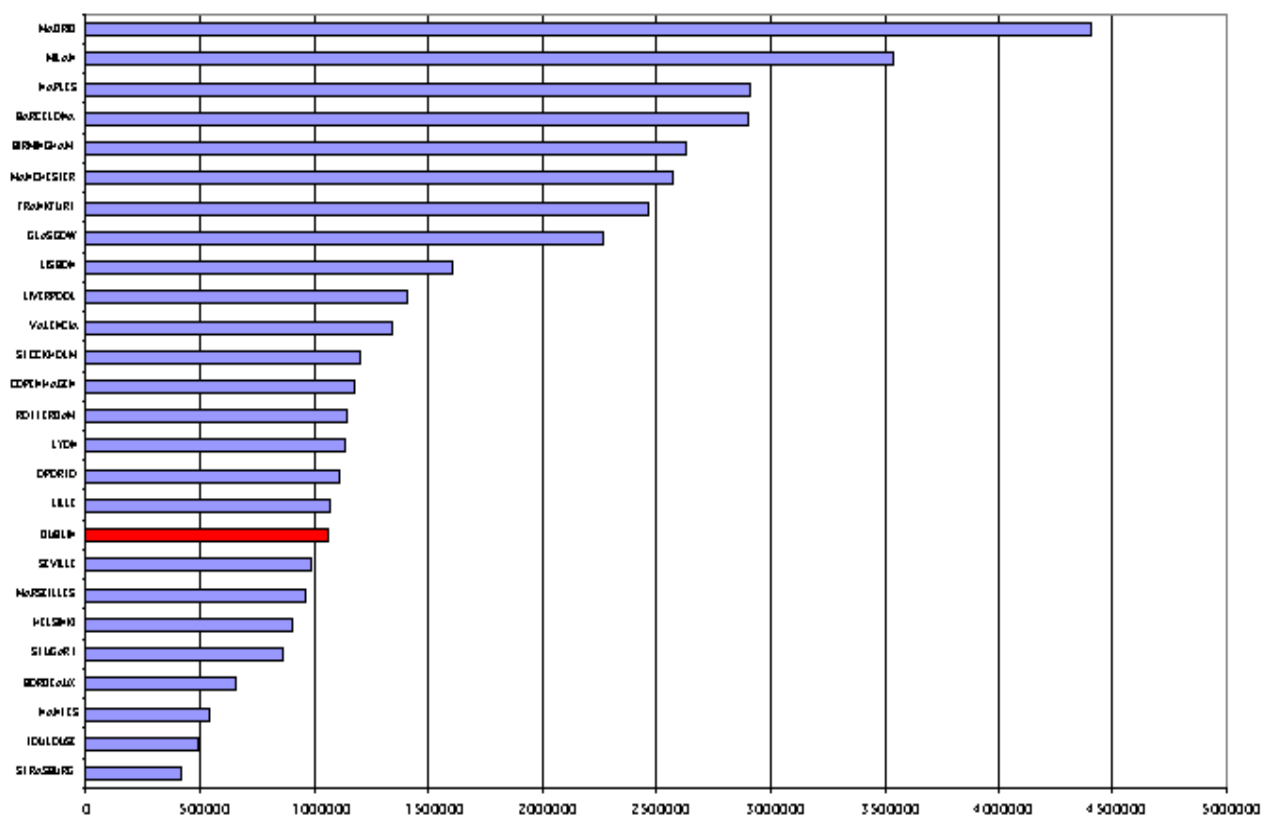


Figure 2.3:

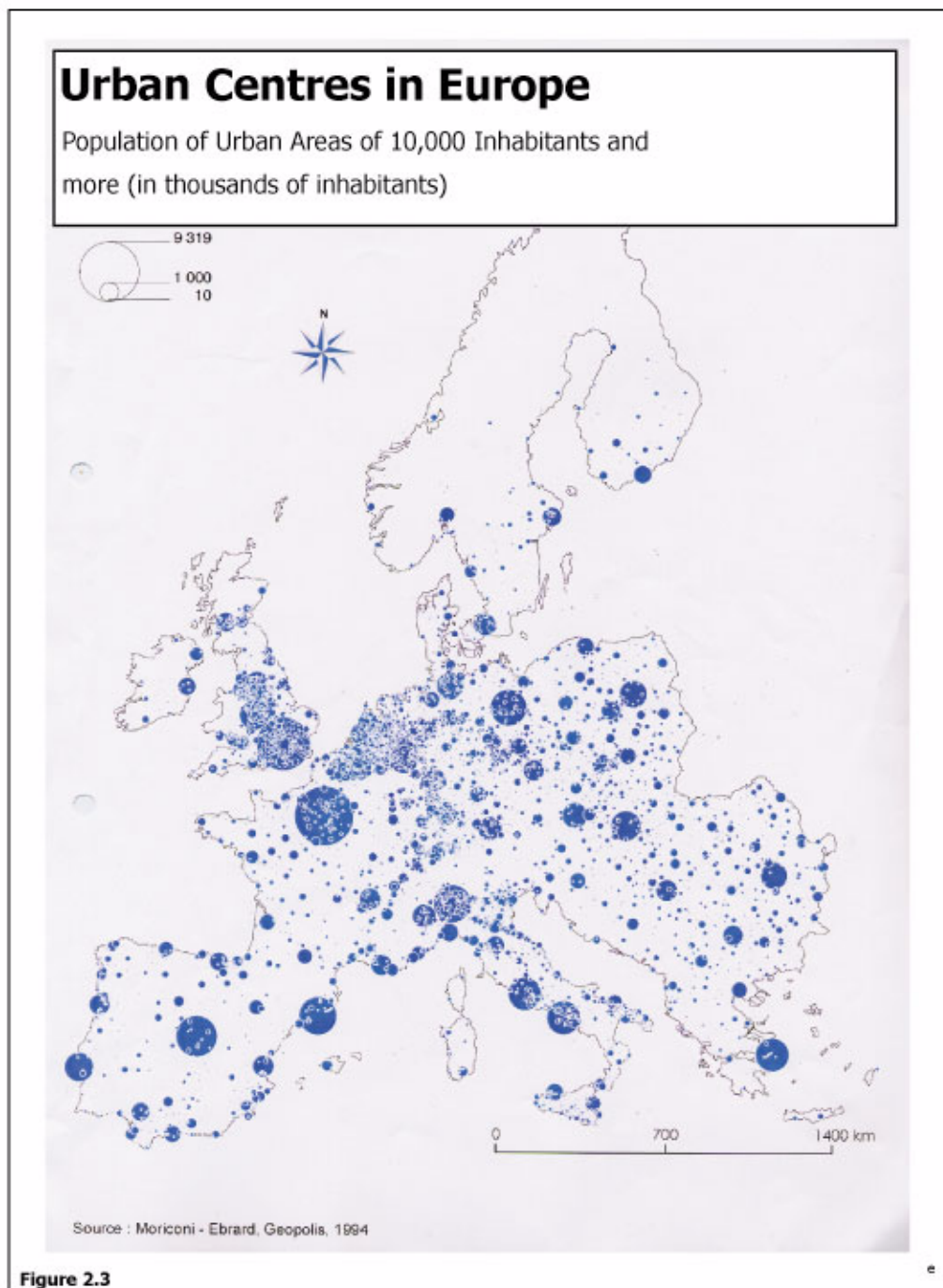
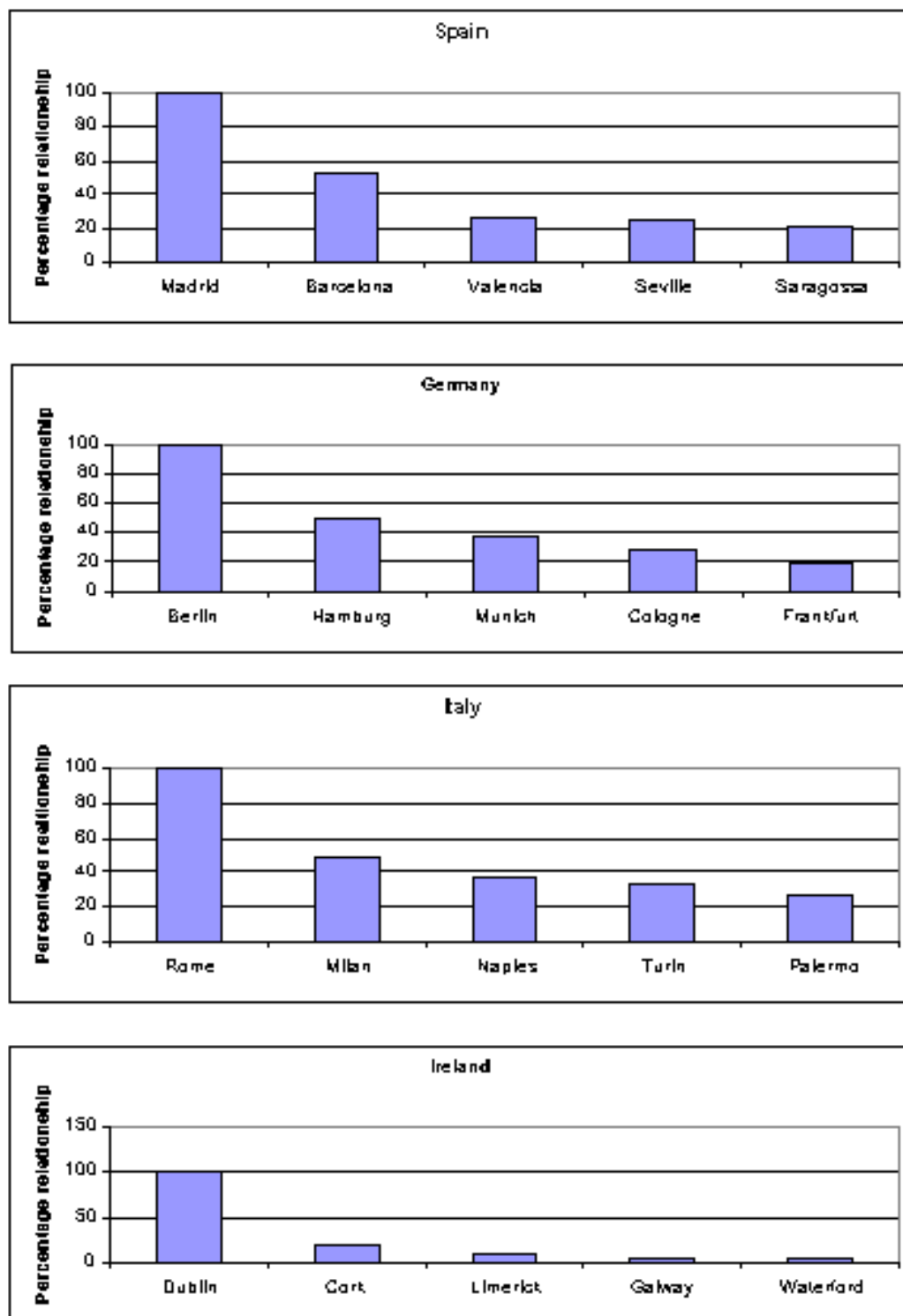


Figure 2.4: Comparison of Urban Hierarchy in Selected European Centres



3 PREVIOUS STUDIES

Introduction

- 3.1 The most relevant studies to aid an understanding of the dynamics of the Irish urban system include an application in 1970 of central place theory to Ireland (Republic and Northern Ireland) by Forbes, O'Farrell's analysis of urban spacing for Ireland as a whole and for Co. Tipperary (1970, 1968), a 1986 updating of O'Farrell's 1968 study, a study in 1978 of processes and patterns in Irish urbanisation by Bannon, and the 1986 paper by Bannon and Blair which ranked towns using indicators based on service activities. A number of more recent studies including the 1997 NESC report examined spatial patterns in the context of population distribution and change while the development of the city region is the focus of papers by Hourihan (1999), Horner (2000), and Williams and Shiels (2000). These studies are summarised below and a full literature review is given in Appendix 2.

Central Place Theory

- 3.2 **Forbes (1970)** is one of the earliest studies of the Irish central place system. It was written as a response to the weaknesses that Forbes recognised in the Irish Regional Plans of the 1960s. In particular, the paper contested the way in which the idea of growth centres had been applied to each region of Ireland as if it were a discrete spatial unit. Forbes pointed to the need for a national central place study to guide the choice of regional growth centres.
- 3.3 Forbes applied the Central Place model (see Chapter 2) to a study of the Republic of Ireland and Northern Ireland.

Findings

- 3.4 Forbes chose six indicator services, representative of major social and economic functions of a fairly high order as it was her intention to only pick out large enough central places to be considered as potential growth centres. Forbes compared the centrality score ordering of central places with the traditional rank/population size method. Galway city, large in population terms is ranked in functional terms 12th and the much smaller Armagh ranked 6th. However there is broad agreement between the two ranking systems and it was the author's opinion that a points scoring system is at least as good a method of assessing the relative importance of towns as straight population size and has an advantage in so far as the points system can be up-dated regularly (from annually published listings), while population size measures are tied to census years. A points scoring system also reflects the range of services provided by an urban centre, which will ultimately attract or deter new residents or new enterprises.

- 3.5 The study identified and mapped six levels in the urban hierarchy. At the lowest functional level, (i.e. the smallest urban centres) there is a striking spatial regularity in the distribution of the centres across the country. Progressing up the points scale, i.e. up the urban hierarchy, the pattern changes. At the higher levels the central place coverage shrinks into the urban plateau of northeast Ulster reflecting the greater density of functions in towns in Northern Ireland, with only isolated points in the rest of Ireland. At the very highest centrality values only the big coastal cities feature. The pattern demonstrates the urban dominance of Ulster. The rank order table places ten of Ulster's towns in the top fifteen towns of Ireland.

Limitations

- 3.6 There are limitations to the kind of information a map series like this one can convey. It does not, for example, easily pick out variations in the density of urban services coverage except at the extremes i.e. very high density coverage in Ulster and very low coverage in parts of the West and Midland. A measure of urban density is a useful proxy measure of accessibility to urban services, which is important for understanding the competitiveness and complementarity of central places in multi-nuclear urban regions. Forbes indeed noted the potential of such multi-nuclear regions as growth poles: "It might conceivably be more suitable to locate one's growth centre in an area where a number of medium order towns are found close together, rather than to crystallise new growth around a single free-standing city, even if it is very big and important" (Forbes p.307)
- 3.7 **O'Farrell (1970)** developed multi-variate (regression) models to investigate any systematic relationships existing between a number of factors (independent variables) and the spacing of urban centres. The first study models thirty-one towns of larger than 5,000 population and the second sixty-seven centres with a population of greater than 1,500.

Findings and limitations

- 3.8 Over two-thirds of the variation in the distance between a specific centre and its nearest neighbour of equal or larger population size, could be accounted for by three variables: population of centre, income density, and distance from the nearest city Dublin or Cork. Of these variables, size of centre was the most important, accounting for half of the total variation. Regional income level disparities were important in explaining distinct regional variations in the urban pattern. However regional income data is not generally available thus limiting the usefulness of this approach. Furthermore the one-third of spatial variation not explained by the model reiterates the importance of the chance element in the distribution of all geographical phenomena and the limitations of statistical models.

- 3.9 In 1986, Hourihan and Lyons updated O'Farrell's 1968 study of central places in Co. Tipperary. Each of the classified central places was revisited and all service functions were recorded. Changes in the social and economic organisation of society in the intervening period were expected to have changed the availability of individual services.

Findings

- 3.10 Three major empirical conclusions arise from the analysis. First, at the level of the overall central-place system, the 1968 services remained relatively stable with all services still available in 1986. Second, within the hierarchy the general pattern pointed to a decrease in service provision at the intermediate level of the hierarchy (i.e. the village level). Thirdly, services had been replaced by technology shifts (e.g., blacksmiths, bicycle repair), increased specialisation (e.g., paint stores, wallpaper stores as opposed to general hardware) or rationalisation (i.e., the squeezing out of more marginal concerns).
- 3.11 Conversely, increasing services were clustered at the level of the major towns. Over the twenty-year period, the five major towns (Clonmel, Thurles, Nenagh, Tipperary and Carrick-on-Suir) all with urban populations of over 5,000 had gained substantially in their number and range of functional units. New technologies, increased affluence, and changing consumer tastes had given rise to new services (e.g., video rentals, photocopier services, and sports stores). Invariably, all of these new services clustered at the upper end of the hierarchy. New services are likely to have relatively high minimum threshold populations and ranges, making location in towns a necessary requirement, at least initially. An important conclusion from this study is that the 5,000 population mark seems to be an important threshold that must be reached if a town is to diversify its service base.

Urban Hierarchy and Urban Hinterlands

- 3.12 Bannon's 1978 study attempted to define an urban hierarchy for the State and to relate it to a hierarchy of urban hinterlands or spheres of influence. Bannon produced a hierarchy of towns as retail centres. A total of seven levels of urban place in the urban hierarchy were identified. The catchment area boundaries (or trade areas) were based on two sources of published material: a study of local and regional newspaper circulations and a list of breakpoints in the inter-urban traffic flows. Identifying a trade area for Dublin posed difficulties - the higher the order of the good the wider the Dublin trading area until for cultural, entertainment and high quality durable goods Dublin's region becomes the State.

- 3.13 **Huff and Lutz's study (1979)** presents a statistically objective approach to delimiting hinterlands through a gravity modelling technique. The study is based on 114 urban centres (of population greater than 1,500 in 1970) at various levels in the urban hierarchy. The study reiterates the weakness of the urban system in the west and northwest. The method depends on a number of normative assumptions thus limiting its value in analysing the dynamics of the urban system.

Urban Hierarchy and Service Functions

- 3.14 **Bannon and Blair's 1986** study ranks Ireland's top fifteen largest cities/towns (and Letterkenny), on the basis of indicators relevant to the functioning of an urban place as a service location. A total of sixteen indicators were used.

Findings

- 3.15 The study brings out the fact that the difference between Dublin and other places is much greater than a comparison of population size would suggest. If regional centres in Ireland are to prove attractive to service industries and become counter-magnets to Dublin, they must provide a sufficient quality and range of facilities and amenities, which are demanded by high technology and service companies. The study shows that even the large urban centres outside Dublin offer relatively poor environments either for new service firms or for other firms wishing to interface with a range of good quality services. The comparative advantage of Dublin is evident in regard to all aspects of service activity but it is perhaps best exemplified in respect to the leakage to Dublin for the purchase of producer services i.e. business consultancy, PR, marketing and advertising.
- 3.16 A contact potential coefficient gives a measure of a centre's suitability for business meetings and contacts, and as a general business environment. Contact potential rapidly declines with distance from Dublin and is a further cause and effect of the centralisation of decision-making.
- 3.17 There is a high level of leakage from provincial towns towards the capital in terms of both financial flows and employment. The reasons for not using local firms related principally to the poor quality of the local supply and to protect confidentiality. The authors are of the opinion that the failure to implement an urban strategy had produced a self-reinforcing situation in which Dublin service firms retained and built upon their historical advantage. Since innovations tend to occur first in the capital city or major metropolis, it seemed likely that there exist strong and recurring forces that would ensure Dublin's continued, if not increasing dominance. The position of Dublin is greatly reinforced by infrastructural, technological and policy considerations.

Population Distribution and Economic Development

- 3.18 The 1997 report by the **National Economic and Social Council** examines spatial patterns and trends in settlement and population since the 1950s. The focus of the report is two-fold: to investigate the key aspects of settlement patterns at regional and sub-regional level and to define the public policy issues arising in the context of these patterns.
- 3.19 The theoretical backdrop to this report is a framework in which economic realities are (almost) the only explanatory variable underlying the factors and forces shaping settlement patterns. The report emphasises that public policy is only one of several potential factors influencing settlement patterns. The context, in which public policy is framed, is the existing distribution of economic activity. This is influenced by decisions on location, which are in turn affected by global supply and corporate factors. The resultant patterns then have a reciprocal effect on future settlement decisions. For example, urban settlements, once established, tend to attract new economic activities and population thereby reinforcing the initial attraction by cumulative causation. Four broad elements provide the basis for the analysis contained in this report. These are (i) existing settlement patterns (ii) patterns of distribution of economic activity (iii) spatial aspects of economic policy and (iv) issues concerning the spatial distribution of public services.

Population Change – Growth of City Regions

- 3.20 **Cork: Hourihan (1999)** describes changes in Cork's population and its spatial distribution in the period 1966-1996. At the beginning of this period, the city was still relatively compact, with just a small suburban area and limited commuting population. Although the population of the officially-defined city has been declining since 1979, this has been more than compensated for by a huge increase in the numbers of people living outside the immediate built-up area but dependent on the city for their livelihood and everyday requirements. Cork has been transformed into what the author calls a daily urban system or urban field.

Findings

- 3.21 Most of the aggregate population growth over the forty-year period occurred in the city suburbs, between 1981 and 1986. Up to 1991, the census figures showed a linear pattern of change, with decline at the city centre and surrounding area and suburban growth. In contrast, the central and inner city areas had the greatest increases between 1991 and 1996, while many of the suburbs in the county borough were in decline although importantly, those outside the city boundary were continuing to increase. A city centre population revival occurred in those parts of the city designated under the Urban Renewal Bill (1986), similar to Dublin from 1991-1996, reversing the trends of the previous quarter-century.

Some of the revival of the city centre is due to market forces, which have made it more attractive for investment and the kind of gentrification, and renewal that has occurred in many Western cities over the past couple of decades. However, Cork Corporation played an important role in its regeneration by being very sensitive to the needs of the city centre. The new residents of the city centre are of a different type than the “urban villagers” type communities that they replaced. They are generally young, single, mobile, renting their accommodation and not intending to make it their permanent home. The authors do not expect the city centre population to increase much further because of the social composition of the newcomers and the ending of the urban renewal initiatives for new building.

- 3.22 There was a massive extension of the suburban boundary for the 1986 census, with an area of almost 130 km² being defined as Cork’s suburbs. Several of the towns in the 1981 map were incorporated into the built-up area. In reality, these areas are not nearly as continuously built up as the term “suburb” implies and include large areas of detached one-off housing. Serving these areas by public transport is almost impossible, and this exacerbates the dependency on private cars and the modal constraints that dominate Cork’s transport system.
- 3.23 Similar problems of definition apply to some of the census towns in the area. Several of them are really residential clusters rather than towns or villages with an economic function and local identity. They may have a few shops and pubs for everyday use, but most of their residents’ shopping is almost certainly done in Cork or in the suburban shopping centres on the periphery of the city. It could well be argued that the distinctions are unimportant since all of these areas are within the immediate vicinity of the county borough and certainly part of Cork’s daily urban system.
- 3.24 **Dublin: Horner (2000)** traces the spread of Dublin city from a compact “Slum city” at the beginning of the twentieth century to what Horner describes as a “Globalised City Region” which stretches out into the counties of Meath, Kildare, Wicklow and Louth over a radius of over fifty kilometres. Changes in the urban population in the hinterland of the city are considered in relation to a set of four 8 kilometre and one 16 kilometre-wide, concentric zones focused on the city centre.

- 3.25 In 1936, over 80% of the urban population within a 48 kilometre radius of the city was actually located in the 0-7 kilometre band. During the Garden City phase thirty years later (1960s) population had halved in the inner city and doubled in the outer parts of the 0-7 kilometre zone as new suburban areas were developed. Outward expansion continued over the next twenty years beyond the eight kilometre zone of the Garden City. The 1970s witnessed the five and six-fold increases in many places beyond the main built-up area for example at Portmarnock, Malahide, Leixlip and Celbridge. After a period of relatively slow change during the 1980s, population growth again accelerated during the 1990s connected with a wider demographic restructuring marked by a significant shift to smaller household sizes. The increase in the population of the inner city reversed a trend of decline evident since 1936.
- 3.26 The revival of the inner city (i.e. the construction of new apartment blocks) has taken place alongside major economic developments like the internationalisation of the high street and the accelerated expansion of Dublin as a tourist location. Developments on the edge of the city like the cordon of hi-tech industries of Intel, Hewlett-Packard, IBM, Microsoft and Dell serve as a reminder that this is not just a Globalised City but a Globalised City Region.
- 3.27 **Williams and Shiels (2000)** examine the factors that have prompted Dublin's acceleration into sprawl. Dublin enters the twenty-first century with a contradictory set of urban development patterns: innovative urban renewal policies which are internationally viewed as relatively successful and management of the peripheral development of the region which is generally seen to be inadequate to deal with the recent phase of economic growth.

Findings

- 3.28 The emerging development of Dublin can be described as a result of infrastructure-led speculative development with the notable absence of inter-suburban transport links and essential infrastructure. Partly because fiscal policy interventions in the housing area have tended to support new buildings at greenfield locations, sprawl into peripheral areas has been encouraged around the more desirable centre. This, allied with an increased dependence on edge city retail developments, encourages car usage and complements the edge city employment pattern.

- 3.29** 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. (Cawley 1996). The spatial expression of the increased level of economic activity in the East Region has been characterised by a dispersal of population, housing and employment functions from the Dublin Metropolitan Area to an expanded commuter belt. This new zone, according to the authors now encompasses a region of up to 90km from Dublin city centre, well beyond the boundary of the East region that has been adopted as the zone of Dublin's influence for both strategic planning and transportation purposes. Locations such as Rochfortbridge in Westmeath, Gorey and Bunclody in Wexford and Castlecomer in Kilkenny have experienced new housing development marketed to Dublin commuters. A strongly emerging trend is characterised by the development of housing schemes in small villages that have not previously experienced large amounts of construction. Such villages are widely dispersed throughout the Dublin Commuter Belt and include locations such as Clonard, Stamullen and Ballivor (Meath), Carbury and Prosperous (Kildare), Aughrim and Baltinglass (Wicklow), Kinnegad (Westmeath) and Collon (Louth).
- 3.30** The move by housing developers to locations increasingly further from Dublin means that the Outer Leinster counties (Louth, Westmeath, Offaly, Laois, Carlow and Wexford) beyond the Mid-East Region are increasingly becoming integrated into the Dublin Commuter Belt. There is also a less prominent "pull" factor of an improved transport infrastructure involved here. Growth is not uniform however, with counties Louth and Westmeath experiencing growth in excess of the remainder of the outer Leinster counties.

Conclusions

- 3.31 The following conclusions are common to the central place studies on of the Irish urban system:
1. The most distinctive feature of the Irish urban system is its strongly “primate” nature, i.e. Dublin is much larger than any other urban place and dominates the economic and social life of the country to an overwhelming degree. While Belfast sits on an urban plateau, Dublin is an *“extraordinarily isolated giant in the urban system”*.
 2. There is a well-developed hierarchy of urban centres in the south and southeast. This area is arranged around the regional capitals of Waterford, Cork and Limerick.
 3. West of a line that runs approximately from Limerick to Dundalk i.e. the west and northwest regions, there is a poorly developed urban system. Urbanisation levels are generally low and for various reasons large urban centres have not developed. Large parts of territory are arranged around small towns with an absence of higher order places.
- 3.32 In smaller area central place studies, (O’Farrell (1968) and Hourihan and Lyons (1986)) a threshold of 5,000 population emerges as dividing those towns that dwindled or diversified their economic base between 1968 and 1986. There may be considerable movement in the hierarchy at lower levels while the upper levels of the hierarchy show considerable stability over time.
- 3.33 Formal statistical approaches to understanding the Irish urban system have been of mixed benefit. Huff and Lutz’s (1979) technique is only useful at picking out central places and their hinterlands at the lowest levels of the hierarchy where it reinforces earlier observations about the relative sparsity of urban centres in the west and north-west of Ireland. O’Farrell’s (1970) regression analysis reveals very little new about the urban system but it does provide evidence in support of the hypothesis that regional income levels are an important part of the explanation of regional differences in urban density.
- 3.34 Bannon and Blair (1986) highlighted the importance of the economic functions provided by large towns in an economy driven by the service sector. Echoing earlier author’s “primate” interpretation of the Irish urban system, they emphasise the extent of the gap in the urban system between Dublin and all other cities or towns in terms of the range and quality of services provided for business.

- 3.35** Horner (2000), Williams and Shiels (2000) and Hourihan (1999) present a new generation of studies based on an interpretation of the functional space of an urban centre as being that “city-region” or “urban field” which can attract activities because of its proximity to the urban and agglomeration economies which were originally located in the city. Characteristics of the developing city-regions of Cork and Dublin include: a general outward expansion of settlement and economic activity, huge increases in the population of places outside the built-up area and “edge-city” industrial and retail developments around a declining core. The authors all emphasise the detrimental impact of sprawling city-regions for the achievement of sustainability goals and the efficient provision of public goods.
- 3.36** It should be noted that the literature review did not include any studies dealing with the historical origins of Irish urban centres and therefore no reference has been made to the extent to which historical factors contribute to an understanding of the dynamics of the urban system.

4 DISTRIBUTION AND HIERARCHY OF URBAN SETTLEMENTS

4.1 The principal features of the distribution and hierarchy of urban centres in Ireland include:

- The primacy of Dublin, which is the overwhelmingly dominant urban centre.
- The aggregate population of the four other County Boroughs is only 38% that of Greater Dublin.
- There is a good size and spatial distribution of urban centres below 40,000 in population, though there is a bias towards the east and south-east for the larger towns.
- The urban structure of the east, south and south-east is relatively well developed but the west and north-west of the country has a less developed structure, with relatively few large urban centres.
- The urban structure of Northern Ireland is characterised by a greater density of larger urban settlements than the Republic and with a less primate hierarchy.
- The spatial distribution of urban centres is influenced by topography, whilst the road network reflects the distribution of the urban centres.
- Nearly half of all urban centres of 5,000 population and over are located on or near the coast.

4.2 All of the settlements in Ireland with a population of 130 and over are listed in Table 12 of the Census of Population. These are given in Appendix 3, together with their populations at each Census year from 1981. The changes in population of the towns and cities over 1500 (in 1996) are given in Appendix 4.

Definitions of Dublin

In the analysis, the following meanings are used:

Dublin	General term meaning the built-up area of Dublin.
Dublin City	Dublin County Borough
Greater Dublin	The enumeration area used by the Central Statistics Office for the Census of Population. It includes Tallaght, Lucan, Clondalkin and Blanchardstown but not Swords, Malahide, Portmarnock or Bray.
Greater Dublin Area	The area covered by the Strategic Planning Guidelines including Dublin County Borough and all of the Counties of Dun Laoghaire-Rathdown, Fingal, Kildare, Meath, South Dublin and Wicklow.
Dublin Metropolitan Area	The area designated for intensive development in the Strategic Planning Guidelines for the Greater Dublin Area extending from Donabate to Greystones and inland to Maynooth and Kilcock

Size Distribution

- 4.3 The size distribution of Irish urban centres is overwhelmingly dominated by Dublin. In 1996, Greater Dublin had a population of 952,692, which represented over a quarter of the national population.
- 4.4 The dominance of Dublin is even more marked if centres in close proximity to the city, such as Swords, Bray, Greystones, Maynooth, Leixlip and Celbridge are included. The Dublin Metropolitan Area, as defined in the Strategic Planning Guidelines for the Greater Dublin Area, had a population in 1996 of 1,109,211, or 30.6% of the national population.
- 4.5 The relative proportion of the national population represented by Greater Dublin, the Dublin Metropolitan Area and the Greater Dublin Area (as defined above) is given in Figs. 4.1, 4.2 and 4.3.
- 4.6 The next largest settlement after Greater Dublin is Cork, followed by Limerick, Galway and Waterford (Table 4.1; Fig. 4.4). The population of Cork in 1996 was 179,954. This represented 5% of the national population. Cork was just 18.9% of the size of Dublin in 1996. Together, the population of the four largest centres after Dublin represents only 38% that of Greater Dublin.
- 4.7 The size distribution of urban centres between 10,000 and 40,000 is given on Fig. 4.5, that of centres between 5,000 and 10,000 on Fig. 4.6 and that of centres between 3,000 and 5,000 on Fig. 4.7. The size distribution of urban centres below 40,000 is relatively well balanced and the system becomes more balanced as the size of the centres falls.
- 4.8 The primacy of Dublin is again evident from Fig. 4.8, which shows the relative size of the 15 most populated urban centres.

Spatial Distribution

- 4.9 Topographical features, including mountain ranges, major rivers and lakes and areas of lowland bog, significantly influence the distribution of urban centres in Ireland (Figure 4.9).
- 4.10 As may be expected, there is a strong correlation between the location of urban centres and major roads, which in turn, are influenced by topographical features (Figure 4.10).
- 4.11 The spatial distribution of towns and cities of over 1,500 population is shown on Figure 4.11. These centres are named on Fig. 1.1. The relatively greater concentration of urban centres in the east and south of the country is evident from this map. Also evident is the greater concentration of larger urban centres in the east and south.
- 4.12 The spatial distribution of urban centres of different sizes is shown on Figures 4.12 to 4.17. The five largest urban centres are the County Boroughs, with their suburbs and environs. Each of these is located on or near the coast (Figure 4.12).

Urban Centres 10,000 - 39,999

- 4.13 There are 23 settlements between 10,000 and 39,999 in size. The spatial distribution of these centres is shown on Figure 4.13.
- 4.14 There is strong clustering of urban centres in the 10,000 to 39,999 category in the east and south-east of the country. Some of these centres, such as Bray, Swords, Malahide, Leixlip, Celbridge and Greystones, have grown very rapidly in recent years and are effectively part of Greater Dublin, being located within the area identified in the Strategic Planning Guidelines for the Greater Dublin Area as the Metropolitan Area.
- 4.15 Other centres in this category have also been influenced by the economic and employment growth in the Dublin region, including Dundalk, Drogheda, Naas, Droichead Nua, Navan, Mullingar, Tullamore, Carlow and, probably to a lesser extent, Athlone.
- 4.16 Four of the centres in this category, Tralee, Sligo, Killarney and Letterkenny, are located in relatively isolated parts of the country, where they are the most important towns. There is no urban centre of this size category in Counties Cork and Galway, possibly reflecting the relative primacy of Cork and Galway cities in a regional context.

Urban Centres 5,000 - 9,999

- 4.17 There are 29 settlements in the 5,000 to 9,999 population range. The spatial distribution of these towns is shown on Figure 4.14.

- 4.18 Towns in the 5,000 to 9,999 category are fairly widely distributed throughout the country, but with some clustering around Dublin and Cork. Interestingly, these are no towns of this size in Counties Sligo, Kerry, Kilkenny, Louth, Offaly, Westmeath or Donegal, where there are towns of the next highest category.

Urban Centres 3,000 to 4,999

- 4.19 There are 27 settlements in the 3,000 to 5,000 population range. The spatial distribution of these towns is shown on Figure 4.15.
- 4.20 There is some clustering of towns in this category in the area to the north and west of Dublin, with few in the west or south-west. Towns in this size category are the largest urban centres in Counties Roscommon and Limerick (outside the County Borough).

Settlements 1,500 - 2,999

- 4.21 There are 48 towns in the 1,550 to 2,999 population range. The spatial distribution of these towns is shown on Figure 4.16, from which it will be seen that they are distributed throughout the country. In County Leitrim, this is the largest size category of town.

All Settlements of 5,000 and Over

- 4.22 The distribution of all settlements of 5,000 population or over is shown on Figure 4.17. From this, it will be seen that there is greater concentration of towns and cities in the east and south of the country. The concentration of towns around Dublin is partly explained by the expansion of the city.
- 4.23 West of Cork, Mallow and Limerick, there are just two settlements of over 5,000 population - Tralee and Killarney. There are few towns of this size in the west and north-west of the country and the density of smaller towns in these areas is also significantly lower than in the east and south.

Comparative Size

- 4.24 Figure 4.18 shows all of the towns over 1,500 in proportion to their population size. The overwhelming size of Dublin, especially when added to its various satellite and commuter settlements is very evident. Cork, Limerick and Galway are much smaller in comparison, though still large settlements in the Irish context.
- 4.25 The relative development and strength of the urban system in the south and east of the country is again evident from Figure 4.18. Not only are there more towns in this part of the country, but they are larger.

Urban Centres in Northern Ireland

- 4.26** The principal urban centres in Northern Ireland are listed in Table 4.2 and shown in proportion to their population size on Fig. 4.19. It should be noted that the population basis for the analysis of urban centres in Northern Ireland is for 1991, though estimates for some centres for 1996 are given in Table 4.2.
- 4.27** The distribution of the urban centres of 5,000 and over in Northern Ireland, as compared to the Republic, can be seen in Figs. 4.12, 4.13, 4.14 and 4.17. There are 11 urban centres in Northern Ireland in the 5,000 to 9,999 category whilst there are 29 such settlements in the Republic. Northern Ireland has 4 urban centres of over 40,000 population, whilst there are only 5 such settlements in the Republic.
- 4.28** As can be seen from Figure 4.19, which shows all of the urban centres of 5,000 population and over on the island of Ireland, there is a greater density of larger urban settlements in Northern Ireland.
- 4.29** Centres close to the Border include Newry, Armagh, Enniskillen, Strabane and Derry/Londonderry. These urban centres, and the corresponding centres in the Republic, have been affected by the presence of the Border, which has influenced their functions and has curtailed their former spheres of influence. Fluctuating circumstances on each side of the Border, including changes in exchange rates and taxation policies, have been reflected in the relative performance of the Border towns.
- 4.30** The hierarchy of urban centres in Northern Ireland, as compared to the Republic, is shown on Figures 4.20 and 4.21, whilst their relative size is shown on Fig. 4.22. Given the relatively smaller area of Northern Ireland as compared to the Republic, the higher density of urban settlements and their relatively larger size, is evident.

Density of Towns and Villages per County and Region

- 4.31** The density of towns per county, based on 1996 census figures can be seen in Table 4.3. The list includes towns from less than 500 people (314) through to greater than 40,000 (5). The average density of towns in Ireland is 0.9 per 100 square km. Dublin and Louth share the highest density of towns, both have a density of 2.1 towns per 100 square km. Dublin has a relatively small number of towns (19), but their size (7 are over 5,000) and the small area of Dublin county account for the high density figure. Louth has only 17 towns, again at a density of 2.1 per 100 square km. The size and prominence of Dundalk and Drogheda in the county as well as its small area account for the high density figure. Not unexpectedly Kildare has the third highest density at 1.8, followed by Meath and Wicklow at 1.2 towns per 100 square km, major parts of these counties form the Greater Dublin Area.

- 4.32 The counties of Longford and Leitrim have the lowest number of towns, 8 and 10 respectively, but it is Galway and Mayo that share the lowest density of towns which stands at 0.4 per 100 square km. Cork and Donegal have the highest number of towns, which are 79 and 52 respectively. This reflects their relatively large area, but their densities are identical at 1.1 per 100 square km, just above the national average. In all cases, the ratios are calculated within existing County Boundaries.
- 4.33 Table 4.4 shows the density of towns per region, based on 1996 census figures. The figures show a clear distinction between the South and East and the Border, Midlands and West regions. The South and East has a higher number of towns (387) and a correspondingly higher density at 1.1 per 100 square km compared to 250 towns and a density of 0.9 in the Border, Midlands and West. The Border, Midlands and West has a higher percentage of towns less than 1500 (84%) compared to the South and East which has 77% of its towns below the 1500 population mark, reflecting its more rural nature.

Conclusions

- 4.34 Dublin is undoubtedly the overwhelmingly dominant urban centre in the country. Consequently, Ireland has an urban structure with a strong primate city (Dublin Metropolitan Area) that contains almost one-third of the national population. The remaining 4 of the 5 most populated urban centres have an aggregate population equal to 38% of Greater Dublin.
- 4.35 There is a good size distribution in urban centres below 40,000 in population. These are generally well distributed throughout the country, but with a bias towards the east and south-east for the larger towns. This is also reflected in the density of urban settlements in the southern and eastern counties, which is markedly higher than in other counties throughout the country. Dublin is the obvious influence but the prominence of centres in rural remote areas such as Tralee, Sligo and Letterkenny in the 10,000 to 39,999 range reflects their importance as regional “sub-capitals”.
- 4.36 The urban structure of the east, south and south-east is relatively well developed but the west and north-west of the country has a less developed structure, with relatively few large urban centres. Nevertheless, the border counties have average or above average town densities with the exception of Leitrim and the urban structure of these counties needs to be considered in the context of urban centres in Northern Ireland, as well as in adjoining counties in the Republic.
- 4.37 The urban structure of Northern Ireland is characterised by a greater density of centres and particularly larger urban settlements than the Republic. It also has a less primate hierarchy.
- 4.38 The spatial distribution of urban centres is influenced by topography, whilst the road network reflects the distribution of the urban centres.

- 4.39** It may be noted that 27 of the 47 urban settlements of 5,000 and over (47%) are situated on or near the coast. Proximity to ports serving Britain and Continental Europe was a factor in the development of Irish towns and is a factor in explaining the relative higher densities of larger urban centres in the east and the south.

TABLES

Table 4.1: The Relative Size of the Four Most Populated Centres Compared to Greater Dublin 1996

	Population	% of State	Comparison to Dublin
State	3,626,087		
Greater Dublin	952,6922	26.3	100.0%
Cork and Suburbs	179,954	5.0	18.9%
Limerick & Suburbs	79,137	2.2	8.3%
Galway & Suburbs	57,363	1.6	6.0%
Waterford	44,155	1.2	4.6%
Total percentage of the State population		36.3	

Table 4.2: Population of Principal Urban Centres in Northern Ireland 1991, 1996

Centre	1991	1996 estimate
Belfast	279237	297300
Londonderry	72334	84200
Newtownabbey	57103	62600
Lisburn	42110	43900
Newtownards	24301	25700
Newry	22975	28850
Carrickfergus	22885	25400
Lurgan	21905	
Portadown	21299	
Antrim	20878	22100
Coleraine	20721	23100
Bangor	19526	56200
Larne	17575	17600
Omagh	17280	19050
Armagh	14640	14750
Dundonald	12943	
Dunmurry	12771	
Banbridge	12529	13650
Strabane	11981	12400
Enniskillen	11436	1200
Limavady	10764	11500
Cookstown	10472	10700
Downpatrick	10257	10300
Dungannon	9420	10850
Comber	8516	
Ballymoney	8242	8350
Ballyclare	7761	
Newcastle	7214	
Magherafelt	7143	7600
Portstewart	6459	
Kilkeel	6123	
Portrush	5703	
Warrenpoint	5637	
Ballinahinch	5196	
Randelstown	4290	

Source: 1991 figures from Census of Population, Northern Ireland; 1996 estimates are taken from 'Shaping of Future', Department of the Environment (NI).

Table 4.3: Density of Towns per County, 1996

County	Number of Towns per County								Towns per 100 Sq. Km
	<500	500-1499	1500-2999	3000-4999	5000-9999	10000-39999	>40000	Total	
Dublin	3	4	5	0	4	2	1	19	2.1
Kildare	11	7	4	2	2	4	0	30	1.8
Meath	14	6	2	5	0	1	0	28	1.2
Wicklow	7	11	3	0	2	2	0	25	1.2
Carlow	5	3	2	0	0	1	0	11	1.2
Kilkenny	9	11	1	0	0	1	0	22	1.1
Tipperary S.R	10	4	2	1	1	1	0	19	0.8
Waterford	6	7	0	0	1	0	1	15	0.8
Wexford	17	6	0	1	1	1	0	26	1.1
Cork	45	15	8	5	5	0	1	79	1.1
Kerry	19	8	2	1	0	2	0	32	0.7
Clare	12	11	2	0	1	1	0	27	0.8
Limerick	19	15	1	1	0	0	1	37	1.3
Tipperary N.R	8	5	1	1	2	0	0	17	0.8
Galway	13	9	1	1	2	0	1	27	0.4
Mayo	9	12	1	1	2	0	0	25	0.4
Roscommon	6	3	2	1	0	0	0	12	0.5
Laois	7	6	1	1	1	0	0	16	0.9
Longford	3	4	0	0	1	0	0	8	0.7
Offaly	14	4	1	2	0	1	0	22	1.1
Westmeath	9	5	0	0	0	2	0	16	0.9
Cavan	11	4	2	0	1	0	0	18	0.9
Donegal	30	15	4	2	0	1	0	52	1.1
Leitrim	5	4	1	0	0	0	0	10	0.6
Louth	8	6	0	1	0	2	0	17	2.1
Monaghan	8	1	2	1	1	0	0	13	1.0
Sligo	6	7	0	0	0	1	0	14	0.8
	314	193	48	27	27	23	5	637	0.9

Source 1996 Census of Population Volume 1 Areas

Table 4.4: Density of Towns per Region, 1996

Region	Number of Towns per Region								Towns per 100 Sq. Km
	<500	500-1499	1500-2999	3000-4999	5000-9999	10000-39999	>40000	Total	
Dublin	3	4	5	0	4	2	1	19	2.1
Mideast	32	24	9	7	4	7	0	83	1.4
Southeast	47	31	5	2	3	4	1	93	1.0
Southwest	64	23	10	6	5	2	1	111	0.9
Midwest	39	31	4	2	3	1	1	81	1.0
South & East	185	113	33	17	19	16	4	387	1.1
West	28	24	4	3	4	0	1	64	0.4
Midlands	33	19	2	3	2	3	0	62	0.9
Border	68	37	9	4	2	3	1	124	1.0
Border, Midlands & West	129	80	15	10	8	7	1	250	0.8
State	314	193	48	27	27	23	5	637	0.9

Source: Census of Population 1996 Vol 1 Areas

Figures

Figure 4.1: Population of Greater Dublin as Proportion of State

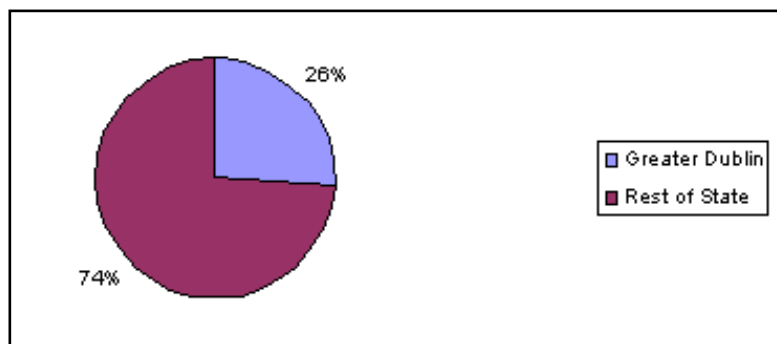


Figure 4.2: Population of Dublin Metropolitan Area as Proportion of State

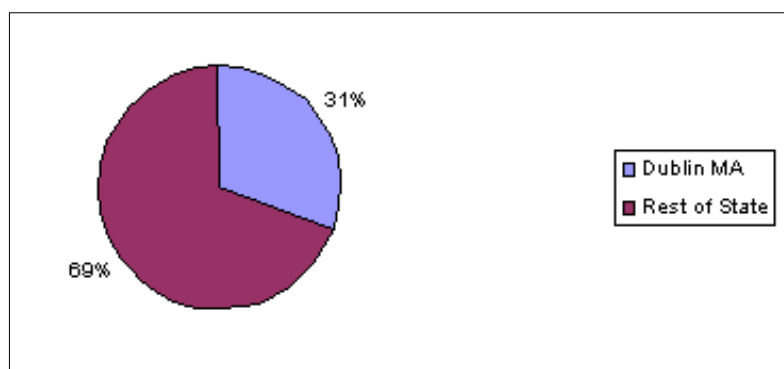


Figure 4.3: Population of Greater Dublin Area as Proportion of State

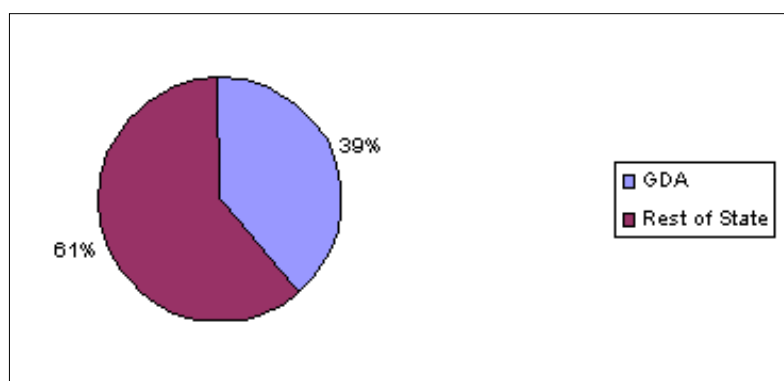


Figure 4.4: Population of Urban Centres over 40,000

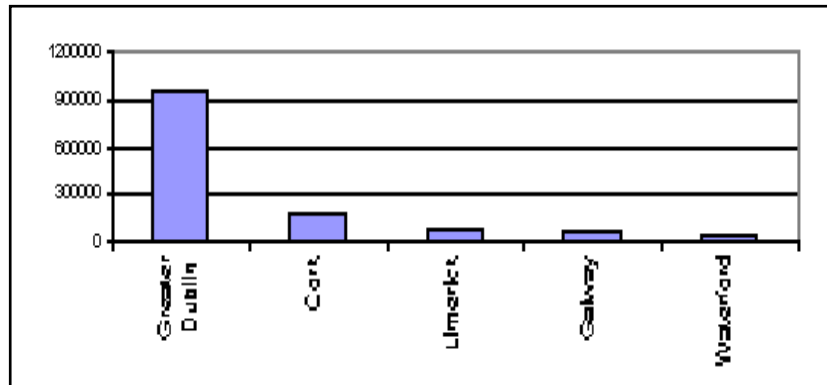


Figure 4.5: Population of Urban Centres 10,000 to 40,000

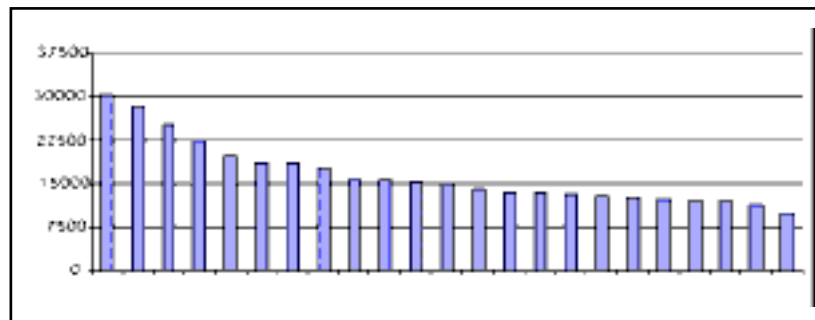


Figure 4.6: Population of Urban Centres 5,000 to 10,000

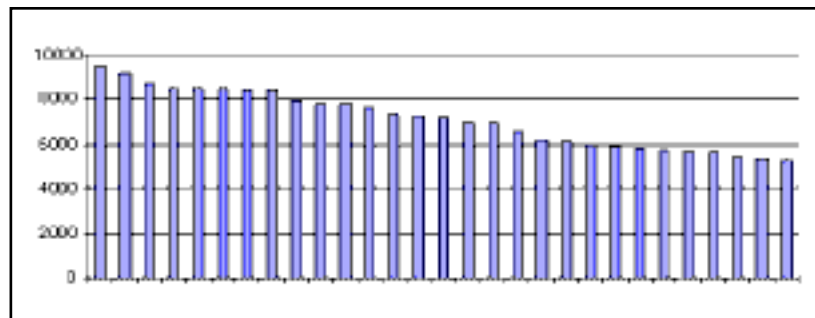


Figure 4.7: Population of Urban Centres 3,000 to 5,000

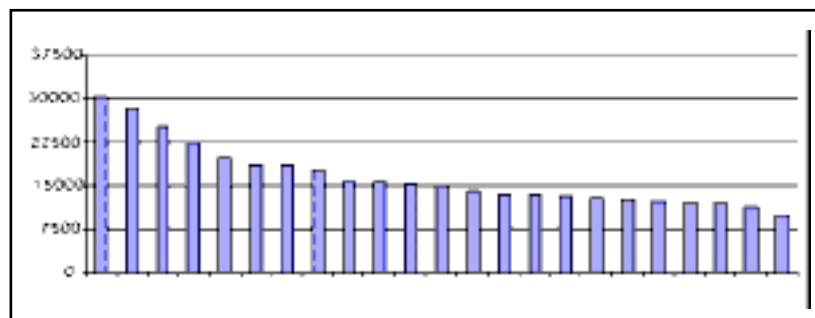


Figure 4.8: The Relative Size of the 15 Most Populated Centres in Ireland.

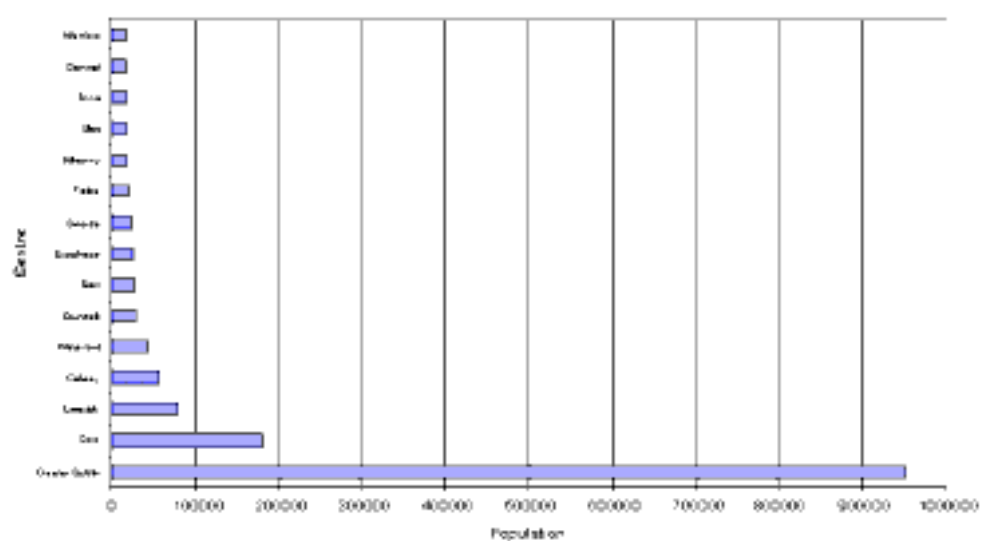


Figure 4.9:

Figure 4.9 - Urban Centres and Topographical Features

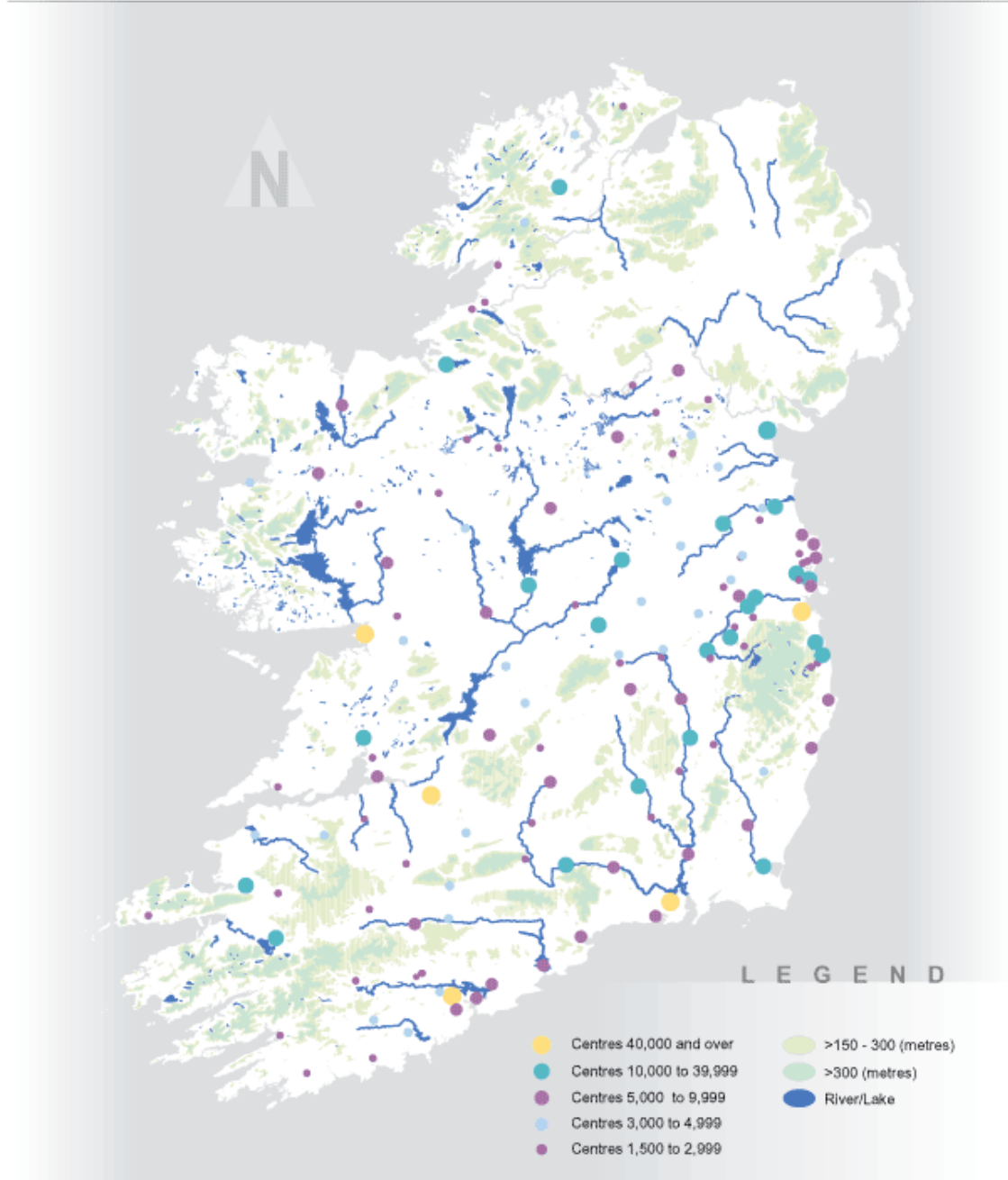


Figure 4.10:

Figure 4.10 - Urban Centres and Principal Roads

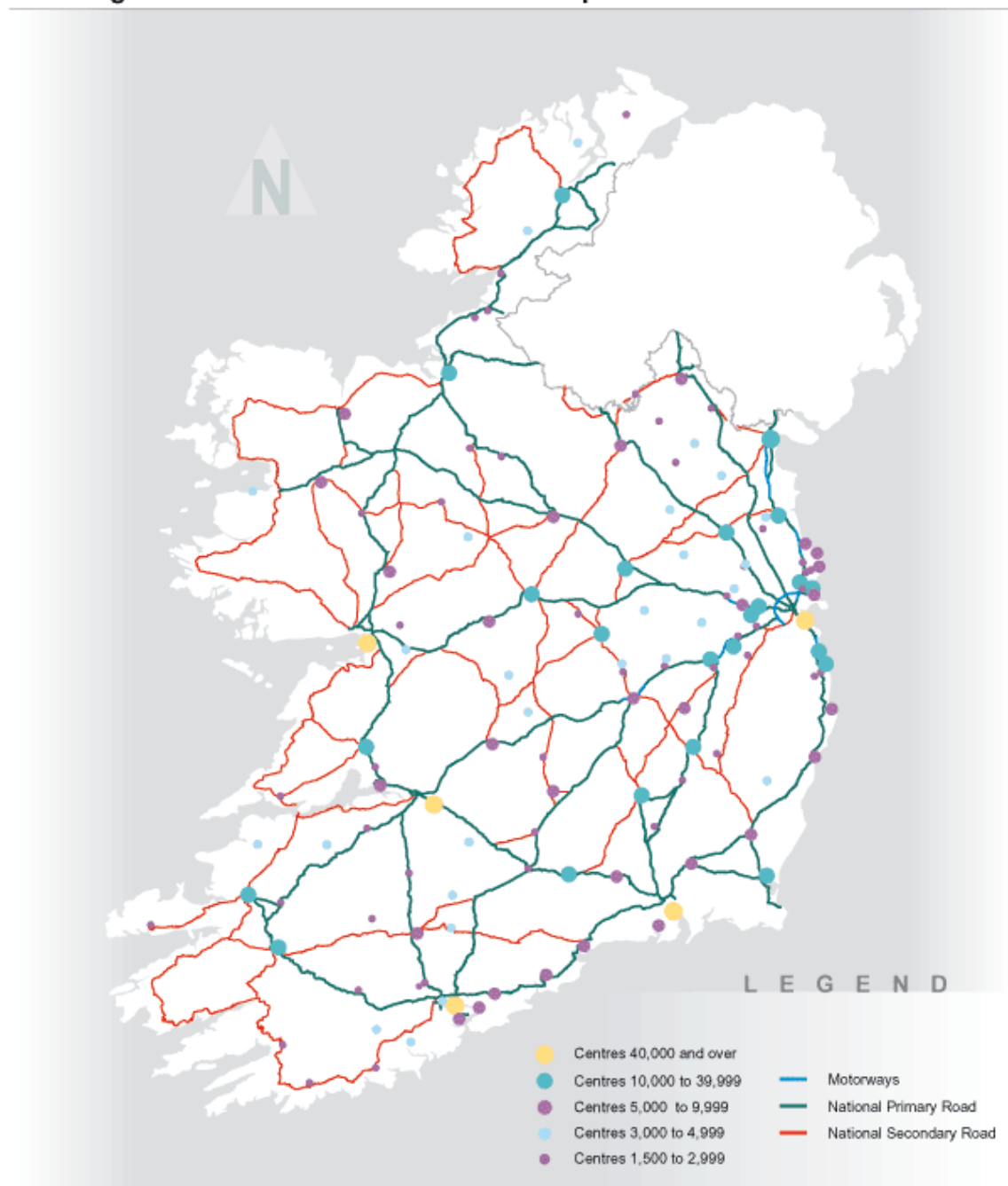


Figure 4.11:

Figure 4.11: Urban centres over 1,500 Population

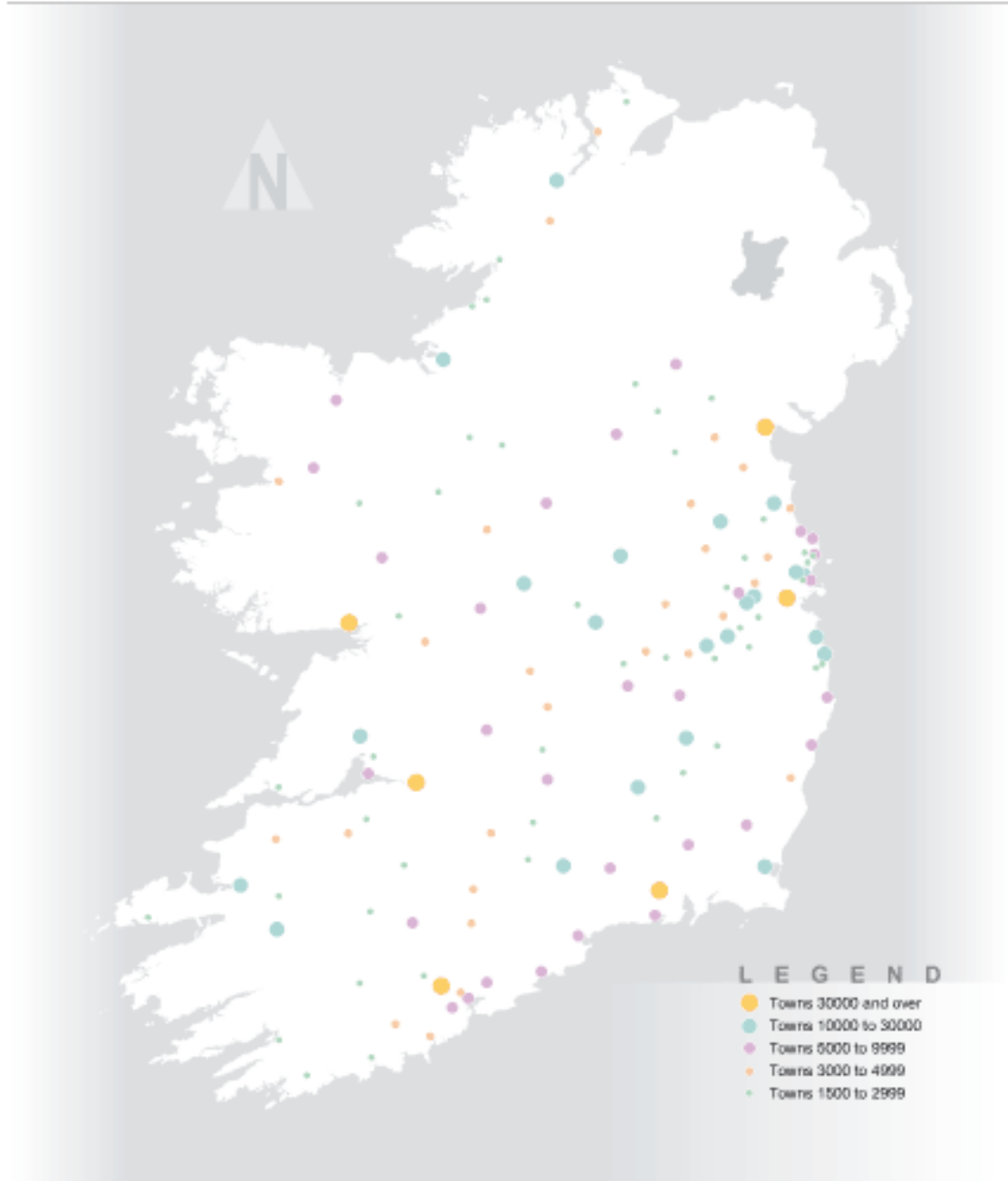


Figure 4.12:

Figure 4.12: Urban centres over 40,000

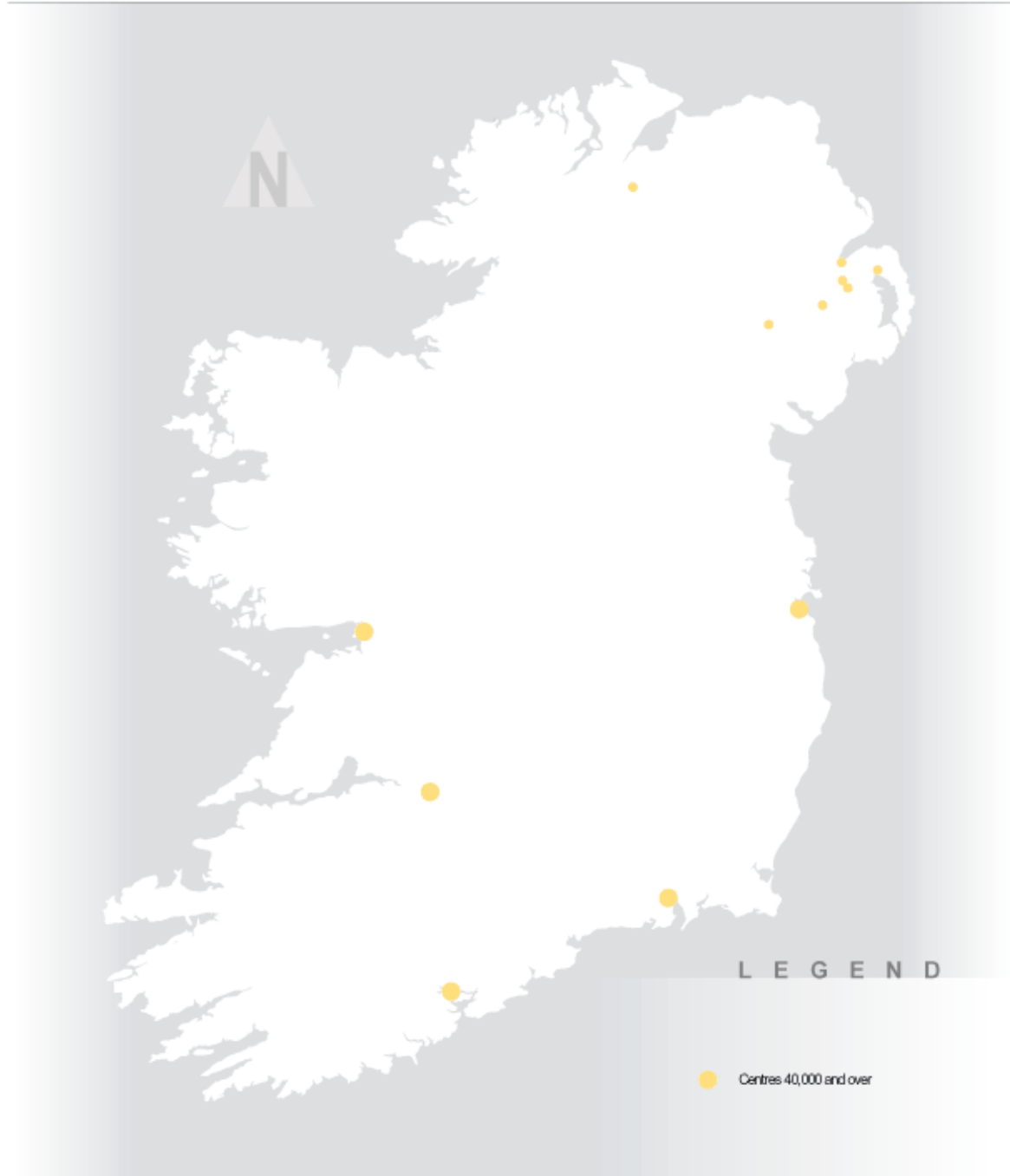


Figure 4.13:

Figure 4.13: Urban centres 10,000 to 39,999

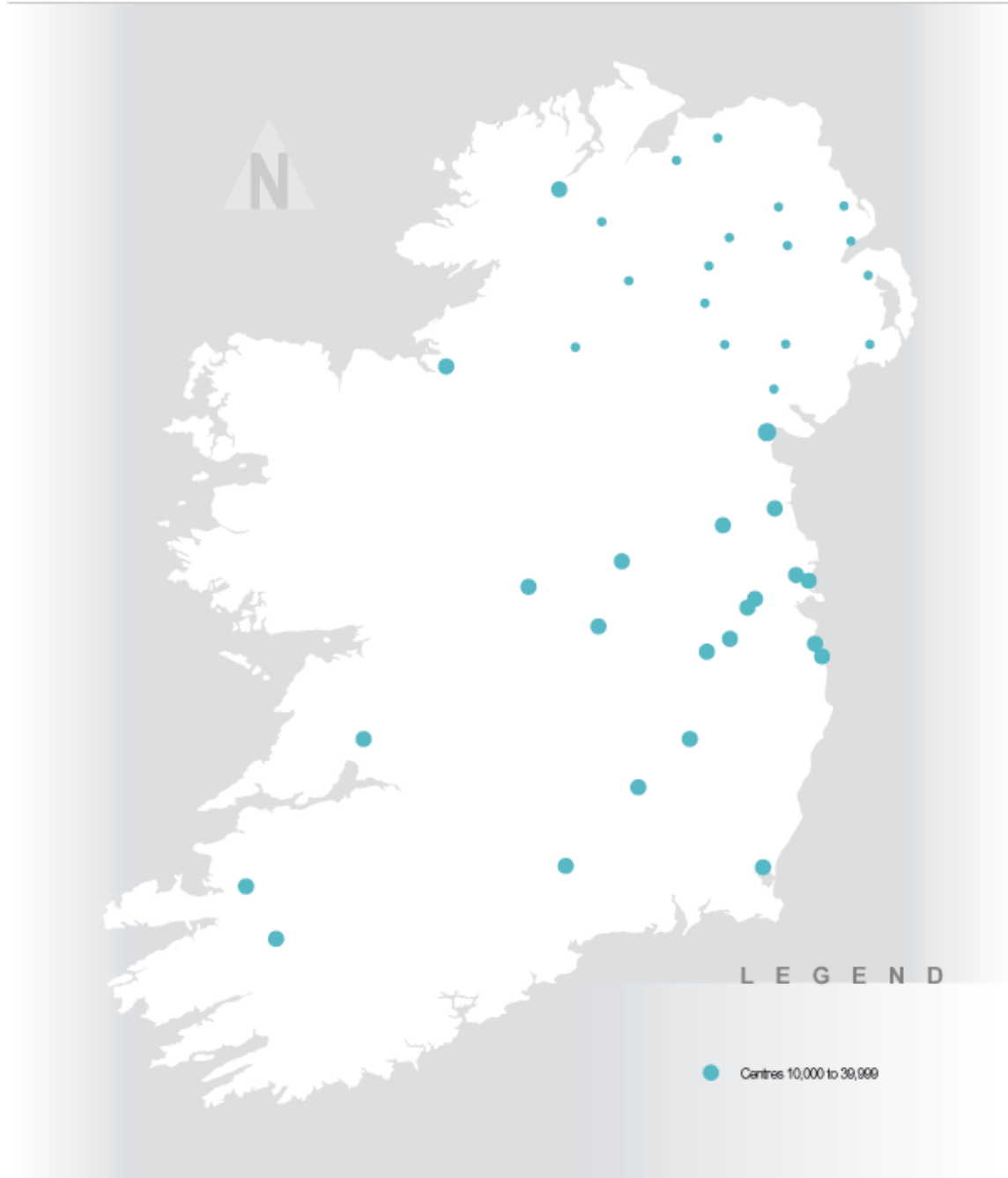


Figure 4.14:

Figure 4.14: Urban centres 5,000 to 9,999

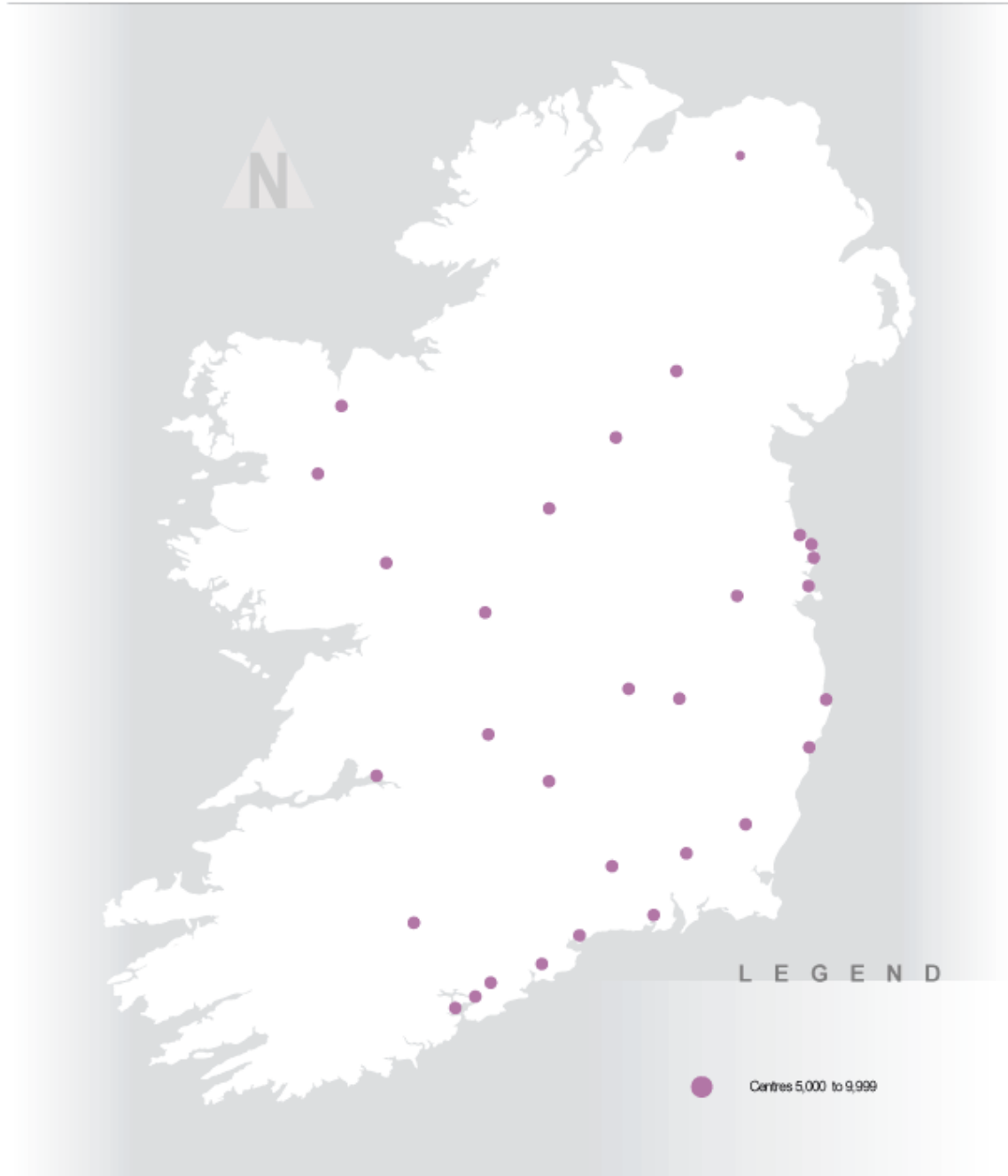


Figure 4.15:

Figure 4.15: Urban centres 3,000 to 4,999

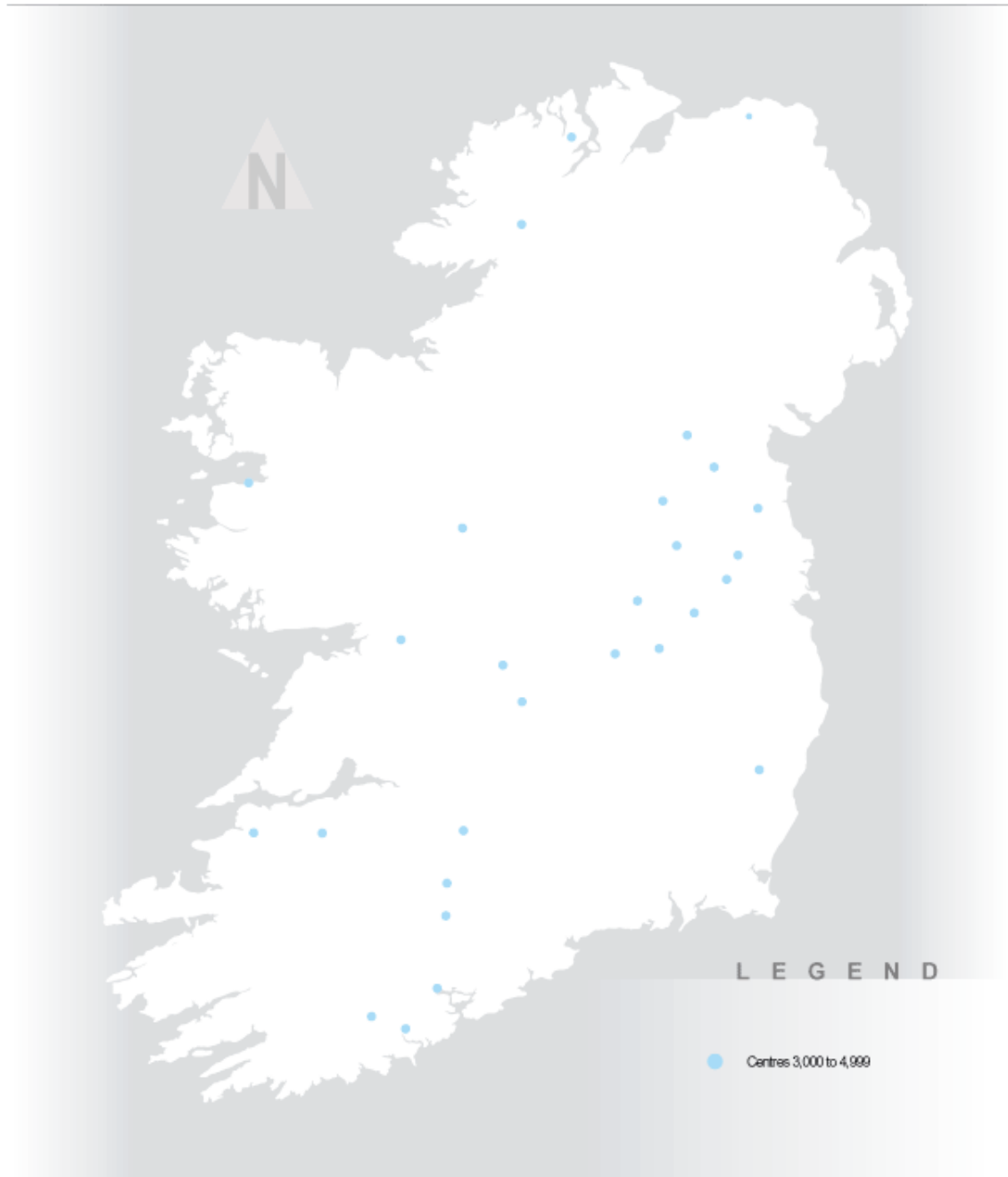


Figure 4.16:

Figure 4.16: Urban centres 1,500 to 2,999

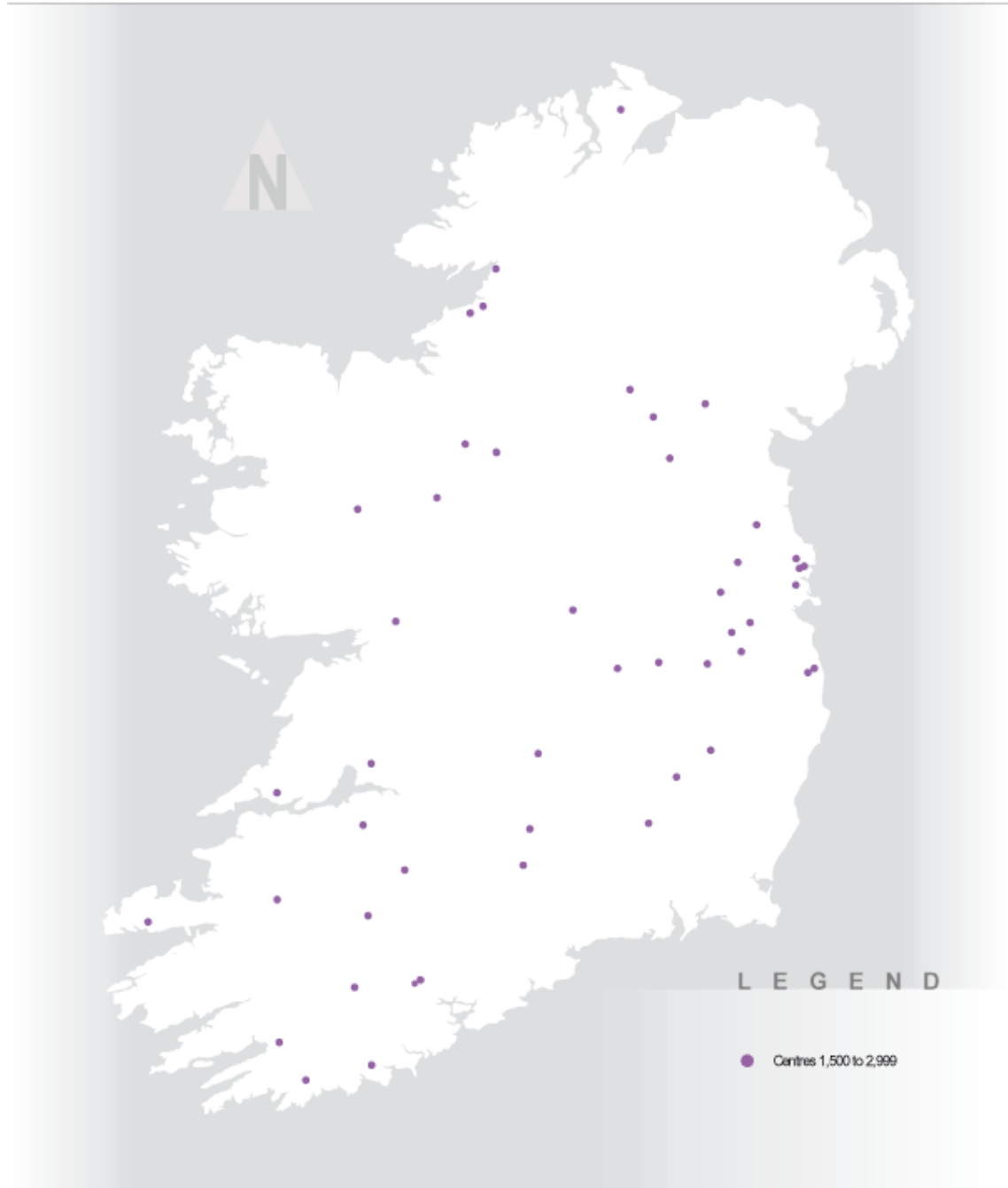


Figure 4.17:

Figure 4.17: Urban centres over 5,000

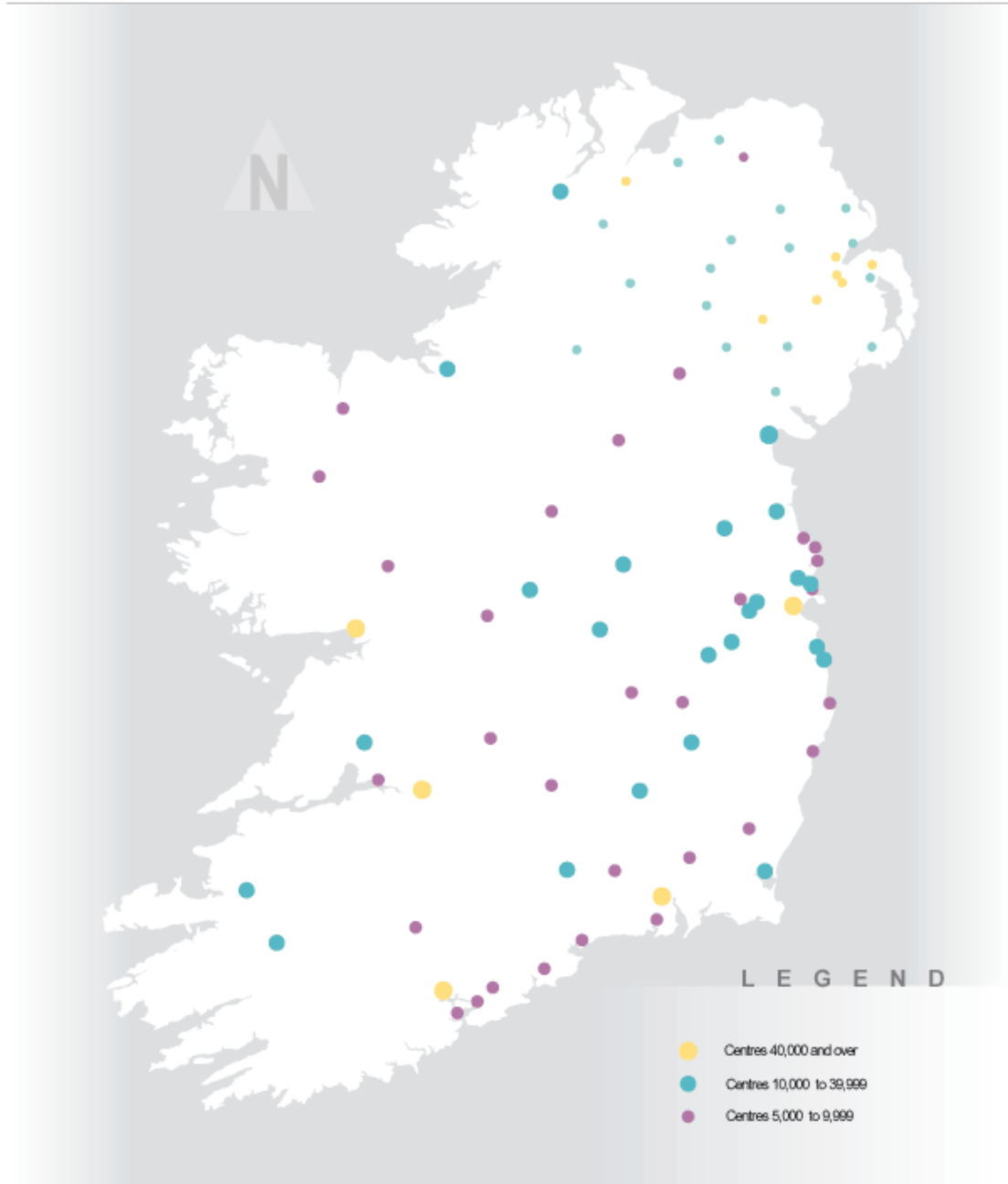


Figure 4.18:

Figure 4.18: Urban centres over 1,500

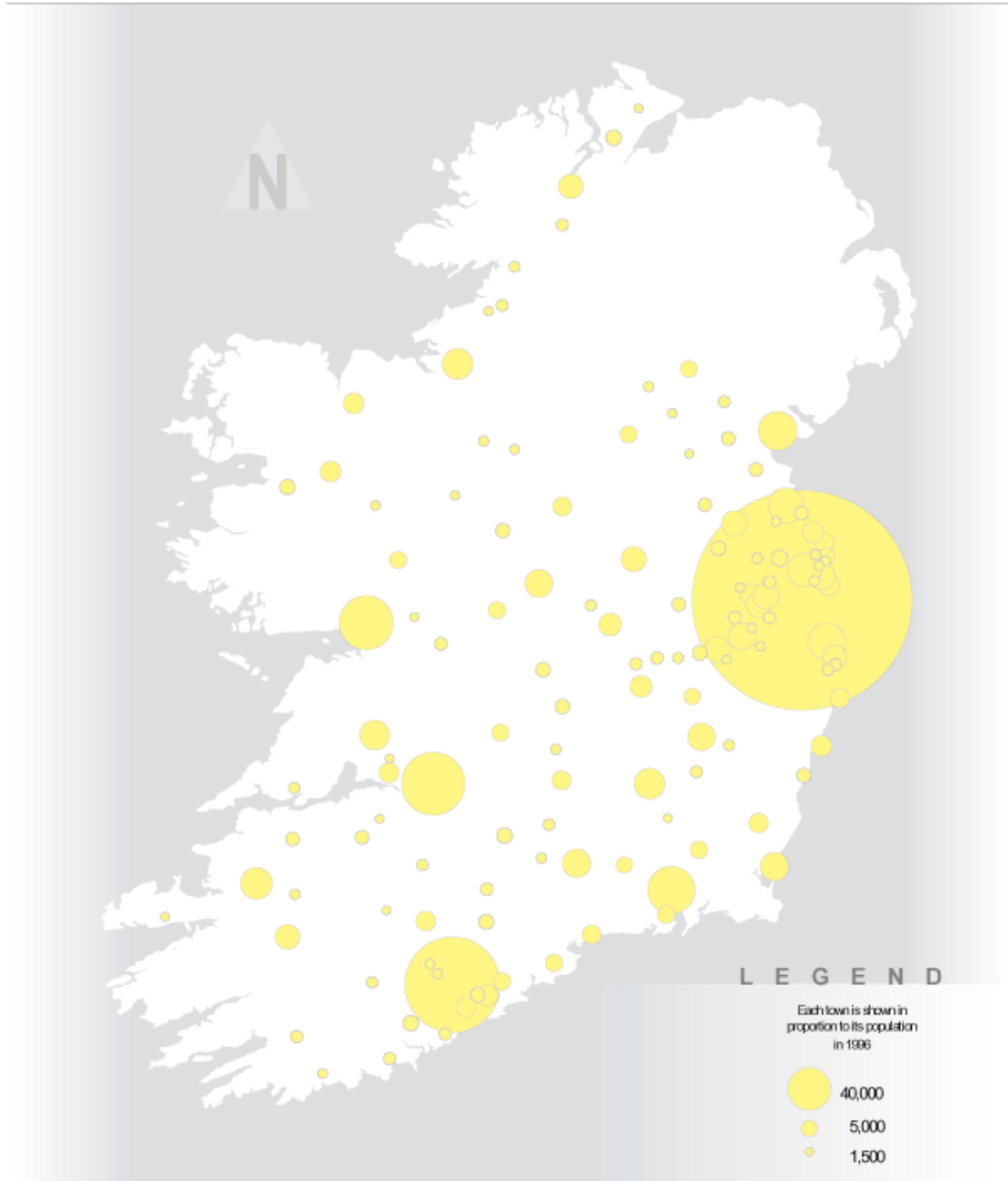


Figure 4.19:

Figure 4.19: Urban centres over 5,000 proportional to size, including Northern Ireland

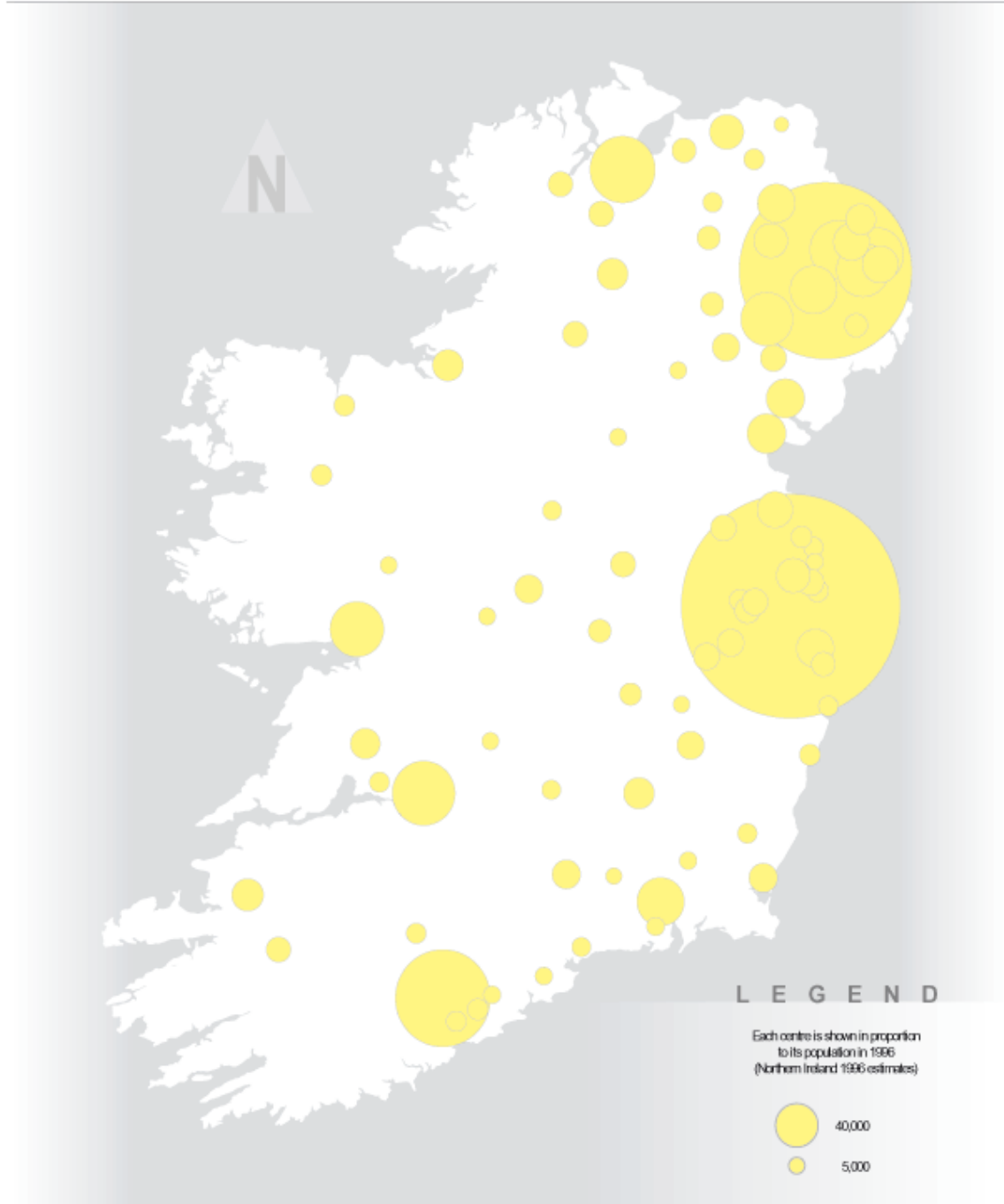


Figure 4.20: Numbers of Urban Centres by Size, Ireland 1996.

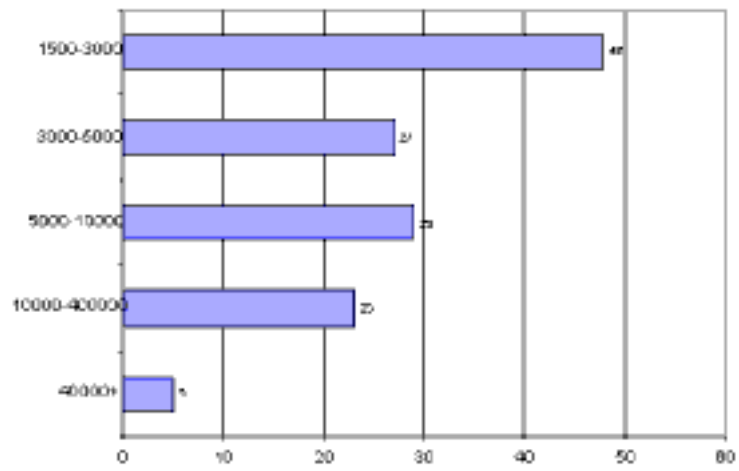


Figure 4.21: Numbers of Urban Centres by Size, Northern Ireland 1991

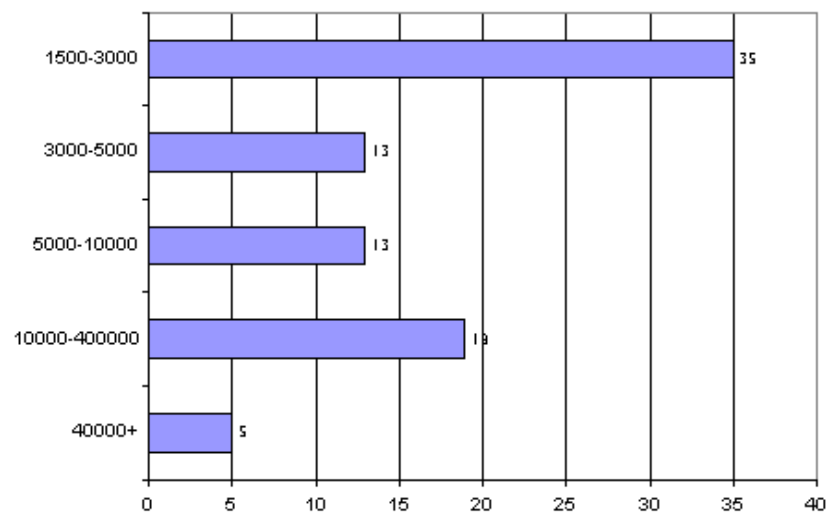
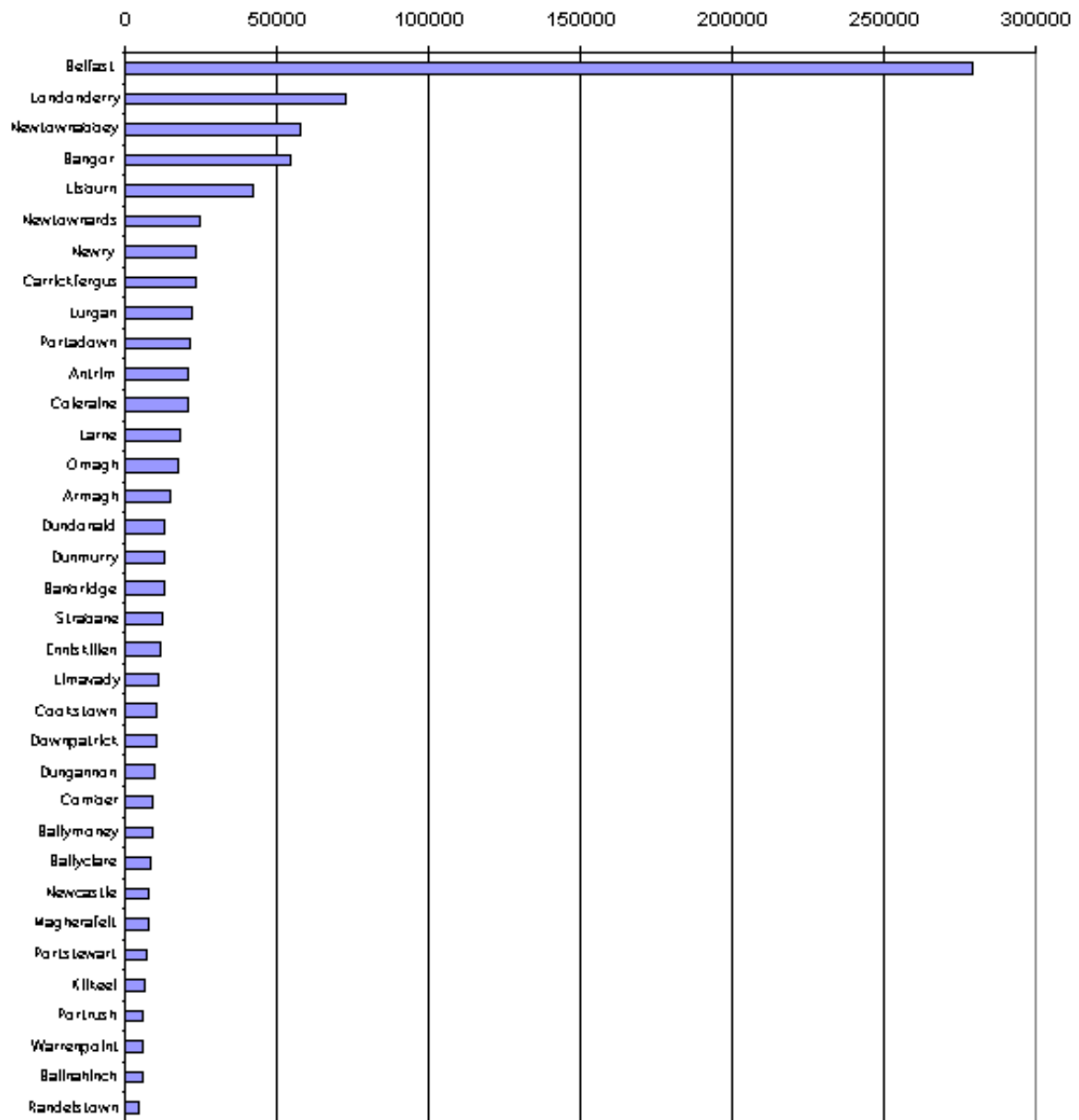


Figure 4.22: Population of Urban Centres in Northern Ireland, 1991



5 CHANGES IN DISTRIBUTION AND HIERARCHY

- 5.1 The principal features of change in the distribution and hierarchy of urban centres in Ireland in recent decades include:
- A continuous increase in the share of the national population residing in the aggregate urban areas, to a level of 58% in 1996.
 - With some exceptions, the larger urban centres have generally shown more consistent growth than the smaller centres. The highest levels of growth occurred in centres over 10,000 in population, but many centres in the 5,000 to 9,999 category also grew significantly.
 - There has been a concentration of growth in the Greater Dublin Area and, to a lesser extent, in the vicinity of the other main cities. The rapid growth of commuter settlements in the hinterlands of the major cities, especially Dublin, is a feature of the past two decades.
 - Urbansiation in the west has been strongly influenced by the growth of Galway but has also been associated with the development of sub-regional centres, such as Letterkenny, located at relatively remote distances from Dublin.
 - Some urban centres, notably in the border, midlands and north Munster areas, recorded a continual decrease in population in the period 1981-96. These centres broadly correspond with rural areas, which once had a stronger agricultural economy but are now in a process of change.

National Population Change

- 5.2 The distribution of the population between urban and rural areas has undergone a major transformation over the last seventy years. Less than one-third of the population lived in urban areas in 1926 (Fig. 5.1). The urban share has increased at each successive census since then, although the rate of increase has been tapering off in recent years. The 1971 census was the first in which the urban population exceeded the rural population. By 1996, approximately 58% of the Irish population was living in urban areas. The population of the state was enumerated in 1996 at 3,626,087.

- 5.3 Urbanisation levels in the Republic are far from uniform, ranging from 97.5% in Dublin to 6.1% in Leitrim. The high national average urban population figure masks the existence of many predominantly rural counties in all four provinces (see Table 5.1). Counties Leitrim, Roscommon, Mayo and Cavan in particular have exceptionally low (under 25%) rates of urbanisation.
- 5.4 In the last inter-censal period (1991-1996), Longford, Leitrim, Roscommon and Monaghan were the only counties not to register population growth and were also the four that suffered population losses in excess of 20% in the 1951-1996 period. The low level of urbanisation in Leitrim and Roscommon are indicative of the strong negative relationship between urbanisation and population gain in Ireland.

Population Change in the Urban System

- 5.5 The principal changes in the urban hierarchy since the early 1980s are summarised in Table 5.2. A high level of stability was experienced in terms of the rank order of towns within the system. Limerick and Galway experienced relatively weak performances in the early 1980s compared with the above average growth rates of Tullamore, Ennis, Kilkenny, Letterkenny Carlow and Tralee. Dundalk, Drogheda, Sligo, Wexford, Athlone and Mullingar experienced weakening in their relative positions. It is apparent that the likelihood of a declining population is much greater among settlements with populations less than 3,000. Whereas 77 of the 88 towns with populations larger than 3,000 experienced some increase, there was a decline in the population of 46% of the 242 settlements between 500 and 3,000 in population.
- 5.6 Population increase was registered in every region in the 1996 census, which is a dramatic turnaround from the previous five years when increases occurred only in Dublin and the surrounding counties that make up the Mid-East region. While natural increase was by far the dominant influence over the 1991-1996 period, its relative importance varied regionally, from 50% in the West to over 100% in Dublin. The natural increase in the Dublin and the Mid-East regions, together, was 50,220 or 54.5% of the total population increase. This represented an increase in the Dublin and the Mid-East region's share of the national population from 1991, which suggests that Dublin and the Mid-East regions are set to grow even further. By contrast, natural increase in the West, Border and Midlands regions was less than it had been in the period 1986-1991.
- 5.7 Galway stands apart from other western counties with the highest natural increase and also a high level of net in-migration. However there are differences in the demographic structure of the County Borough (Galway city), and the rest of the county. The County Borough has one of the highest rates of natural increase (8 per 1000), which is only surpassed by Kildare, Fingal and South Dublin, and the highest in-migration rate in the country. The uniquely strong position of Galway city reflects its importance as the regional capital with a very diverse range of functions. The natural rate of increase and the rate of in-

migration for Galway county are much less remarkable at 3.4 and -0.3 per thousand respectively.

- 5.8 Changes in the population of towns over 1,500 in population are given in detail in Appendix 4.
- 5.9 Table 5.2 sets out the trend in population share by town size group between 1971 and 1996. In general there was an increase in the concentration of population in the larger population centres, and a decline in the population living in rural areas. The most obvious increase was in towns of over 10,000 whose share of population increased from 3.6% to 10.5%. Outside the immediate influence of Dublin, the centres of Galway, Navan and Newbridge had the fastest growth, while Drogheda, Wexford and Clonmel had the smallest percentage increases.
- 5.10 Smaller urban settlements (1,500-3,999) performed much better in the 1970s than in the 1960s but villages performed even better than towns. Small villages had a considerable functional stability for the provision of convenience goods at the same time that the functions of minor towns were increasingly under competition from larger urban settlements in an age of increased mobility. Towns in the range of 5,000 to 9,999 grew vigorously between 1971 and 1981. These towns included many of the county towns, and those towns where growth was supported by an expansion of their industrial, commercial and administrative functions. The towns that grew most rapidly were clearly those benefiting from metropolitan overspill - Naas +64.3%, Greystones-Delgany +65.5%, Ballincollig-Carrigrohane +241.6%.

Greater Dublin

- 5.11 Between 1961 and 1971, the population of Greater Dublin (as defined in the Census) increased by 134,000 - the equivalent of 83.8% of the total national increase. By 1971 Greater Dublin accounted for 28.6% of the total population (see Table 5.3).
- 5.12 Greater Dublin's share of national population declined a little in relative terms in the early 1980s and declined in absolute and relative terms in the late 1980s when emigration picked up. The decline is partly explained by the migration of Dublin residents to new residential satellites within commuting distance of the city but which were outside the CSO enumerated suburbs/environs. From 1991-1996, the trend of population increase resumed in response to three factors: the reclassification of Lucan (>10,000 population) as part of Greater Dublin, the redevelopment of inner city areas initiated by urban renewal schemes and the improved net migration situation.

Towns 40,000-150,000

- 5.13 The share of population living in the next four regional urban centres - Cork, Limerick, Galway and Waterford increased by almost 70% from 1961-1996, equivalent to a rise in their share of national population from 7.78% to 9.94%. There were sub-periods of low growth or decline from 1970-1990 but here, as in the case of Dublin, the growth of satellite towns and extended commuting zones played a role. Galway experienced high growth during the entire period particularly in the 1970s when the city grew by over 42%.

Towns >10,000

- 5.14 There were 23 towns of greater than 10,000 population in 1996 compared with 8 in 1951. This size category shows the highest levels of population growth (Table 5.5). The relative importance of this town size category also changed; in 1951 the size category accounted for just over 3% of the national population, by 1996 this had risen to 10.5%. Of the additional 15 towns, 8 had a satellite and/or dormitory role in relation to Dublin. These included Swords, Malahide, Navan, Leixlip, Celbridge, Naas, Newbridge and Greystones. Other towns in this size category by 1996 were Athlone, Mullingar and Tullamore (Midlands), Letterkenny (North-West/ Donegal), Ennis (Midwest), Carlow (South-East) and Killarney (South-West).

Towns 5,000-10,000

- 5.15 Towns in the range 5,000 to 10,000 increased their share of the national population from 3.7% in 1951 to 5.7% in 1996. There are a number of satellite towns in the South West in this size group (5 in 1996), which had experienced rapid growth since 1951. For example, Carrigaline grew from less than 500 to more than 5,000 while Midleton grew from under 3,000 to over 5,000.

Towns 3,000 – 5,000

- 5.16** The number of these centres has not changed very much from 21 in 1951 to 27 in 1996, and their share of population remains small at just under 3%. However, there is a high rate of turnover in this category with only one-third of the towns registered in 1996 being the same as those in 1951. There is a bias in their distribution towards the East (12) and South-West (10), once again suggesting that the influence of large mature urban centres is important in stimulating the growth of this size of town in a region. Leitrim is the only county not to have a town in this or larger categories.

Overall Pattern of Change

- 5.17** The overall pattern of change in the population of urban centres between 1981 and 1996 is illustrated on Figure 5.2. The most striking feature is the concentration of growth in the Greater Dublin Area (Dublin, Kildare, Meath, Wicklow). In addition, Carrigaline, which may be regarded as a commuter centre for Cork, experienced a growth in excess of 50%. Other centres which experienced strong growth included Killarney, Galway, Letterkenny and Westport.
- 5.18** Population decrease is evident in a band stretching from east Mayo through east Galway and into Tipperary, though decreases in population are evident in other areas, including west Limerick, north-east Kerry, parts of the east Midlands, Monaghan and south Donegal
- 5.19** Changes in the population of urban centres in the inter-censal periods 1981-86, 1986-91 and 1991-96 are shown on Figures 5.3, 5.4 and 5.5. Again, the strong growth around Dublin is evident. The 1986 to 1991 period was characterised by population decrease in a significant number of towns, including many of those that saw an overall increase in the 1981-1996 period. The 1991-1996 period shows the influence of the expanding economy of the 'nineties, with many towns showing population increase. The exceptions include a group of towns in Tipperary, Ballinasloe, Gorey, Monaghan and some smaller centres.

- 5.20 Figure 5.6 shows the urban centres that experienced a continual increase of 20% or greater in each inter-censal period and those which experienced a continual decline. The 5 centres with sustained growth in excess of 20% are all in the Dublin area. Three large towns, Monaghan, Ballinasloe and Thurles experienced continual decline, as did 9 smaller centres. The decline in one of these, Portrane, is almost certainly the result of a major reduction in the institutional population of a large hospital, and this may also explain some of the decline in Ballinasloe.
- 5.21 Changes in the ranking of urban centres of over 5,000 population in the 1991-96 period are shown on Figure 5.7. The relative strength of the east and south of the country, in terms of urban structure, is again illustrated by the changes in ranking. However, both Castlebar and Ballina in Mayo, Killarney and Nenagh also increased their ranked position.
- 5.22 Many of the increases in ranking position reflect the development of transportation arteries, especially into the Dublin Region, including the N7, N8, N9 and N11.
- 5.23 Figure 5.8 shows the change in population of centres of 500 population or greater from 1991 to 1996. There is good distribution of growth, with almost all parts of the country containing centres that grew in the period. However, there is also a pattern of population decline evident in the border counties, parts of Connaught, north Munster (especially Limerick and Tipperary) and parts of southwest Leinster. This map also illustrates the relative strength of larger centres as compared to smaller ones.
- 5.24 The changes in the population of urban centres should be considered in the context of changes in the population of rural areas close to the towns, which in many instances increased significantly (Figs. 5.9 and 5.10).

Rural Population Change

- 5.25 The aggregate urban population increased by 257,000 (or by 19.8%), to bring the urban share of total population to 52.2% between 1971 and 1981, in contrast to the 1960s when only the larger categories of urban settlement experienced growth, there was a growth of population in virtually all settlement categories.
- 5.26 Part of the recent growth in rural area populations, from 1991-1996 is an expression of the growth of commuting to towns in all parts of the State, facilitated by rising car ownership and improved roads. The simultaneous rural and urban population growth in Galway, Limerick and Wexford seem to point to this explanation.

Migration

- 5.27 Migration is a key explanatory variable in relation to the changing distribution of population. Two key features of internal migration in the Republic of Ireland are the relatively low migration rates that have traditionally prevailed and the dominance that Dublin has traditionally held as a migration destination within the state, for females in particular. However, three national policies pursued over the past two decades have served to divert migration from Dublin to other centres, noted in the growing importance of Counties Limerick and Galway as migrant destinations. These are the pursuit of industrial regional growth centre policy from the early 1970s, the establishment of Regional Technical Colleges in nine cities and large provincial towns, and the decentralisation of selected civil service functions to regional and county towns.
- 5.28 Cork City acts as a destination focus for migrants from both Counties Cork and Kerry and to a lesser extent from other counties in the southwest. Waterford and Carlow serve as regional foci for employment and higher education in the south-east, as does Athlone in the Midlands region. Inter-county migration from one year data at four regularly spaced intervals from 1970 to 1986 is dominated by two principal flows: towards counties which contain county boroughs (Dublin, Cork, Limerick, Waterford and since 1985 Galway), and from County Dublin to the adjoining counties of Meath, Kildare and Wicklow. The indirect effect of the age-selective aspect of migration in favour of young adults, which gives a further impetus to population growth, through higher rates of natural increase in migrant destinations, is worth noting. Dublin, for instance, has one of the most youthful populations in Europe with almost half of its population being less than 25 years old. This indicates a continuing high natural rate of increase for the future.
- 5.29 Education is an important differential in migration. Taking up a place in higher education usually involves a migration experience in itself, and the types of occupations to which highly educated persons aspire tend to be concentrated in large urban centres. (See Figure 6.4) The only regions to consistently gain in terms of in-migration of graduates of all levels are the Dublin and Mid East Regions. For example, in 1994, almost 56% of graduates found employment in the Dublin and Mid East Regions, which had just less than 40% of the total population. Moreover, as qualification increases, so does the likelihood of relocation to the eastern region. Inter-county migration patterns between 1970 and 1981 were very stable. The high rates of out-migration from some parts of the midlands may be associated with the urban employment opportunity levels of these centres and their proximity to Dublin while the low rate of out-migration rate for Cork undoubtedly reflects the intervening opportunities provided by Cork City.

- 5.30 One of the most striking features of Irish urban growth is the rapid urbanisation of the counties around Dublin, particularly Kildare and Meath whose urban share have risen substantially. A similar effect may be seen in Clare, insofar as its rising urban level reflects the spill-over effects of Limerick City and the effect of the corridor between Limerick and Galway in stimulating the growth of Ennis and Shannon. Net in-migration to Clare is associated with high levels of movement from other counties to the airport, industrial zone and town complex at Shannon and with residential mobility from Limerick city to parts of east Clare. The in-migration pattern shows that in the early 1980s, almost 60% of the total in-migration to counties Kildare, Meath and Wicklow came from Dublin. The lowest in-migration rate was to Donegal (6.3 per 1000) and the rate was also less than 10 per 1000 for counties Cavan, Monaghan, Mayo, Kerry, Cork and Waterford.

Conclusions

- 5.31 The urban share of the national population has increased at each successive census since 1927, although the rate of increase has been tapering off in recent years. By 1996, approximately 58% of the Irish population was living in urban areas.
- 5.32 On a county basis, there is a positive relationship between the level of urbanisation and population gain.
- 5.33 The growth in urbanisation in the west of Ireland has been strongly influenced by the performance of Galway city, which has one of the highest rates of natural increase in the country.
- 5.34 Towns in the range of 5,000 to 9,999, which included many of the county towns, and those towns where growth was supported by an expansion of their industrial, commercial and administrative functions, grew vigorously between 1971 and 1981.
- 5.35 Following a period of relative decline in the rate of growth in the 1980s, the population of Dublin expanded strongly in the nineties, but some of this growth is attributable to changes in the enumeration areas.
- 5.36 The highest levels of population growth occurred in urban centres of over 10,000 population. Many of the developing centres in this category were commuter towns.
- 5.37 Between 1981 and 1996, there was a concentration of growth in the Greater Dublin Area (Dublin, Kildare, Meath, Wicklow), mainly as a consequence of the growth of commuting. A similar pattern is evident around Cork. However, centres such as Killarney, Galway, Letterkenny and Westport also recorded very significant growth. This may, in part, be due to the importance of these centres at sub-regional level, combined with government policy, which resulted in these centres acquiring public sector administrative and service functions.

- 5.38** A group of urban centres in the Border area, the midlands and north Munster, including Monaghan, Ballinasloe, Templemore and Thurles recorded a continual decrease in population in the period 1981 to 1996. Although some of the decline may be accounted for by increases in neighbouring DEDs, centres like Templemore and Thurles are located in areas which were identified in the study on the Irish Rural Structure and Gaeltacht Areas as relatively weak areas.

Tables

Table 5.1: Population in the Aggregate Town and Aggregate Rural Areas of each Province, County and County Borough and Percentage of Population in the Aggregate Town Area, 1996

Province, County or County Borough	% of population in aggregate town area	Province, County or County Borough	% of population in aggregate town area
Leinster	73.5	Munster	49.7
Carlow	46.1	Clare	35.3
Dublin	97.5	Cork	60.4
<i>of which</i>		<i>of which</i>	
Dublin Co. Borough	100.0	Cork Co. Borough	100.0
Dun Laoghaire-Rathdown	98.4	Cork County	43.2
Fingal	90.5	Kerry	31.2
South Dublin	96.7	Limerick	49.0
Kildare	60.6	<i>of which</i>	
Kilkenny	29.2	Limerick Co. Borough	100.0
Laois	29.1	Limerick County	25.5
Longford	23.2	Tipperary N.R.	33.3
Louth	63.5	Tipperary S.R.	40.4
Meath	33.9	Waterford	60.1
Offaly	36.6	<i>of which</i>	
Westmeath	42.4	Waterford Co. Borough	100.0
Wexford	32	Waterford County	27.5
Wicklow	58.4		
		Connacht	29.3
Ulster (part of)	22.1		
		Galway	39
Cavan	16.9	<i>of which</i>	
Donegal	21.8	Galway Co. Borough	100.0
Monaghan	28.1	Galway County	12.4
		Leitrim	6.1
		Mayo	21.3
		Roscommon	18.4
		Sligo	33.2

Source: Census of Ireland 1996, C.S.O.

Table 5.2: Aggregate Town and Rural Population, 1971-1996

	1971		1981		1991		1996	
Size of Centre	No. of towns	Population	No. of towns	Population	No. of towns	Population	No. of towns	Population
200-499	199	63,988	262	83,583	280	88,424	279	89,190
500-1,499	152	129,348	185	167,513	198	174,180	194	170,416
1,500-2,999	41	89,460	42	91,626	47	101,264	48	102,780
3,000-4,999	24	91,122	27	101,655	25	96,403	27	105,042
5,000-9,999	22	139,060	34	243,798	31	218,564	29	206,346
10,000-150,000	16	419,694	17	362,238	23	490,979	26	561,177
Greater Dublin	1	852,219	1	1,003,164	1	1,025,304	1	1,058,264
Cork County Borough	1	128,645		136,334	1	174,400	1	179,954
Rural Areas		1,193,357	67,600	1,260,957	104399	1,156,558	-3,440	1,153,118
Total Population		2,978,248	465,157	3,443,405	82,314	3,525,719	100,368	3,626,087
% Rural		40.1		36.6		32.8		31.8
% in Towns over 200		59.9		63.4		67.2		68.2

Table 5.3: Percentage Distribution of Population of State by Size of Place 1951-1996

Size of Centre	1951	1961	1971	1981	1986	1991	1996
Greater Dublin	21.43	23.54	28.61	29.13	26.01	29.08	29.18
Cork CB and suburbs	3.78	4.1	4.55	4.91	5.04	4.95	4.96
Limerick CB and suburbs	1.72	1.84	2.13	2.16	2.22	2.14	2.18
Galway CB and suburbs	0.72	0.84	1	1.33	1.37	1.44	1.58
Waterford CB and suburbs	0.97	1	1.17	1.16	1.19	1.19	1.22

Source: NESC (1997) Population Distribution and Economic Development

Table 5.4: Towns Classified by Size Groupings 1981,1986,1991,1996

Number of Towns						Number of Towns registering decline		
	1971	1981	1986	1991	1996	1981-86	1986-91	1991-96
<500	199	308	304	306	315	103 (33.4%)	154 (50.7%)	173 (56.5%)
500-1499	152	194	194	198	194	74 (40.0%)	110 (56.7%)	92 (46.5%)
1500-2999	41	42	43	47	48	21 (50%)	30 (69.8%)	19 (40.4%)
3000-4999	24	27	27	25	27	11 (40.7%)	19 (70.4%)	2 (8%)
5000-9999	22	34	33	31	29	11 (32.4%)	19 (57.6%)	5 (16.1%)
10,000-40,000	16	15	19	19	23	0	7 (36.8%)	0
>40,000		5	4	5	5	0	0	0
Total		616	624	632	641	220	339	291

Table 5.5: Changes in Population by Settlement Size

Percentage Change in Cumulative Population				Percentage of Total Population in each town size group				Share of population growth/decline of town size categories and rural areas		
Size of Centre	1971-1981	1981-1991	1991-1996	1971	1981	1991	1996	1971-1981	1981-1999	1991-1996
200-499	30.6	5.8	0.9	2.1	2.4	2.5	2.5	4	6	1
500-1,499	29.5	4.0	-2.2	4.3	4.9	4.9	4.7	8	8	-4
1,500-2,999	2.4	10.5	1.5	3.0	2.7	2.9	2.8	0	12	2
3,000-4,999	11.6	-5.2	9.0	3.1	3.0	2.7	2.9	2	-6	9
5,000-9,999	75.3	-10.4	-5.6	4.7	7.1	6.2	5.7	23	-31	-12
10,000-150,000	-13.7	35.5	14.3	14.1	10.5	13.9	15.5	-12	156	70
Greater Dublin	17.7	2.2	3.2	28.6	29.1	29.1	29.2	32	27	33
Cork County Borough	6.0	27.9	3.2	4.3	4.0	4.9	5.0	2	46	6
Rural Areas								15	-127	-3

Figures

Figure 5.1: Urban/Rural Population Changes, 1926-1996.

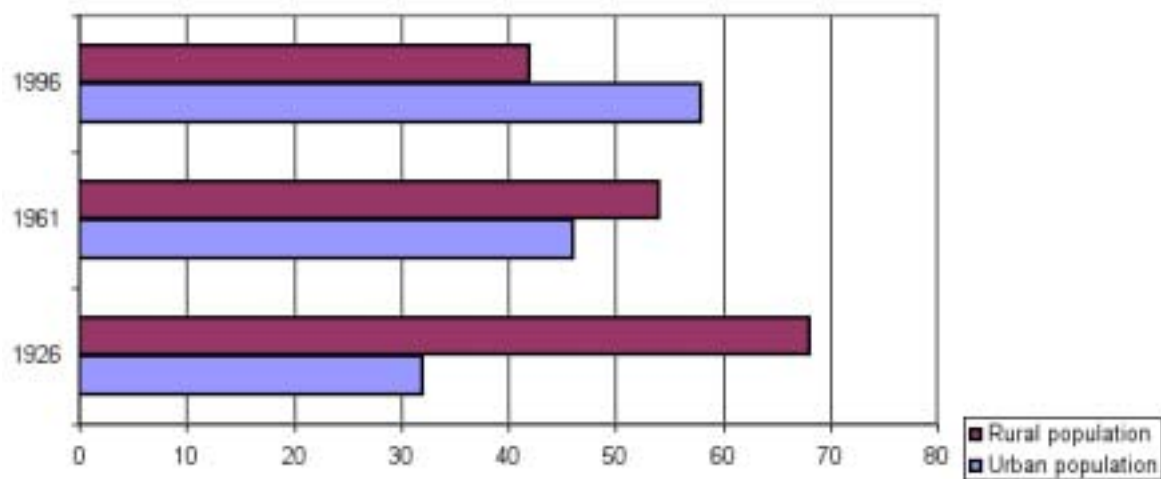


Figure 5.2:

Figure 5.2 - Urban Centres Population Change, 1981 to 1996

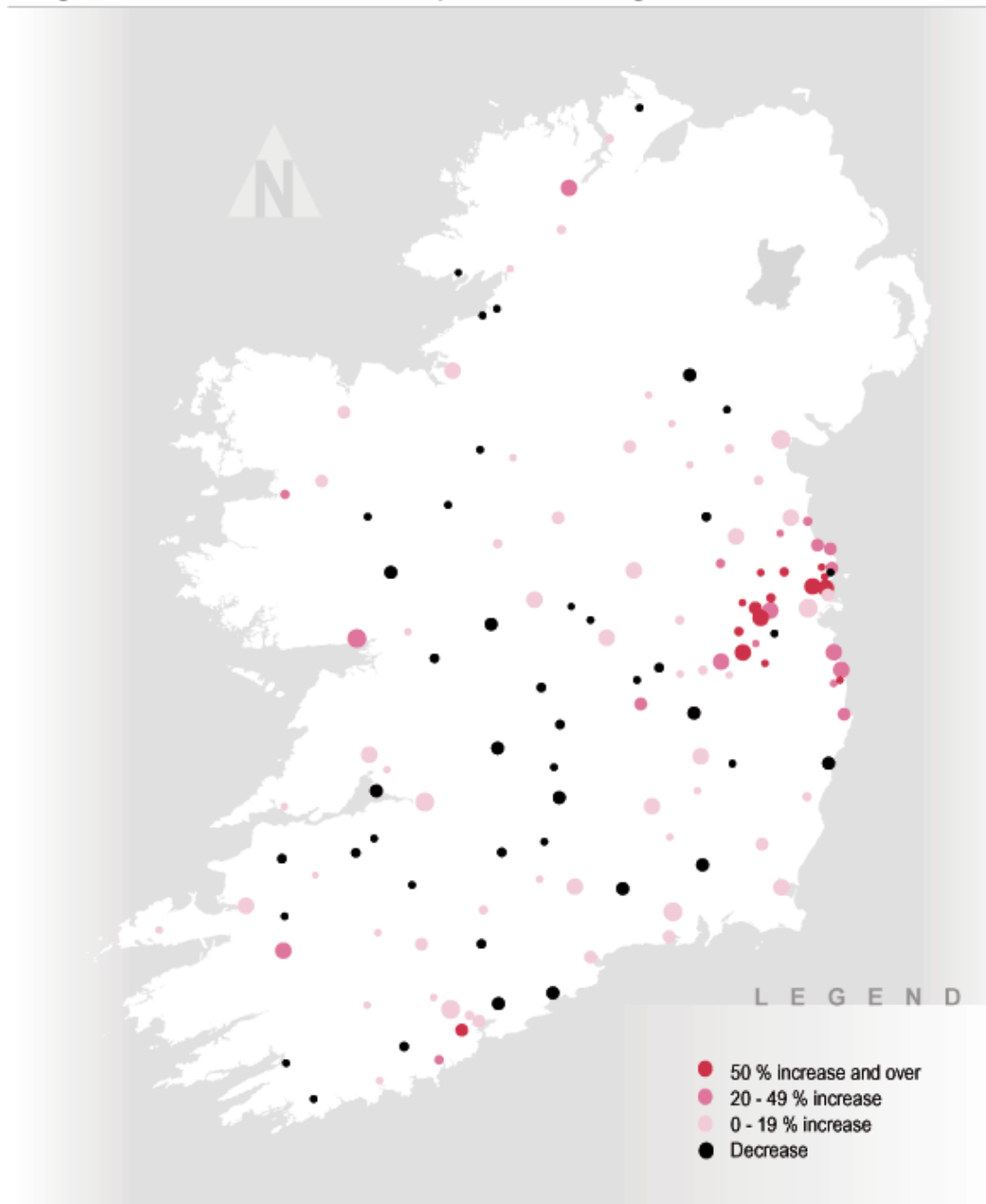


Figure 5.3:

Figure 5.3 - Urban Centres, Population Changes 1981 - 1986

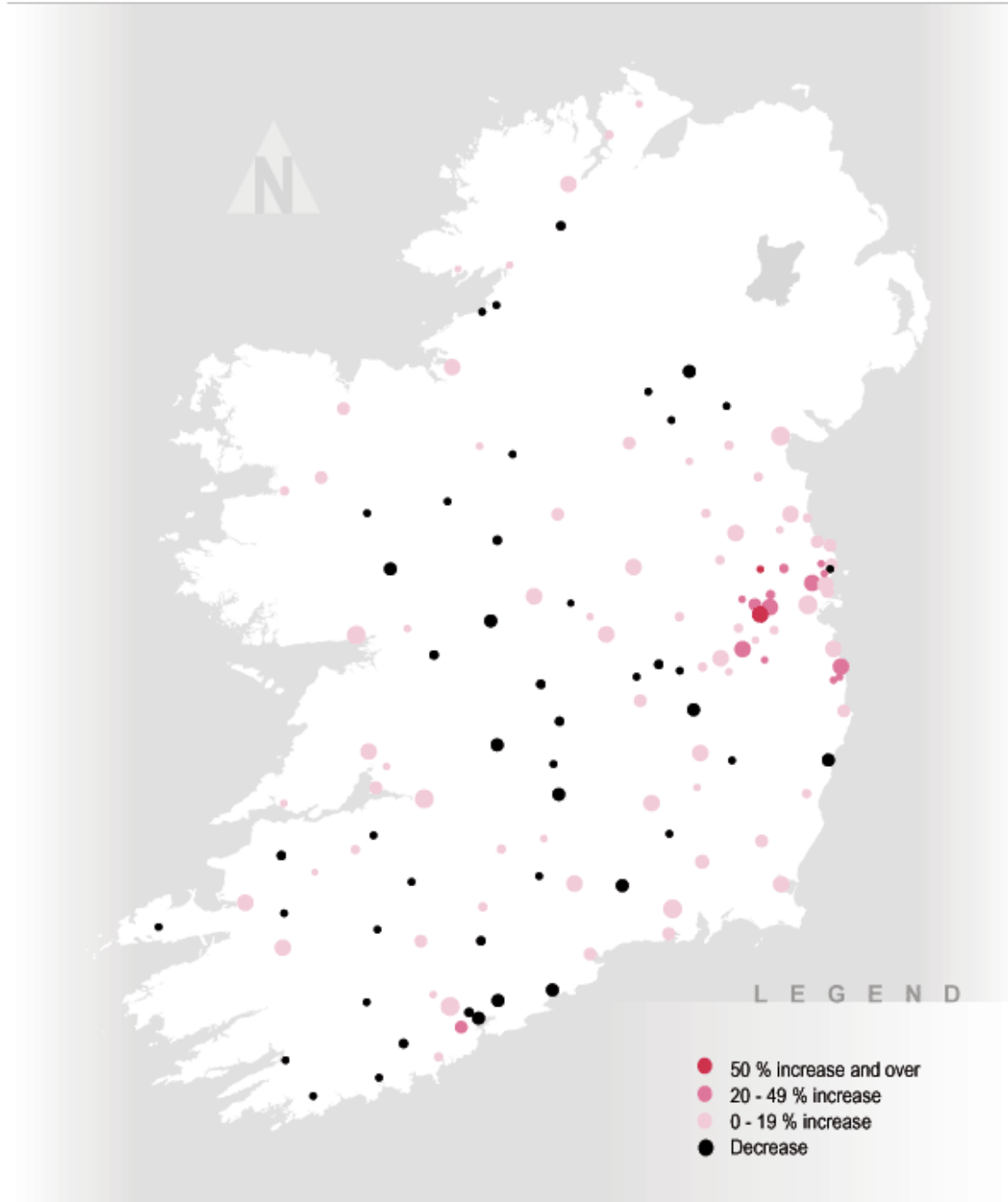


Figure 5.4:

Figure 5.4: Irish urban centres, population change 1986 - 1991

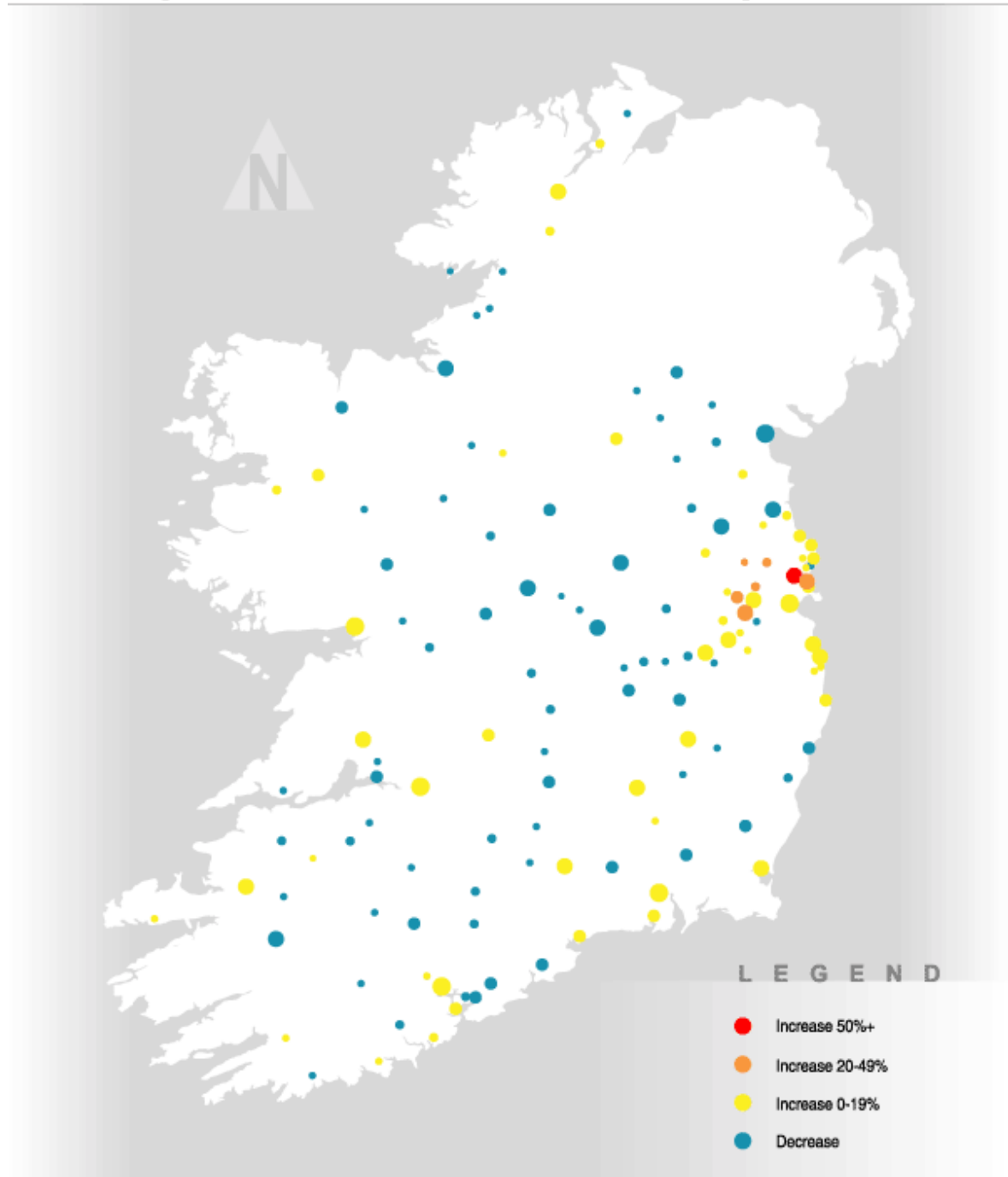


Figure 5.5:

Figure 5.5: Irish urban centres, population change 1991-1996

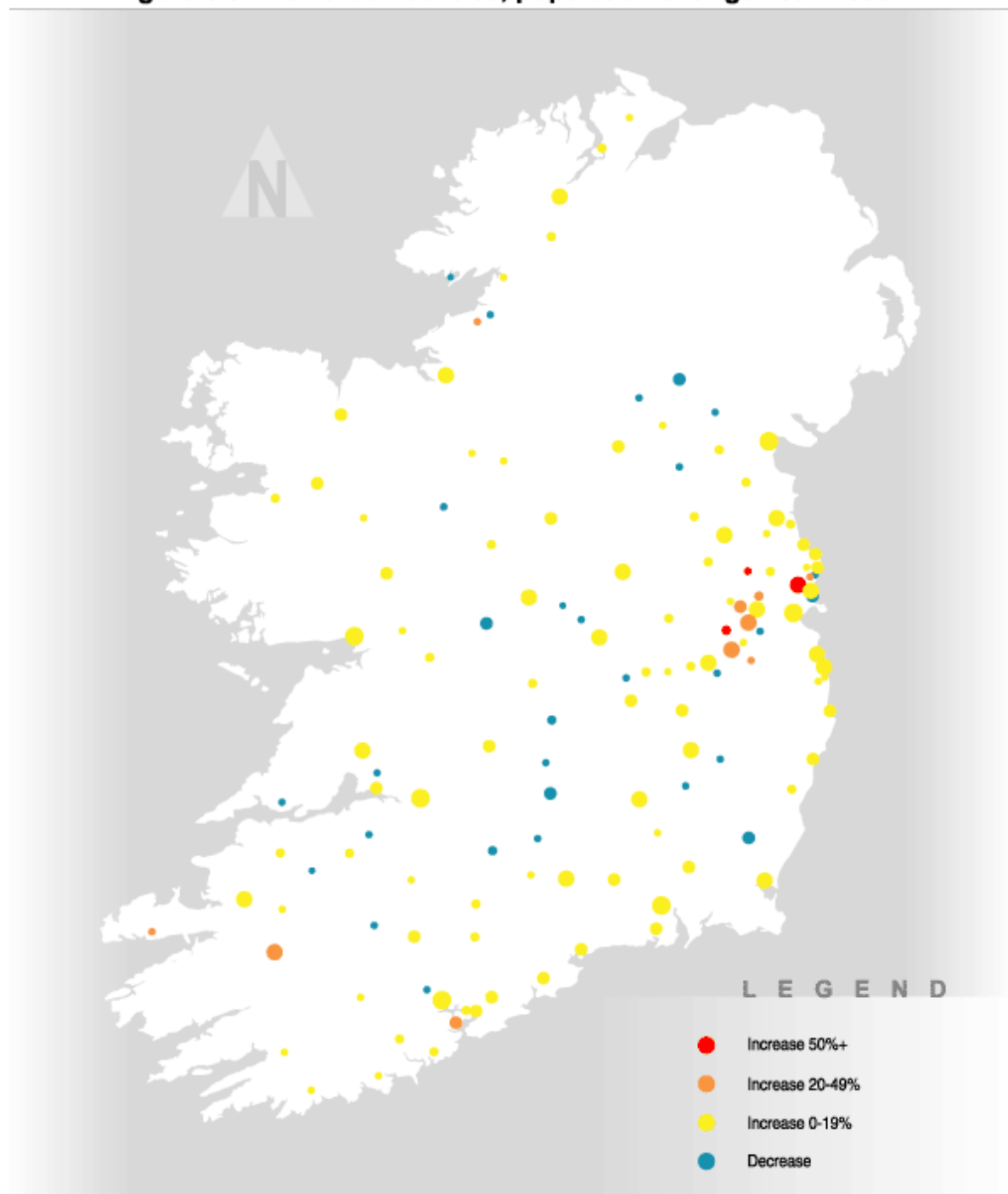


Figure 5.6:

Figure 5.6: Population change in urban centres, continual increase (20%) and continual decrease, 1981 - 1986



Figure 5.7:

Figure 5.7 - Urban Centres, Centres over 5,000, Change in Rank 1991-1996

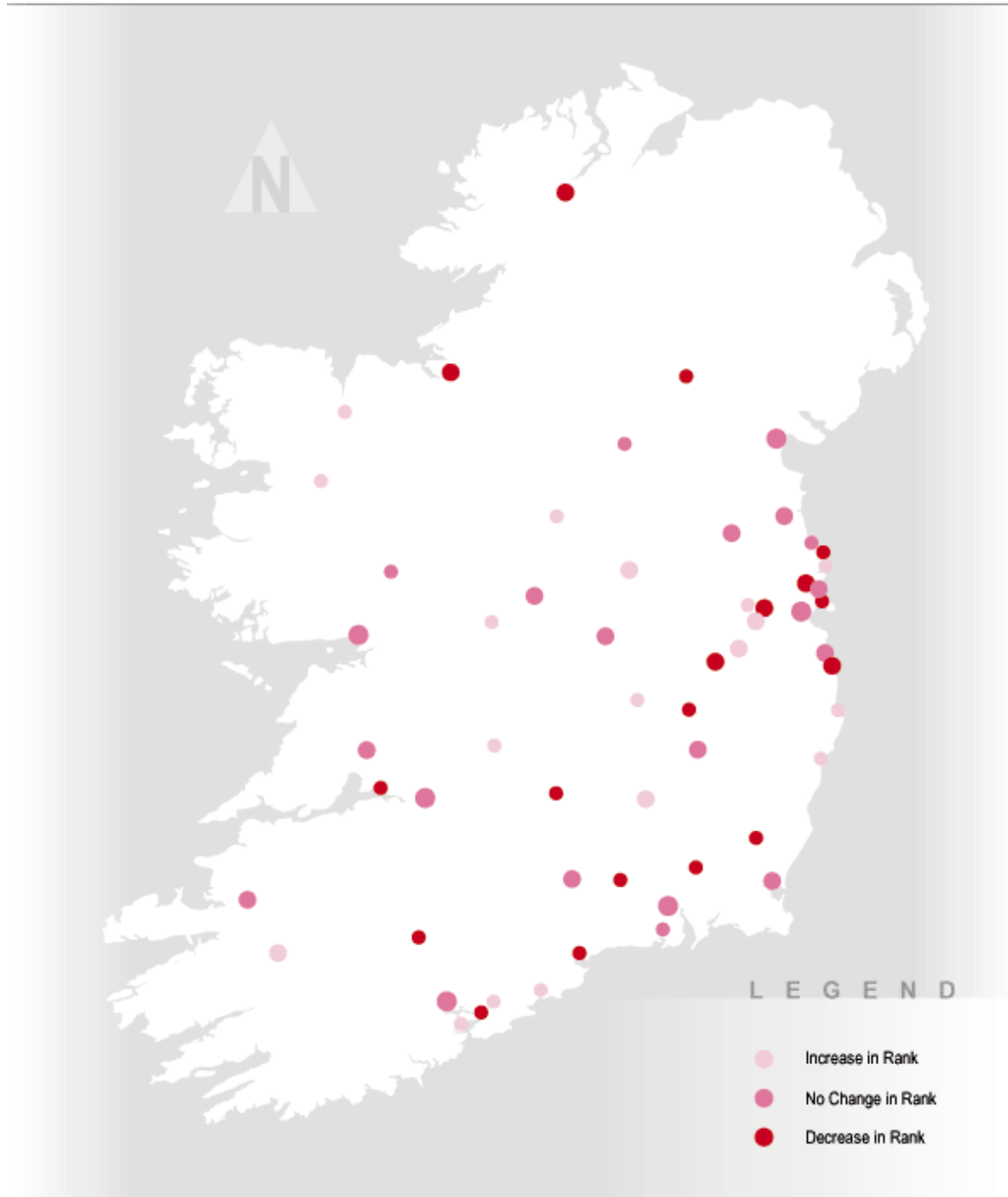


Figure 5.8:

Figure 5.8 - Urban Centres (>500) Experiencing Growth/Decline in Population from 1991 to 1996

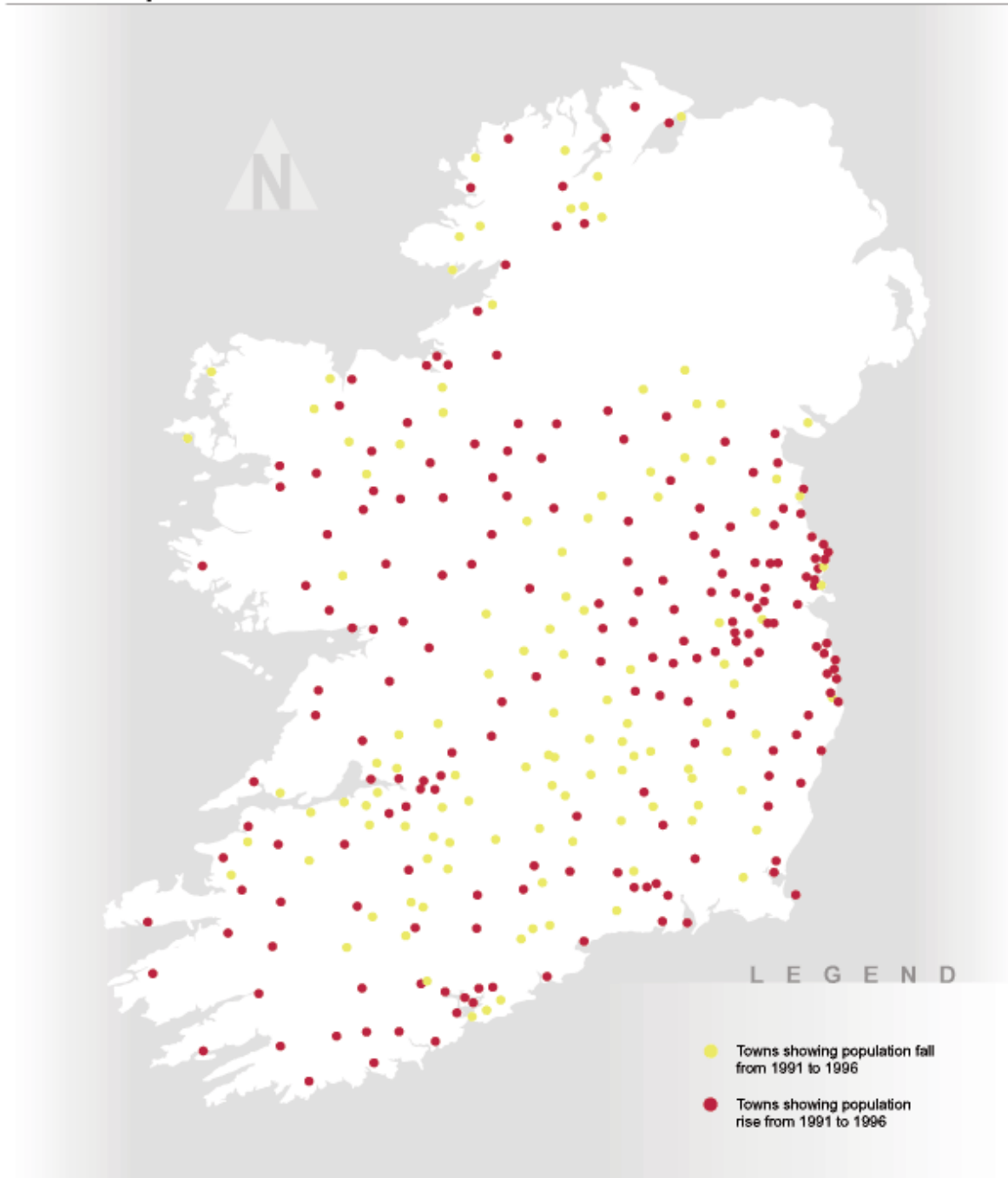


Figure 5.9:

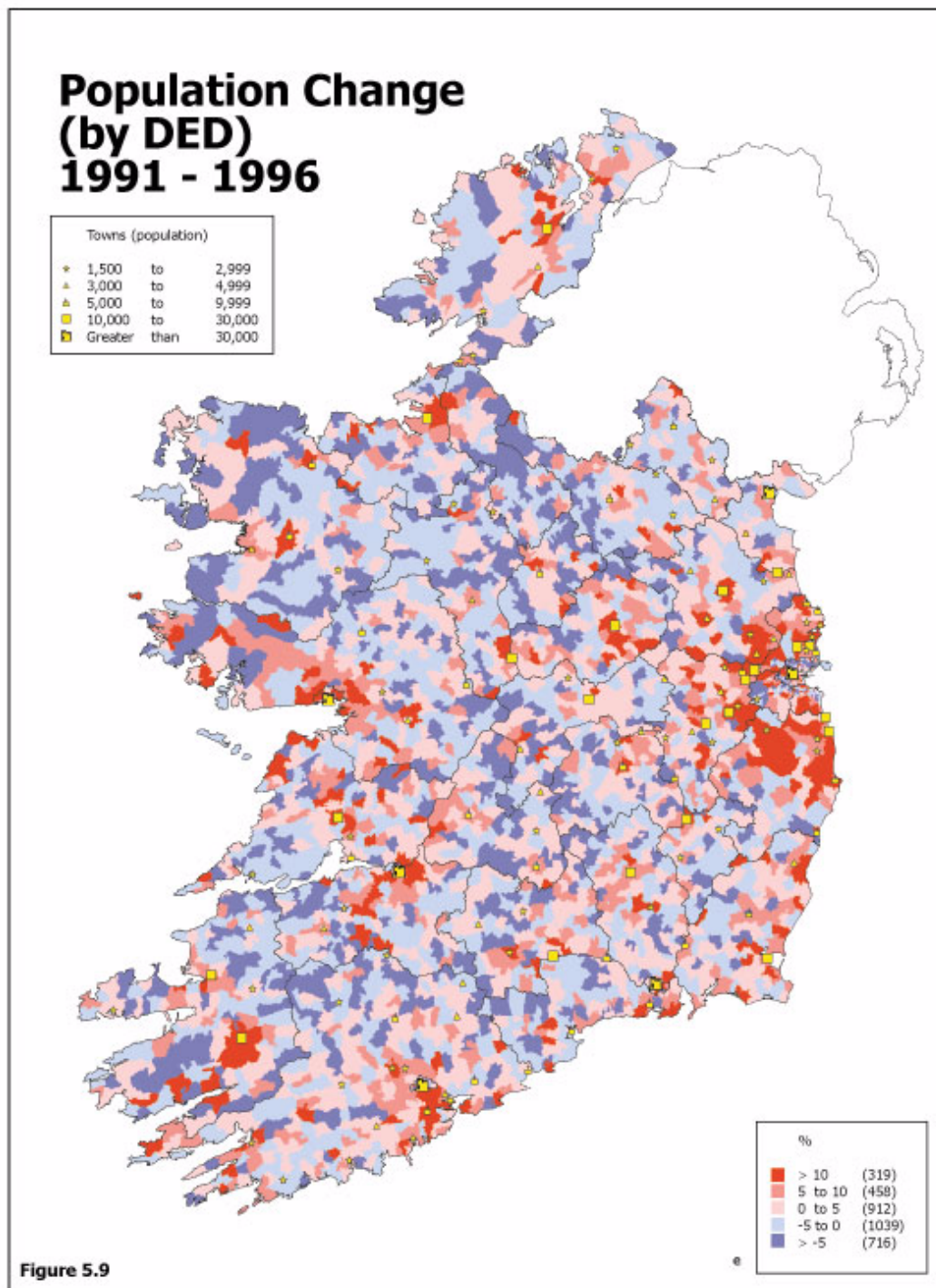
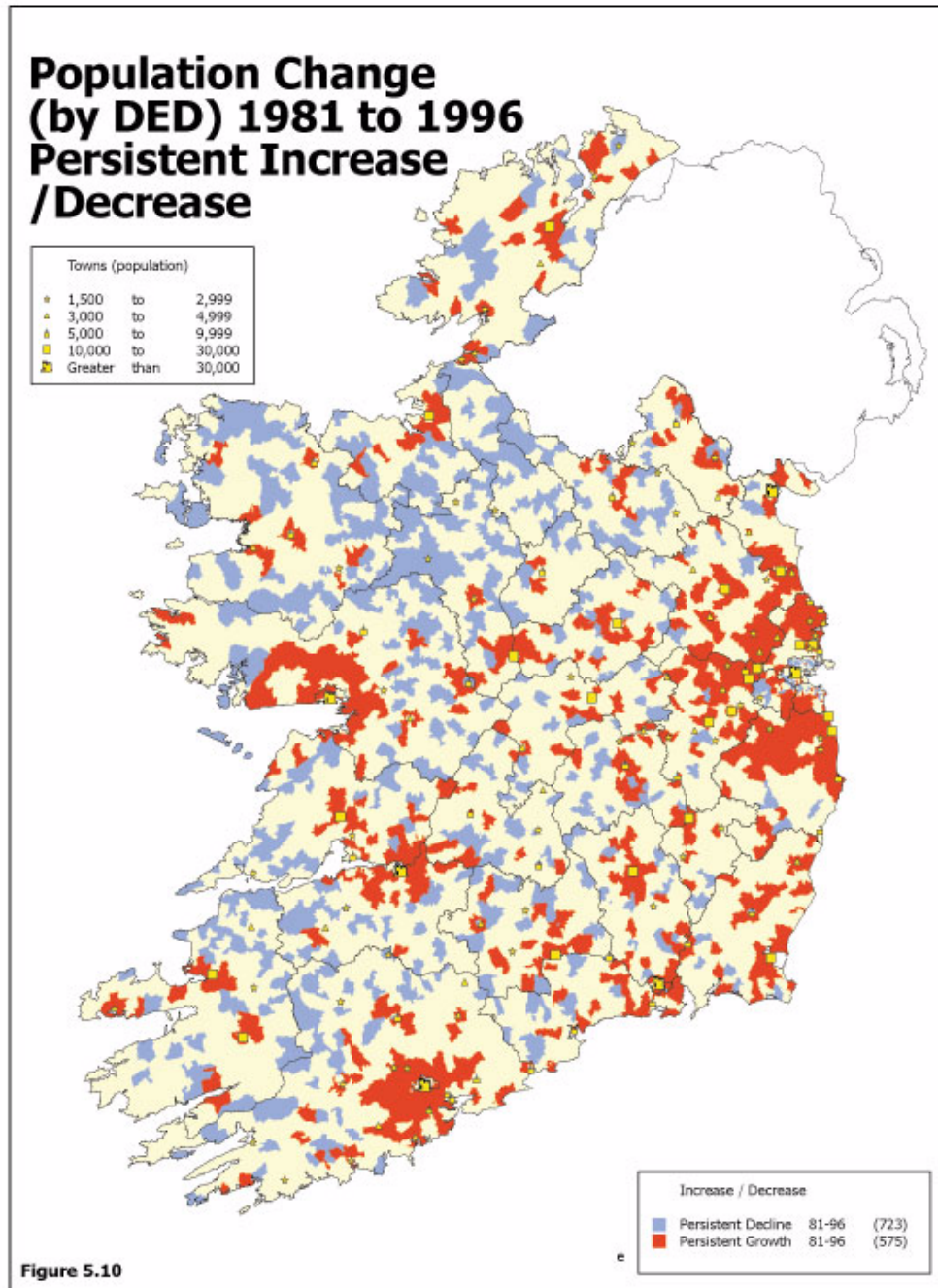


Figure 5.10:



6 URBAN FUNCTIONS

6.1 There is relatively little data, of a consistent and comprehensive nature, available on the functions of Irish urban centres. However, the information available indicates that Irish urban centres may be classified as:

- Those with a level of function significantly higher than their population level would indicate. These are mainly market centres, providing goods and services to rural hinterlands. Letterkenny, Monaghan, Thurles, Castlebar and Enniscorthy are examples.
- Those with a level of function broadly in keeping with their population levels. These include the major cities as well as centres such as Ennis, Clonmel, Carlow and Portlaoighse.
- Those with a level of function significantly lower than their population level would indicate. These are mainly commuting centres, within the sphere of influence of the larger cities, especially Dublin. Examples include Balbriggan, Malahide, Leixlip and Swords, as well as Carrigaline and Cobh. Shannon is also in this category, explained by its lack of an established rural hinterland.

6.2 Some centres have a high level of specialised function. Killarney, with its concentration of tourism and leisure facilities, is an obvious example.

The Functions of Urban Centres

6.3 A function is defined as a specific activity or service provided in an urban centre, serving the resident population and the population of the centre's hinterland. There is a huge range of functions, which may, however, be categorised broadly as:

β employment in manufacturing or services, though in a few centres, such as Navan, primary sector activities such as mining may be significant;

- retailing;
- education;
- health services;
- cultural and other social services;
- tourism and leisure;
- transport, as with ports;
- agricultural services; and
- public administration.

6.4 In previous times, functions such as defence were relatively more important and these former functions may explain the location and/or morphology of a town.

- 6.5 All urban centres serve a number of functions but the mix and extent of the functions vary almost uniquely from settlement to settlement. Generally, larger centres have a greater range of functions as well as a greater extent of provision for each function. There are, however, exceptions. In Ireland, some smaller urban centres serve relatively large rural catchments and may, therefore, have a level of provision far in excess of that indicated by their resident population. Where the role of smaller centres is reinforced by the presence of functions allocated through policy decisions, as with local authority administration, the smaller centres can assume an importance well in excess of that indicated by population size. Roscommon and Carrick-on-Shannon are two examples.
- 6.6 The converse occurs where centres develop as commuter settlements to larger centres. Such centres tend not to develop the range and extent of functions indicated by their population size, as many of the functions are already established in the larger settlement and the centres do not have established rural hinterlands of any scale. A number of such centres are developing around the larger cities.

Functions of Centres of 5,000 and over

- 6.7 Consistent and comprehensive data on the functions of urban centres are not readily available, with a few notable exceptions. In particular, reliable recent data on retailing, apart from that relating to planned shopping centres (only a fraction of the overall provision), are not available. As retailing is the principal market function of most urban centres, this is regrettable. Recourse was, therefore, had to sources such as the Golden Pages directory and the websites of major retailers.
- 6.8 A Functional Index for each urban centre of 5,000 or over in population was derived by assembling a range of available data and arranging this into seven types or categories as follows:
1. financial services;
 2. retail services;
 3. business services;
 4. social and administrative services;
 5. educational services (second and third level);
 6. tourism and leisure services; and
 7. agricultural services.
- 6.9 In each case an index was derived based on a selection of available information (Table 6.1). For example, the index for financial services was based on the number of bank and other financial institution outlets in each centre. In the case of each category, the urban centres were ranked in accordance with the index and this ranking was compared to the population rank for that city or town.

- 6.10 The individual rankings were then combined into an overall Functional Index for the set of urban centres of 5,000 population or over (Table 6.2).
- 6.11 The individual functional indices were tested for sensitivity by omitting and/or inserting different indicators. This test showed that, whilst the actual scores of the individual centres increased or decreased, the overall relative results were stable.

Categories of Urban Centres

- 6.12 The set of rankings of overall Functional Index is graphed against the rankings of population size in Fig. 6.1. From this it is clear that the set of urban centres falls into three categories:
 - 1. Centres with a Functional Index ranking markedly higher than their respective population ranking.
 - 2. Centres with a Functional Index ranking broadly similar to their population ranking.
 - 3. Centres with a Functional Index ranking markedly lower than their respective population ranking.
- 6.13 Those centres with a Functional Index ranking markedly higher than their respective population ranking all have relatively extensive rural hinterlands and would generally be classed as strong Market Towns. They include Letterkenny, Castlebar Thurles, Monaghan, Nenagh, Enniscorthy, etc. These urban centres are well distributed throughout the country (Fig. 6.2).
- 6.14 The centres with a Functional Index ranking markedly lower than their population ranking are mainly commuter towns. The most marked difference in ranking is for Swords, Malahide, Leixlip, Celbridge, Greystones, Portmarnock, Balbriggan and Skerries, all commuter settlements in the Greater Dublin Area, whilst Carrigaline and Cobh are commuter centres for Cork. These commuter centres are clustered around the major cities (Fig. 6.2).
- 6.15 Shannon is a planned town with a very limited rural hinterland and which competes against the established centres of Limerick and Ennis. It is not surprising, therefore, that its ranking in terms of Functional Index is lower than its population ranking.
- 6.16 The urban centres whose Functional Index ranking is broadly similar to their population ranking fall within the two parallel black lines on either side of the population rank line on the graph (Fig. 6.1). These lines are located five Functional Index rank places above and below the population rank line.
- 6.17 The most notable feature of this category is that it includes the five main cities and a number of the other larger established population centres, including Dundalk, Sligo, Tralee, Kilkenny, Ennis, Clonmel, etc. The smaller urban centres generally fall into either of the other categories, with a few exceptions, such as Naas and Portlaoighse.

Hospitals and Third-Level Educational Facilities

- 6.18** Hospitals and third-level educational facilities, including universities and institutes of technology, are key functions that contribute significantly to the overall functional importance of a centre. The presence of these functions in a settlement is a result of policy decisions, which can have a beneficial knock-on in terms of generating and attracting other functions to the selected centre. All hospitals are shown on Fig. 6.3, whilst the principal third-level educational establishments are shown on Fig. 6.4.

Second Level Education

- 6.19** One of the few functions for which complete data are available is second-level education. Information provided by the Department of Education and Science allows for accurate ranking of towns by enrolment in second level education (Table 6.3). In the set of towns of 5,000 population and over, the broad pattern of school enrolment reflects the three-fold categorisation of towns described above (Fig. 6.5).
- 6.20** The second-level school enrolment of many centres with a population of less than 5,000 is relatively large. Centres with a second-level school enrolment of over 1,000 in 1999-2000 are given in Table 6.4.

Conclusions

- 6.21** Consistent and comprehensive data on the functions of urban centres, with the exception of a few categories such as education, are not readily available. This makes meaningful comparison of centres, including their competitiveness and complementarity, difficult.
- 6.22** Analysis of the available information indicates that some urban centres, including the principal cities, have a level and provision of functions that reflects their level of population. Other centres have a significantly higher level of function than would be associated with their population level and this is explained, in most cases, by the relatively extensive rural hinterlands of these centres. On the other hand, some commuting settlements, and a small number of other centres such as Shannon, have a level of provision that is markedly lower than indicated by their population levels.

Tables

Table 6.1: Sub-Components of Functional Indices

Index	Sub-Component
Financial Services	No. of branches of major financial institutions (BoI, AIB, Ulster Bank, ACC, NIB, EBS, ICS, Irish Nationwide, TSB, ICC, Irish Permanent) + no. Credit Union branches.
Retail Services	No. of national food retail chain outlets (major supermarkets + SuperValu) + no. chemists + no. jewellers + no. shoe shops + no. mobile phone outlets + no. video sale/rental outlets + no. hairdressers.
Business Services	No. of solicitors + no. estate agents + no. accountants + no. courier/haulage companies + no. computer repair companies + no. employment agencies + no. marketing consultants.
Social and Public Administration Services	No. of hospitals + no. fire stations + no. social welfare offices + no. training centres+ no. training offices+ no. libraries + no. Garda stations with Chief Superintendent or higher + no. County administration offices + no. courthouses + no. court offices + no. tax offices + no. NCT centres.
Educational Services	No. of universities + no. ITT/other CAO institutes + no. post-primary schools.
Tourism and Leisure Services	No. of hotels + no. guesthouses + no. visitor/heritage centres + no. museums/art galleries + no. opera/theatre venues + no. GAA County sports grounds + no. swimming pools + no. cinemas/multiplexes.
Agriculture Services	No. trading marts + no. Teagasc offices + no. forestry inspector offices + no. local Department of Agriculture and Food offices/ labs/ field stations + no. creameries + no. millers + no. fertiliser agents + no. meat processors + no. potato inspector offices + no. abattoirs.

Table 6.2: Summary of Functional Indices

Centre	Population	Population rank	Financial Services	Retail Services	Business Services	Social Services	Education	Tourism/Leisure Services	Agricultural Services	Total of rankings	Inverse rank * 1000	Functional Index Rank
Greater Dublin	952692	1	1	1	1	1	1	1	1	7	142.86	1
Cork	179954	2	2	2	2	2	2	2	2	14	71.43	2
Limerick	79137	3	3	3	3	4	3	5	6	27	37.04	3
Galway	57363	4	5	4	4	5	4	4	3	29	34.48	4
Waterford	44155	5	4	6	5	2	5	6	19	47	21.28	5
Dundalk	30195	6	9	5	10	6	6	11	6	53	18.87	6
Bray	27923	7	14	20	13	38	8	11	46	150	6.67	21
Drogheda	25282	8	9	25	8	29	8	18	19	116	8.62	16
Swords	22314	9	47	44	26	38	18	45	46	264	3.79	42
Tralee	19950	10	6	7	7	6	8	11	26	71	14.08	9
Kilkenny	18696	11	9	8	11	6	12	6	13	65	15.38	8
Sligo	18509	12	6	9	6	6	8	9	16	60	16.67	7
Ennis	17726	13	8	12	9	10	18	8	13	78	12.82	10
Clonmel	16182	14	14	13	20	18	18	11	6	100	10.00	12
Wexford	15862	15	25	10	14	15	12	9	19	104	9.62	13
Athlone	15544	16	14	14	23	23	12	18	26	130	7.69	18
Carlow	14979	17	14	22	16	15	7	11	26	111	9.01	14
Naas	14074	18	25	23	12	23	18	37	5	143	6.99	20
Malahide	13539	19	39	41	36	50	52	45	46	309	3.24	48
Leixlip	13451	20	47	48	47	50	46	37	41	316	3.16	49
Droichead Nua	13363	21	32	28	32	31	18	28	41	210	4.76	35
Navan	12810	22	25	18	19	23	12	37	35	169	5.92	27
Mullingar	12492	23	18	14	15	10	18	23	16	114	8.77	15
Celbridge	12289	24	39	54	39	56	46	55	41	330	3.03	51
Killarney	12011	25	18	16	21	23	18	3	35	134	7.46	19
Letterkenny	11996	26	12	11	23	10	18	18	3	95	10.53	11
Greystones	11296	27	52	48	54	47	52	45	46	344	2.91	53
Tullamore	10039	28	18	17	17	15	33	28	26	154	6.49	23
Portlaoighse	9474	29	25	30	29	10	33	31	19	177	5.65	29
Portmarnock	9145	30	56	55	51	56	52	52	46	368	2.72	56
Ballina	8762	31	18	32	34	23	33	11	6	157	6.37	24
Arklow	8557	32	39	38	44	31	33	28	41	254	3.94	40
Castlebar	8532	33	12	19	22	10	33	11	16	123	8.13	17
Maynooth	8528	34	39	41	39	47	33	45	35	279	3.58	44
Balbriggan	8473	35	52	51	55	44	46	56	46	350	2.86	55
Cobh	8459	36	39	40	50	47	46	37	46	305	3.28	46
Shannon	7939	37	47	51	45	44	33	42	46	308	3.25	47
Carrigaline	7827	38	47	51	47	50	52	45	46	338	2.96	52

	Functional rank higher than population rank
	Functional rank lower than population rank

Table 6.2: Summary of Functional Indices (continued)

	Functional rank higher than population rank
	Functional rank lower than population rank

Centre	Population	Population rank	Financial Services	Retail Services	Business Services	Social Services	Education	Tourism/Leisure Services	Agricultural Services	Total of rankings	Inverse rank * 1000	Functional Index Rank
Mallow	7768	39	25	20	25	31	18	31	13	163	6.13	26
Enniscorthy	7640	40	31	30	18	31	33	25	6	174	5.75	28
Skerries	7339	41	52	48	55	50	52	45	46	348	2.87	54
Wicklow	7290	42	39	41	32	31	18	18	26	205	4.88	34
Dungarvan	7175	43	18	36	39	38	18	31	41	221	4.52	36
Longford	6984	44	18	34	27	18	46	25	26	194	5.15	32
Thurles	6939	45	32	28	30	23	12	31	6	162	6.17	25
Tramore	6536	46	47	56	51	50	46	37	35	322	3.11	50
Midleton	6209	47	32	33	28	31	18	42	19	203	4.93	33
New Ross	6147	48	39	44	42	44	18	23	26	236	4.24	38
Youghal	5943	49	32	44	47	29	33	31	46	262	3.82	41
Nenagh	5913	50	18	27	38	18	33	42	6	182	5.49	30
Monaghan	5842	51	25	23	30	18	18	18	19	151	6.62	22
Ballinasloe	5723	52	32	35	43	31	33	31	19	224	4.46	37
Tuam	5627	53	39	37	37	38	12	52	26	241	4.15	39
Cavan	5623	54	32	25	35	18	18	25	35	188	5.32	31
Rush	5429	55	56	57	57	51	50	57	46	374	2.67	57
Athy	5306	56	32	38	45	38	33	52	26	264	3.79	42
Carrick-on-Suir	5217	57	55	47	51	38	33	45	35	304	3.29	45

Table 6.3: Second Level School Enrolment, 1999, Centres over 5,000 pop.

Centre	Population 1996	School Enrolment	Ratio Enrolment to Pop.	Population Rank	School Enrolment Rank
Greater Dublin	952692	88519	0.93	1	1
Cork	179954	18749	1.04	2	2
Limerick	79137	8868	1.12	3	3
Galway	57363	5947	1.04	4	4
Waterford	44155	5485	1.24	5	5
Dundalk	30195	4892	1.62	6	6
Bray	27923	4003	1.43	7	8
Drogheda	25282	4311	1.71	8	7
Swords	22314	2325	1.04	9	20
Tralee	19950	3128	1.57	10	10
Kilkenny	18696	3787	2.03	11	9
Sligo	18509	2607	1.41	12	16
Ennis	17726	2954	1.67	13	11
Clonmel	16182	2094	1.29	14	25
Wexford	15862	2835	1.79	15	13
Athlone	15544	2539	1.63	16	18
Carlow	14979	2933	1.96	17	12
Naas	14074	2332	1.66	18	19
Malahide	13539	1051	0.78	19	46
Leixlip	13451	1518	1.13	20	36
Droichead Nua	13363	2296	1.72	21	22
Navan	12810	2638	2.06	22	15
Mullingar	12492	2325	1.86	23	20
Celbridge	12289	1378	1.12	24	39
Killarney	12011	1720	1.43	25	32
Letterkenny	11996	2163	1.80	26	23
Greystones	11296	682	0.60	27	56
Tullamore	10039	1593	1.59	28	35
Portlaoighse	9474	1322	1.40	29	41
Portmarnock	9145	1010	1.10	30	49
Ballina	8762	1496	1.71	31	38
Arklow	8557	1176	1.37	32	44
Castlebar	8532	1963	2.30	33	27
Maynooth	8528	712	0.83	34	54
Balbriggan	8473	1363	1.61	35	40
Cobh	8459	983	1.16	36	50
Shannon	7939	1251	1.58	37	43
Carrigaline	7827	868	1.11	38	53
Mallow	7768	1919	2.47	39	30
Enniscorthy	7640	2114	2.77	40	24
Skerries	7339	972	1.32	41	51
Wicklow	7290	1645	2.26	42	34
Dungarvan	7175	1696	2.36	43	33
Longford	6984	1296	1.86	44	42

Table 6.3: Second Level School Enrolment, 1999, Centres over 5,000 pop. (continued)

Centre	Population 1996	School Enrolment	Ratio Enrolment to Pop.	Population Rank	School Enrolment Rank
Thurles	6939	1948	2.81	45	29
Table 6.3 (Contd.)					
Tramore	6536	706	1.08	46	55
Midleton	6209	2059	3.32	47	26
New Ross	6147	1954	3.18	48	28
Youghal	5943	971	1.63	49	52
Nenagh	5913	1511	2.56	50	37
Monaghan	5842	2552	4.37	51	17
Ballinasloe	5723	1074	1.88	52	45
Tuam	5627	1868	3.32	53	31
Cavan	5623	2671	4.75	54	14
Rush	5429	439	0.81	55	57
Athy	5306	1024	1.93	56	48
Carrick-on-Suir	5217	1026	1.97	57	47

Table 2.5: Second Level School Enrolment of over 1,000 in centres of less than 5,000 pop.

Centre	Population 1996	Enrolment
Athenry	1614	1259
Bandon	4751	2037
Buncrana	4805	1117
Carndonagh	1580	1513
Carrickmacross	3617	1603
Cashel	2887	1281
Clonakilty	2950	1121
Edenderry	3825	1012
Fermoy	4469	1708
Gorey	3939	1511
Kells	3542	1263
Killorglin	1278	1010
Listowel	3656	1025
Roscommon	3915	1056
Roscrea	4170	1215
Stranorlar	3047	1130
Tipperary	4854	1227
Trim	4405	1347
Westport	4520	1139

Source: Department of Education and Science

Figures

Figure 6.1: Functional Index and Population by Rank

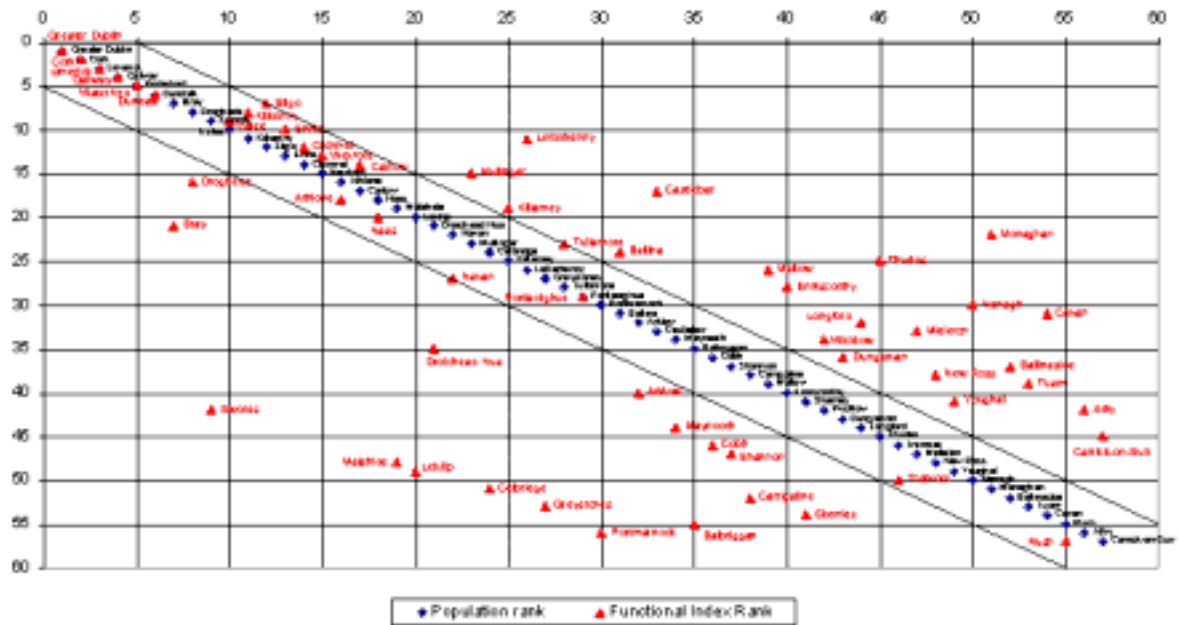


Figure 6.2:

Figure 6.2: Urban centres with functional index ranking, as differentiated from the population rank

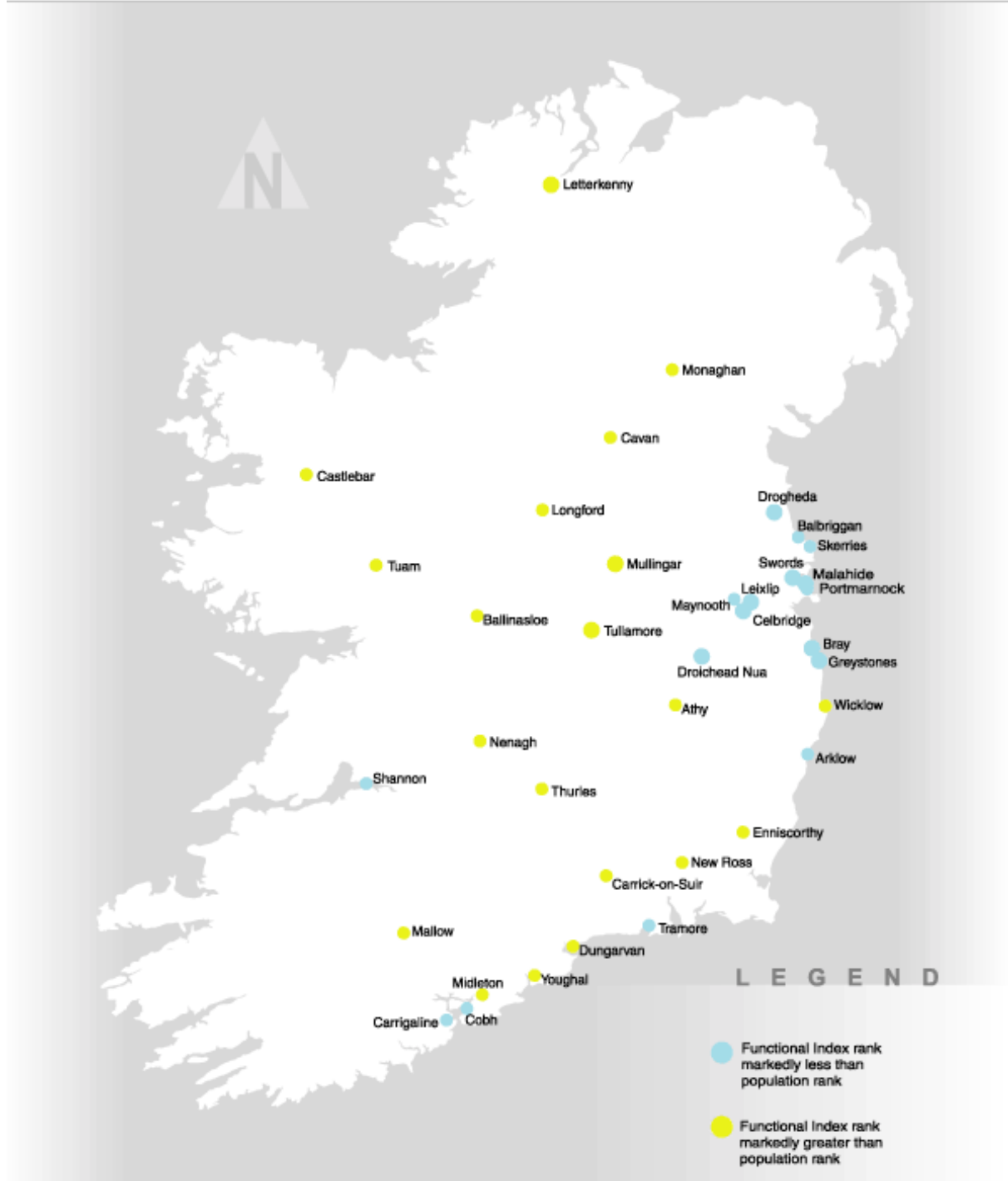


Figure 6.3:

Figure 6.3: Hospital locations

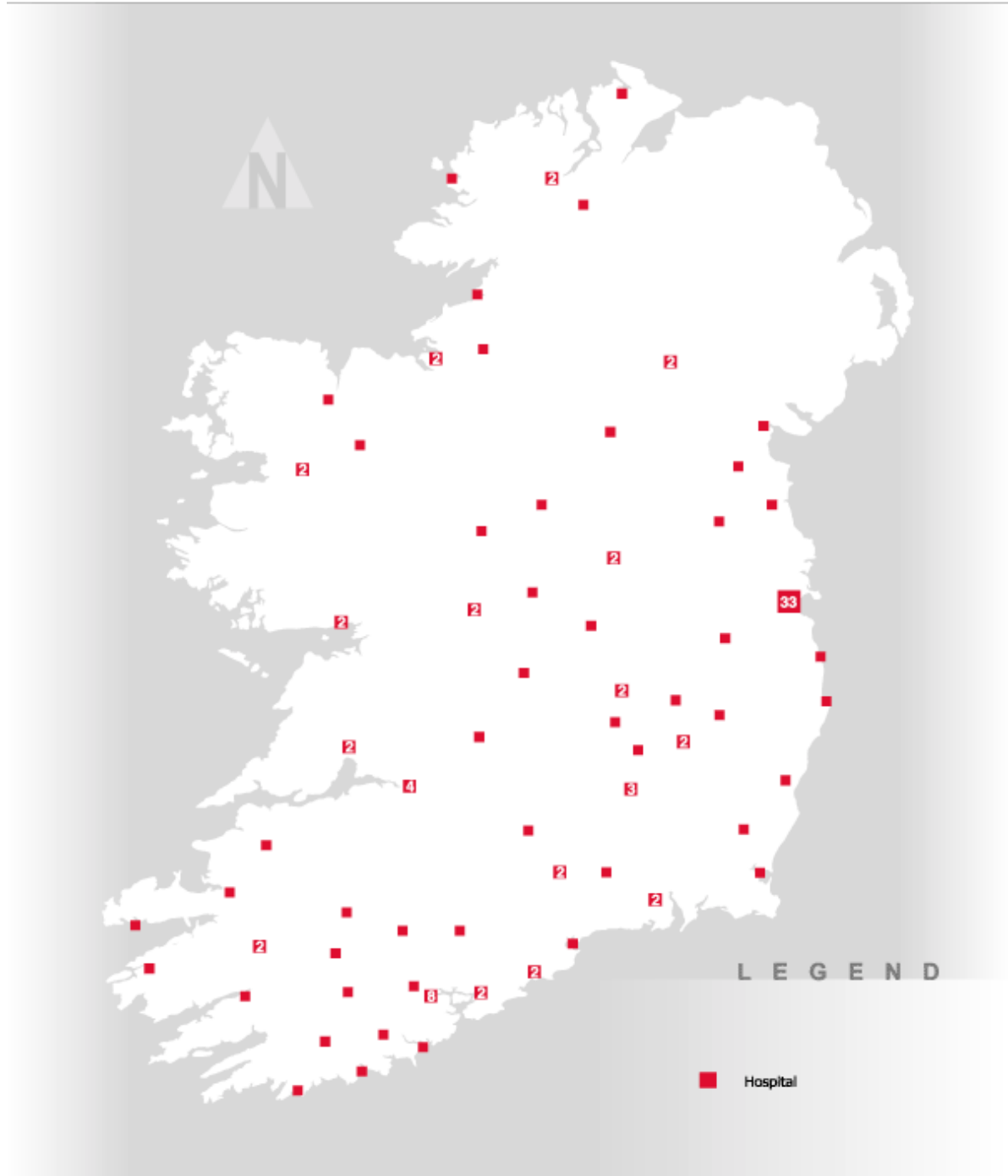


Figure 6.4: Third level education institutions



Figure 6.5: Second-level School Population by Rank

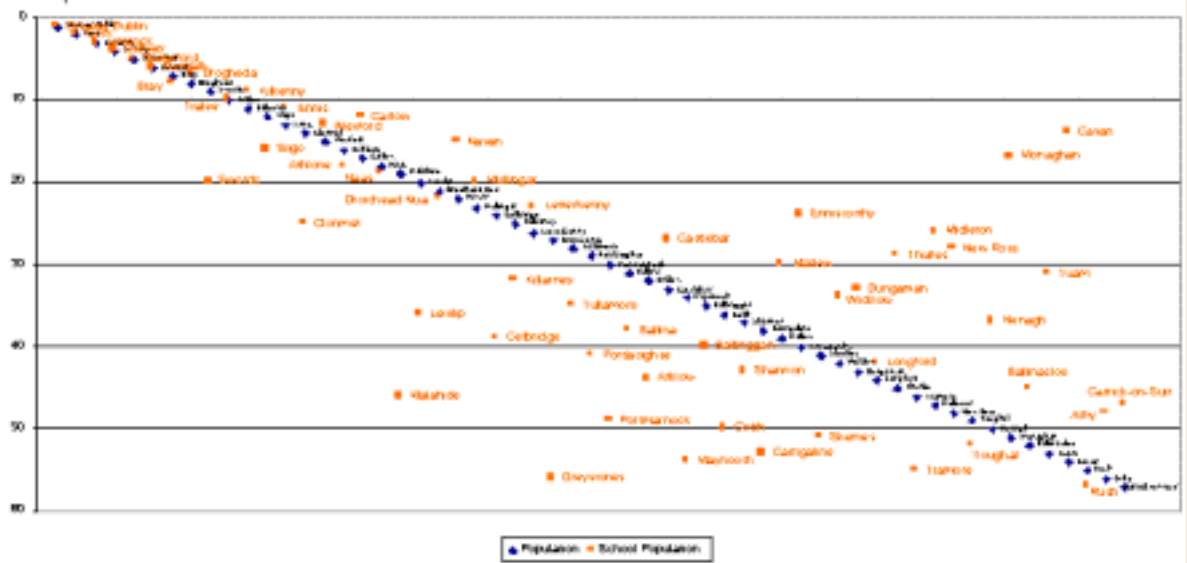
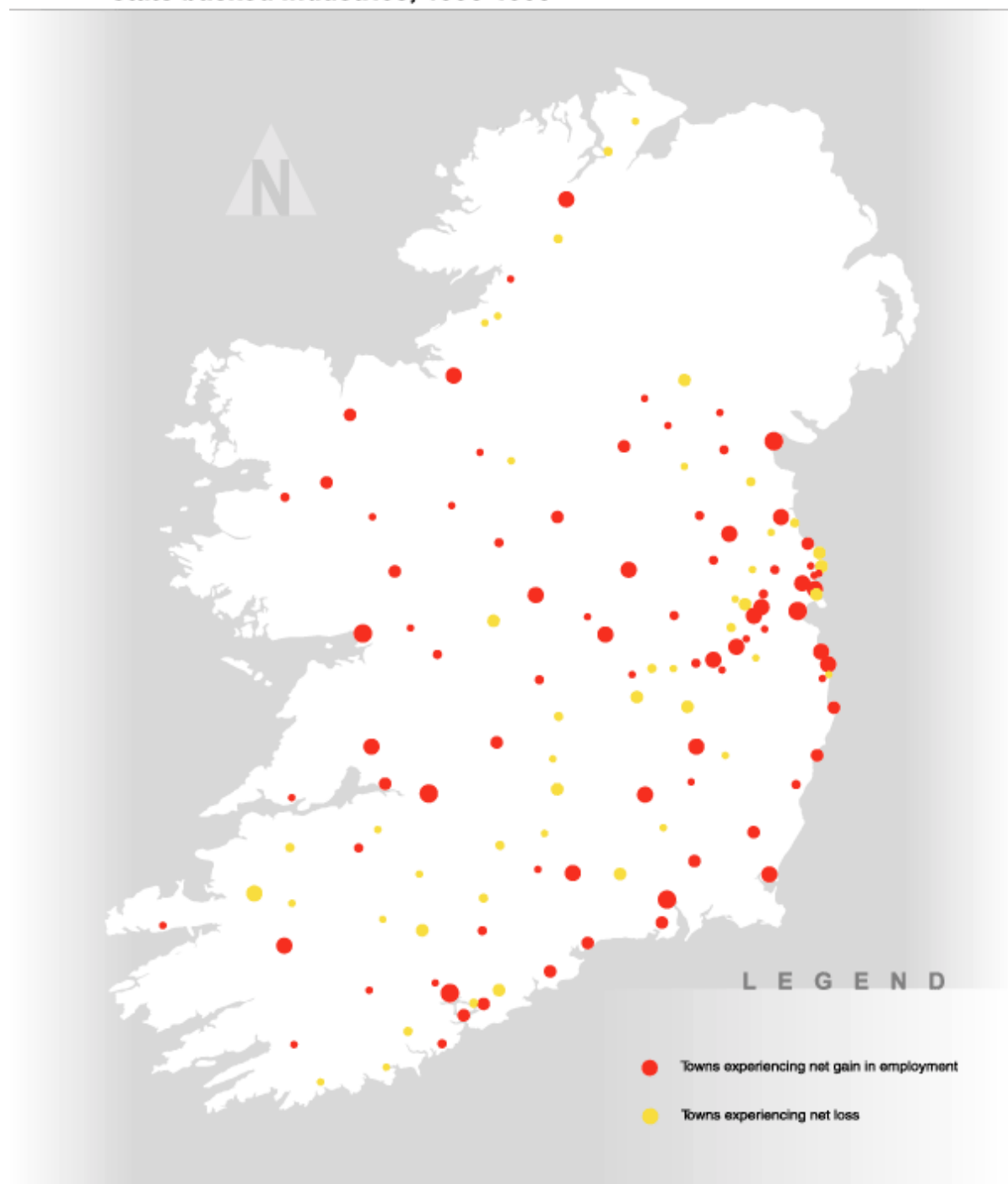


Figure 6.6:

Figure 6.6: Urban centres, not gain/loss in employment in state backed industries, 1995-1999



7 URBAN FIELDS

7.1 An analysis based on Census of Population data at District Electoral Division (DED) level and using the limited information on urban functions discussed in Chapter 6, allows the visualisation of the urban fields of the principal centres. This, together with consideration of the other findings of the study, leads to a number of conclusions, including:

- There is a more dense distribution of urban fields in the east and south, reflecting the number and distribution of cities and towns of over 5,000 population in that part of the country.
- In the west and north-west, larger urban centres are more widely spaced and some of the functions normally associated with centres of this size are served by smaller centres, such as Roscommon or Carrick-on-Shannon.
- There is a significant level of urbanisation occurring outside of the formal town boundaries (statutory and/or census), with many DEDs exhibiting markedly urban characteristics. This process of urbanisation is spreading into the wider countryside.
- Certain sets of urban centres have relatively well-defined relationships. These include the centres in the Greater Dublin Area, together with those in Co. Louth, and a number of sets in the south and west. The relationship between settlements in the south-east and midlands is less clear and may require further study.
- The primacy of Dublin makes it the principal 'gateway' to the country. The next largest centres may not be of sufficient size and/or functionality to act as major 'gateways' on their own but, in combination with other centres, there may be potential for the formation of one or more polycentric 'gateways'.

Urban Fields

7.2 Each function of an urban centre has an associated urban field. This may be defined as the area within the hinterland served by that particular function. Taken together, the urban fields describe the 'sphere of influence' of the urban centre.

7.3 The extent and shape of an urban field for a particular function is dependent on a range of factors including:

- The proximity of the settlement to other centres providing the same function, especially centres of similar or larger size.
- The nature and pattern of transportation links to the centre and hence the accessibility of the surrounding area to the urban centre.

- The location of the centre and the physical geography of its hinterland. An urban field may be limited by the coastline or constrained by a river or mountain range.
 - The extent or size of the function or the provision made for it in the centre. Thus, centres with larger retail floorspace areas may be expected to have relatively larger retail fields
- 7.4** In aggregate terms, the overall urban field of a centre will also be influenced by the number as well as the extent of the functions provided by the centre, the 'image' and status of the centre and consumers perception and preferences.
- 7.5** Clearly, the urban field of a centre will vary from function to function. For example, the field for hospital services is likely to be greater than for retailing, which in turn might be greater than for first or second level education or church services.
- 7.6** The fields for certain functions are determined by policy. For example, local administration is centered in County Towns and the fields for these centres, in terms of public administration, will be the County unit. In a number of instances, the County Towns are not located centrally within the County, giving rise to public administration fields that may be very different from market fields, such as retailing. Urban centres located on or near administrative boundaries are shown on Fig. 7.1.
- 7.7** Determining the extent of an urban field, either in aggregate terms or for a specific function, is dependent on the availability of adequate data on the functions of the centre. As discussed in Chapter 6, there are only very limited comprehensive and consistent data available on the functions of urban centres. Moreover, the techniques for determining the fields associated with a function have serious limitations. Gravity models, based on the relative 'weight' of centres, are commonly used, especially in modelling retail systems. However, these generally assume an isotropic surface and consequently require considerable moderation to achieve any useful results.
- 7.8** An alternative approach, based on the analysis at DED level undertaken for the associated study of the Irish Rural Structure and Gaeltacht Areas, provides a more consistent means of assessing the extent of the urban fields around the principal urban centres.
- 7.9** The analysis of population density (Fig. 7.2) provides an initial visualisation of the influence of urban centres on the surrounding hinterland. Apart from a number of rural areas, especially along the western seaboard, which have traditionally had a very high density of settlement, most of the DEDs with a population density of more than 50 persons per square kilometre show a close correlation with urban centres. The influence of the major centres of Dublin, Cork, Limerick, Galway and Waterford are evident.

- 7.10 The pattern of population change (Fig. 5.9) and more particularly persistent population change (Fig. 5.10), also sheds some light on the influence of urban centres and reinforces the pattern shown on the map of population density (Fig. 7.2). However, care must be taken with the population change maps, as many DEDs, such as those in the Wicklow Mountains, have a small population base.
- 7.11 A map of Rural Typology was developed as part of the work on the study of the Irish Rural Structure and Gaeltacht Areas. From this work, it was possible to identify 'Urban DEDs', which are those DEDs aggregated to Urban Districts (as defined by the CSO), other DEDs with a population density in excess of 150 persons per square kilometre (following an OECD definition of urban regions) and DEDs which contained other urban centres of 1,500 population or greater.
- 7.12 Figure 7.3 shows these 'Urban DEDs', together with areas identified in the analysis as:
1. 'Peri-urban Areas', which are characterised by high population densities, an advanced level of transition to a higher socio-economic profile (higher proportions with advanced levels of education, larger shares of the workforce in professional services and commerce functions) and low reliance on agricultural employment. These are clearly areas with strong urban characteristics, although not sufficiently densely settled to be defined as urban areas. In most instances, there is a clear correlation with cities and towns and the 'Peri-urban Areas' therefore provide a useful visualisation of the general fields of the centres.
 2. 'Very Strong Areas', which are characterised by relatively strong agriculture. However, these areas also exhibit an above average level of transition to non-agricultural employment, as well as evidence of generally favourable demographic structures. In some respects, they may be regarded as developing towards 'Peri-urban Areas'. In at least some instances, as for Dublin and Cork, they appear to correspond to the outer limits of commuting and therefore are useful in helping to visualise the wider urban fields of the major centres.
- 7.13 The 'Urban DEDs' extend well beyond the boundaries of the cities and towns around which they are clustered. The urban structure of Ireland must, therefore, be regarded as extending beyond the cities and towns as defined for purposes of the Census of Population (and local government) and embracing a far greater area than might be gleaned from the analysis of urban centres in Chapters 4 and 5.
- 7.14 A Remoteness Index was also developed as part of the work on the study of the Irish Rural Structure and Gaeltacht Areas. This is illustrated on Fig. 7.4 and, as with the other maps based on the analysis of DEDs, helps to visualise the influence of urban centres, and in this case the associated transportation system.

- 7.15 An additional guide to the visualisation of urban fields may be obtained from consideration of the areas served by the school transport system feeding into second level schools in the various centres. These are shown on Fig. 7.5.
- 7.16 Whilst the urban field of any centre varies with function, it is, nevertheless, possible to provide a broad visualisation of the urban fields of the main urban centres by combining the analysis based on DEDs with consideration of the range and extent of the functions provided in the centre (the Functional Index), topography and transportation routes.
- 7.17 An indication of the urban fields of the five main cities is given in Fig. 7.6 whilst a similar indication of the urban fields of the other centres of over 5,000 population is given in Fig. 7.7. It should be stressed that these fields are indicative only and do not correspond with the specific field associated with a particular function of the centre.
- 7.18 The relatively dense distribution of urban fields in the east and south reflects the number and distribution of cities and towns of over 5,000 population in that part of the country. In the west and north-west, larger urban centres are more widely spaced and this is reflected in the fields. For higher order services and functions, the fields of all of the urban centres will extend further. Ultimately, for the highest order functions, every part of the country will lie within one or more urban field. The 'gaps' in the distribution of the urban fields, as shown on Figs. 7.6 and 7.7, are served by smaller centres and this helps explain the relatively strong level of functions found in many Irish towns with populations below 5,000.

Gateways

- 7.19 The concept of gateways is used in the National Development Plan 2000-2006, which defines them as:

“...centres which have a strategic location relative to the surrounding territory, possess good social and economic infrastructure and support services and have the potential to open up their zones of influence to further development by providing transport links with contiguous zones.

They are centres which are strategically placed to drive growth in their zones of influence, generating a dynamic of development which embraces the complementarity between city, town, village country.”
- 7.20 Regional Gateways are a key component of the Government Regional Development Policy. The aim is to facilitate development by creating the conditions for a second tier of larger urban centres thus spreading economic growth more widely across regions. Their development is a long-term strategy requiring an incremental, planned and consistent approach to investment. The choice of locations for development as Regional Gateways must be based on their potential to stimulate growth in the towns, villages and rural areas

throughout their zone of influence. The choice must also reflect on the quality of their transport connections to other parts of the country.

- 7.21 The development of Regional Gateways however is not confined to currently designated centres or their immediate hinterlands. What is required is to create a 'critical mass' to spur growth in the designated centres and their wider zones of influence. Within these zones, there will also be a crucial need for a tier of development hubs that are primarily relevant at county or local level. Regional Gateways act as hubs for economic growth, supporting the development of smaller towns, villages and rural areas.
- 7.22 Regional Gateways may be contrasted with the older concept of Growth Centres, points where investment would be concentrated in order to stimulate economic development. Growth Centres were exclusive and did not embrace linkages to other centres within their spheres of influence. The concept of Regional Gateways, compared with Growth Centres, is a more spatially dynamic one, which expresses and emphasises the relationship between centres of various sizes, focused on a 'gateway' centre that acts as a window through which policies can be directed to energise the entire area.
- 7.23 It is clear that many of the individual urban centres are not of sufficient scale to act as 'gateways' and their urban fields are too small to represent the required spheres of influence. Thus, apart from the principal cities and their primary and secondary fields, a concept on a larger scale is required to form the basis for consideration of potential gateways.

Components of the Urban System

- 7.24 Examination of the indicative urban fields shown on Maps 7.6 and 7.7, together with consideration of the DED analysis maps, especially Fig. 7.3, which shows areas that are experiencing significant urbanisation, permits the identification of components of the Irish urban system. These are illustrated on Fig. 7.8.
- 7.25 The components shown on Fig. 7.8 relate to all centres of 5,000 or more in population. They can be broadly classified as:
- Urban centres, or sets of centres, which on the basis of function and field have relatively well-defined relationships with their wider hinterlands and/or with other centres in the set. These are labelled 1-8 and A1-A2 on Fig. 7.8; and
 - Urban centres, or sets of centres, which do not have clearly defined relationships with neighbouring centres, except at a relatively local level. These are labelled A-D on Fig. 7.8.

- 7.26** Apart from Dublin, which has a strong relationship with a set of urban centres in the Greater Dublin Area and County Louth, the more clearly defined components of the Irish urban system are those in the south and west. This may be due, at least in part, to the size and growth of Dublin, which is exerting strong influence over many urban centres in the Midlands and South-East. It may also reflect the relatively more dense settlement structure of the east and south with closely spaced urban centres with overlapping urban fields, which contribute to the complexity of the pattern.

1. Dublin and the East

- 7.27** The size of Dublin and the extent and range of its functions exert a major influence over other urban centres, especially those with strong commuter links to the capital. The planning and development of many of these centres is guided by the Strategic Planning Guidelines for the Greater Dublin Area, whilst Drogheda and Dundalk both have strong transportation links with Dublin. This component therefore includes the Metropolitan Area of Dublin, together with the principal urban centres in the Greater Dublin Area and in Co. Louth.
- 7.28** Dublin is the national capital and an important international centre. It has, by far, the greatest range and extent of functions of any Irish urban centre and ranks number 1 in all categories. In terms of national administration and the highest order of services, its fields extend over the whole of the State.
- 7.29** In addition to Greater Dublin, this group contains four of the 10 largest urban centres in Ireland - Dundalk, Bray, Drogheda and Swords. Dundalk has a functional index broadly corresponding to its population ranking but the border with Northern Ireland affects the extent of its hinterland. It grew in the 1991-96 inter-censal period, following a period of decline in the 'eighties. Bray and Swords, and to a lesser extent Drogheda, have a lower level of functionality than their populations would indicate, reflecting their increasing role as commuter settlements. Swords, in particular, grew very rapidly in the late 'eighties and 'nineties.
- 7.30** The group also includes a number of urban centres that, because of their location and traditional relationship with relatively extensive rural hinterlands, continue to have some significance as market centres, but which are coming under increasing commuter pressure from Greater Dublin. These include Navan, Naas, Droichead Nua and Wicklow. All of these settlements grew significantly in the 1991-96 period.
- 7.31** The remaining urban centres in this component are primarily commuter centres, though some are significant towns in their own right. They include the north-east Kildare towns of Celbridge, Maynooth and Leixlip and the coastal settlements of Balbriggan, Skerries, Rush, Malahide, Portmarnock and Greystones. All of these centres have grown significantly in recent years.

2. The Cork Area

- 7.32** In terms of function and size, Cork is the second most important urban centre. It ranked second to Dublin in every category of function examined and its urban fields extend over much of the county for a range of functions.
- 7.33** The component includes a number of urban centres of 5,000 population and over. These include Mallow, which is a strong market centre as indicated by its relatively high functional index. It also includes Midleton and Youghal, which are both strong towns providing a level of function greater than their population levels. However, both are also coming under the commuting influence of Cork. Both increased their population levels in the 1991-96 period, following a period of decline.
- 7.34** Cobh and Carrigaline have relatively low levels of function as compared to their population, reflecting their role as commuter centres to Cork. Carrigaline was the only urban centre in the 5,000+ category, outside of the Greater Dublin Area, to increase its population by more than 50% in the 1981-96 period.
- 7.35** Together, this component forms a relatively well-defined group of urban centres, located outside the sphere of influence of Dublin except for the highest order services. The administrative and cultural unity of the group may contribute to its strength, as all of the centres lie within one county.

3. The Limerick Area

- 7.36** Limerick is the third largest urban centre in terms of population and its functions broadly match this status. The Limerick-Ennis corridor, embracing Shannon, has experienced significant economic development over the last few decades, whilst Nenagh has strengthened its links to Limerick in recent years.
- 7.37** Limerick forms the core of an area, embracing Ennis, Nenagh and Shannon, that is currently the subject of a single planning study (Limerick Planning, Land-Use and Transportation Study). Thus, for purposes of strategic planning, this is a recognised component of the overall urban system.
- 7.38** Ennis has a level of functions marginally higher than its population would indicate, whilst Nenagh has a significantly higher functional ranking than its population ranking. Shannon, however, has a relatively low functional index, reflecting the absence of an established rural hinterland. It also decreased in population in the 1981-96 period.

4. The Galway Area

- 7.39** Galway is the fourth largest settlement in population terms and has a range of functions and services that broadly match this ranking. It increased its population steadily over the 1981-96 period. Galway has an extensive rural hinterland embracing many smaller centres, but only one in excess of 5,000 population. This is Tuam, which has a functional index well in excess of its population level.
- 7.40** The component is relatively well-defined, but may interact with the western edge of the Midlands group of centres (B), especially Ballinasloe.

5. Kerry Centres

- 7.41** Kerry contains two urban centres of over 5,000 in population, both of which are relatively strong. Tralee is the County town with a range of functions broadly matching its population ranking, and has grown steadily over the 1981-96 period.
- 7.42** The functional index of Killarney is boosted by its importance as a tourism and leisure centre, where the analysis indicated that ranked in third position, behind Dublin and Cork. However, it also scores higher than its population rank for all other categories of function, except agricultural services.
- 7.43** The relative isolation of these centres from Dublin, together with the level of administrative and government services provision located in them (itself a reflection of the relative isolation), gives them significance and strength greater than their population ranking.

6. Mayo Centres

- 7.44** Castlebar and Ballina, together with smaller centres, notably Westport, form a component of the urban system with many of the characteristics of the Kerry centres. Castlebar has a level of function well in excess of its population ranking, whilst Ballina also scores strongly. Both centres increased in population in the 1991-96 period, though Ballina recorded a decrease in the 1986-91 period.
- 7.45** These centres have benefited from their relative isolation from Dublin, together with the range of government services located in them.

7. Sligo

- 7.46** Sligo forms a relatively independent component of the urban system. Its functional index ranking is marginally higher than its population ranking. However, the border with Northern Ireland affects the natural hinterland of Sligo, though the town has links to Enniskillen. As with many other centres, Sligo recorded a population decrease in the 1986-91 period, but recovered in the 1991-96 period.

8. Letterkenny

- 7.47** Similarly, Letterkenny forms a relatively independent component of the system, benefiting from its relative isolation from Dublin and consequent level of public sector activities. It increased steadily in population between 1981 and 1996. Letterkenny has a relatively high level of functions as compared to its population, though its natural hinterland overlaps that of Derry. Thus, the border with Northern Ireland affects both centres.

A. South-East

- 7.48** The south-east is relatively more urbanised than the west or north-west. However, the relationship of these centres to each other is more difficult to establish.
- 7.49** Waterford is the largest of the settlements in the south-east and the fifth largest urban centre in the country. It increased in population steadily in the 1981-96 period. Waterford's range of functions broadly matches its population ranking. Waterford has a relatively well-defined relationship (A1) with Dungarvan, Tramore, New Ross and Carrick-on-Suir.
- 7.50** Dungarvan is the County town and has a level of functions greater than its population ranking. Its hinterland extends to sparsely-populated mountainous areas and is also constrained by the coast. Tramore is a seaside resort and commuting centre, which not surprisingly has relatively low levels of functions. Both centres increased their population between 1981 and 1996.
- 7.51** New Ross and Carrick-on-Suir both have levels of function greater than their population rankings. Following population decline between 1986 and 1991, both centres recovered in the 1991-96 period.
- 7.52** The relationship between Wexford and Enniscorthy is also relatively clear (A2). Whilst Wexford has a level of functions broadly reflecting its population level, Enniscorthy has a higher functional ranking than its population ranking. Wexford increased in population steadily from 1981 to 1996, but Enniscorthy recorded population loss in the 1991 and 1996 Censuses.
- 7.53** The relationship of other centres in this component is not so obvious. In the north of the area, Athy and Carlow are coming under the increasing influence of Dublin, as is Arklow. The functional ranking of Athy is greater than its population ranking, possibly reflecting both its traditional market function and its central location. The town increased in population in the 1991-96 period, following a period of decline.
- 7.54** Carlow's population has increased at every Census since 1981, whilst Arklow only recorded an increase in the 1991-96 period. The functions of Carlow broadly match its population ranking, whilst those of Arklow are lower. This may reflect the growth of Arklow as a commuter settlement and/or its hinterland, which is relatively constrained by mountains and sea.

- 7.55 Kilkenny is a historic centre well located to service its rural hinterland. It has grown in each inter-censal period since 1981. Kilkenny's functional ranking is marginally above its population ranking. Kilkenny scores well on tourism services, reflecting its heritage, and on social services. It has links to Waterford and also to Carlow.
- 7.56 Clonmel, like Kilkenny is relatively independent of other settlements and increased its population at each Census since 1981. Its overall functional ranking broadly matches its population ranking, and it scores particularly well in agricultural services.
- 7.57 In terms of aggregate size, this group of centres has significant potential, but the relationship between the centres is not clear and there is considerable competition between some of them at the present time. In overall terms, Waterford is clearly the largest centre in the group. Whilst it has strong linkages with some other centres in the group, it does not have any significant linkages with Carlow and Athy. Kilkenny is a strong and centrally located urban centre but its relationships with other centres is not clear. In the future, the route taken by new road links from Dublin to Waterford and Rosslare/Wexford to Waterford may assist in defining the relationships of the various centres.

B. Midlands

- 7.58 The set of urban centres in the Midlands share many characteristics and also have some links, but may be regarded as mainly independent centres.
- 7.59 Ballinasloe has links to Athlone but possibly stronger links to Galway. It was one of the few centres of 5,000 and over in population that declined in size at every Census since 1981. Some of this, however, may be attributable to changes in the institutional population of the town, which is an important medical centre. The functional index ranking of Ballinasloe is significantly higher than its population ranking, reflecting its traditional market function.
- 7.60 Mullingar, Portlaoise and Tullamore are all coming under stronger influence from Dublin as the transportation links, and hence the rate of commuting, from these centres to the capital increases. All three centres declined in population in the 1986-91 period but recovered sharply in the 1991-96 period and are known to be growing quickly at present. The functional ranking of Portlaoise exactly matches its population ranking. Mullingar, and to a lesser extent Tullamore, have functional rankings greater than their population rankings.
- 7.61 Longford has a level of functions higher than its population ranking and has some links to the north-east. It recorded a population decrease in the 1986-91 period, but recovered in the 1991-96 period. Athlone is a relatively independent centre, which is centrally located with respect to the national territory. However, its relationships with other centres do not appear very strong. To the west of the Shannon, there is a tendency to look towards Galway as the principal centre, whilst the commuting area of Greater Dublin is encroaching into its

eastern hinterland. Athlone has a marginally lower functional ranking than its population ranking. It also recorded a population decrease in the 1986-91 period, but recovered in the 1991-96 period.

- 7.62 Athy can be considered as part of the Midlands component or as part of the South-East (component A).

C. Border Centres

- 7.63 Both Cavan and Monaghan are relatively strong urban centres with fairly extensive fields. Both have functional rankings markedly higher than their population rankings. Monaghan recorded a continual decline in population from 1981 to 1996, whilst Cavan increased its population in all inter-censal periods.
- 7.64 The level of interaction between Cavan and Monaghan is not evident and there are links from both areas eastwards to Dundalk, as well as across the Border.

D. Thurles

- 7.65 Thurles is a relatively independent urban centre with no obvious relationship to other major urban centres. In administrative terms it has links to Nenagh and there are some links westwards to Limerick. However, the links to Clonmel and Kilkenny are probably stronger.
- 7.66 Thurles lost population continually over the 1981 to 1996 period, but, as in other centres, this may be offset by growth in the neighbouring rural areas. The functional ranking of Thurles is significantly higher than its population ranking, reflecting its traditional role as a major service centre for agriculture.

Conclusions

- 7.67 Each function of an urban centre generates an urban field and the extent of these varies from function to function. As consistent and reliable data on the functions of settlements is relatively scarce, it is difficult to determine urban fields based on the strength of the functions. However, an alternative approach based on DED analysis, taken with the available information on functions, allows for the visualisation of urban fields. This shows that there is a more dense distribution of urban fields in the east and south, reflecting the number and distribution of cities and towns of over 5,000 population in that part of the country.
- 7.68 In the west and north-west, larger urban centres are more widely spaced and some of the functions normally associated with centres of this size are served by smaller centres, such as Roscommon or Carrick-on-Shannon.
- 7.69 A full understanding of the Irish urban system must embrace the hierarchy, distribution and changing patterns of the cities and towns of the country, together with an appreciation of the significant urbanisation occurring in 'peri-urban' areas and even in the wider rural countryside.

- 7.70** The primacy of Dublin and the extent of its functions and associated fields makes it the principal 'gateway' to the country. The next largest centres may not be of sufficient size and/or functionality to act as major 'gateways' on their own but, in combination with other centres, there may be potential for the formation of one or more polycentric 'gateways'.
- 7.71** Certain sets of urban centres have relatively well-defined relationships. These include the centres in the Greater Dublin Area, together with those in Co. Louth, and a number of sets in the south and west. The relationship between settlements in the south-east and midlands is less clear and may require further study.

Figures

Figure 7.1:

Figure 7.1: Urban centres located on or near Administrative Boundaries

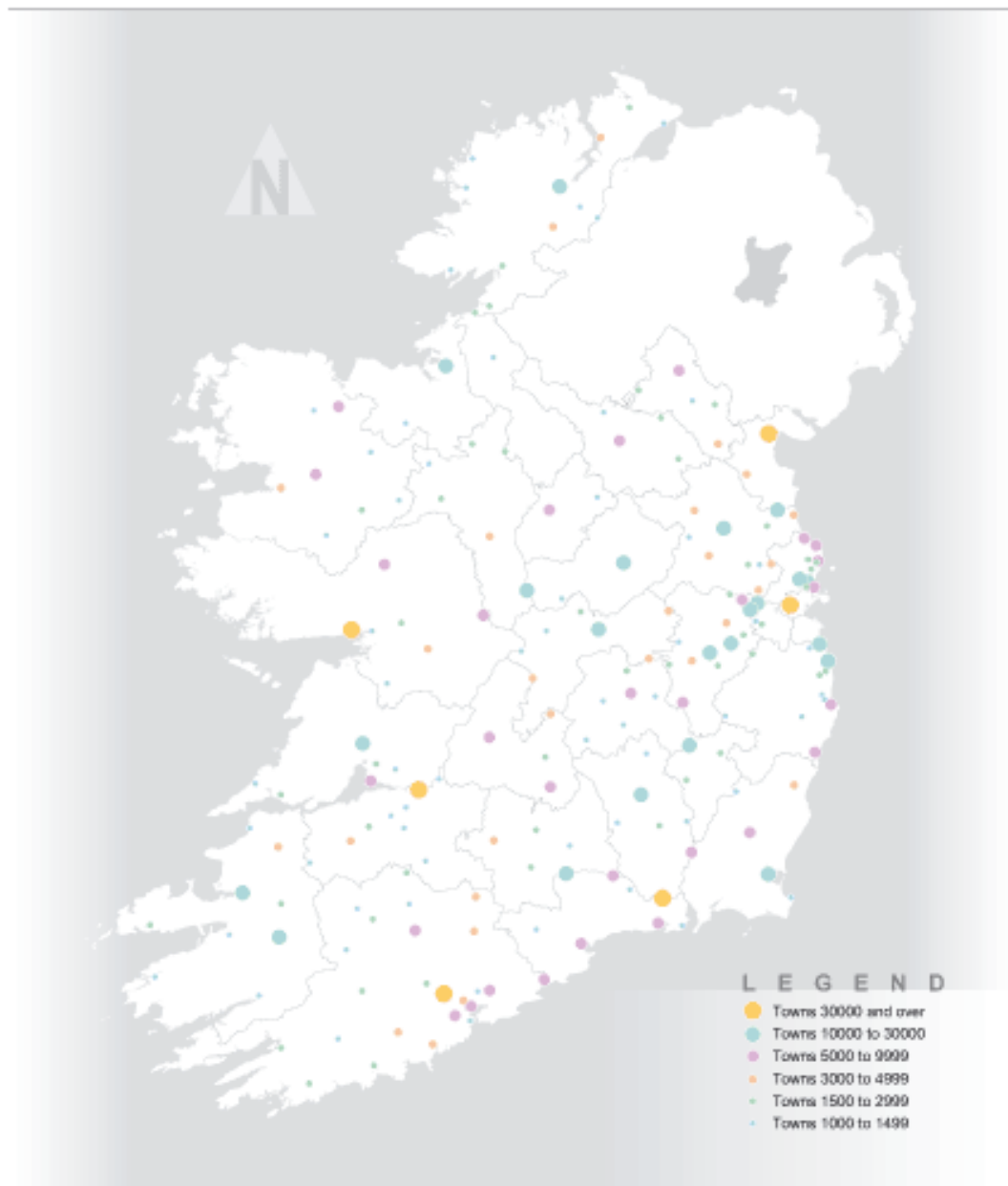


Figure 7.2:

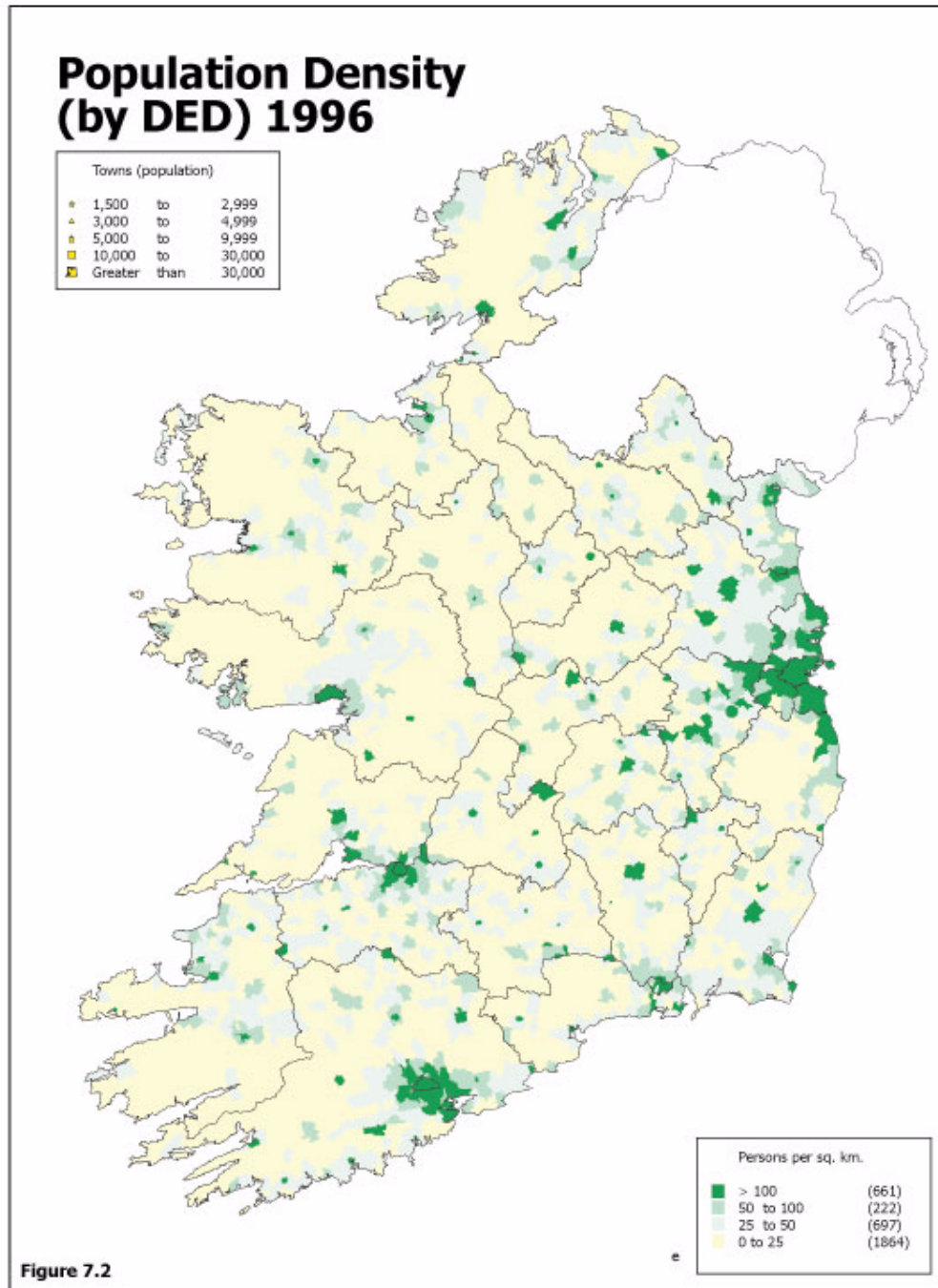


Figure 7.3:

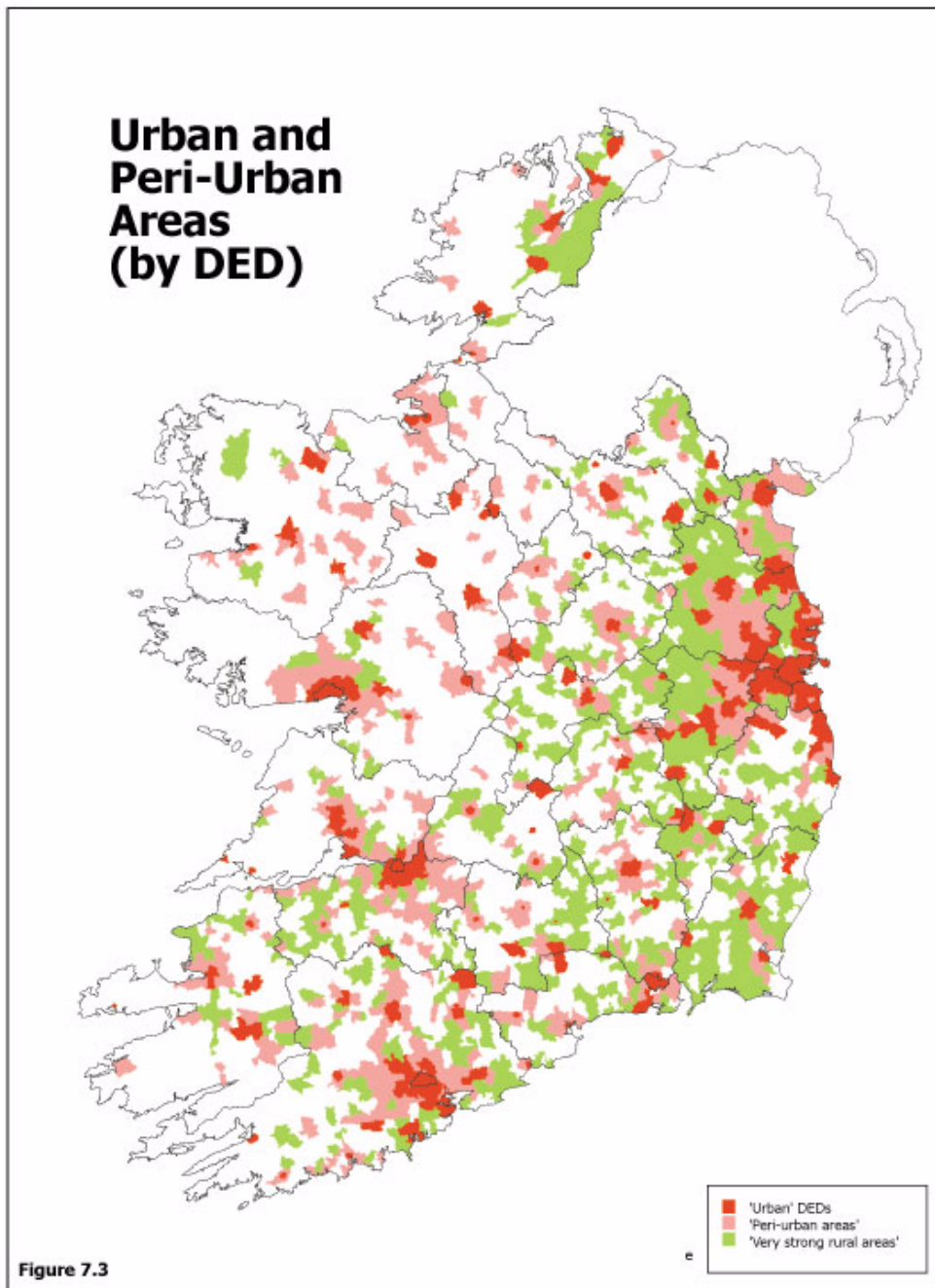


Figure 7.4:

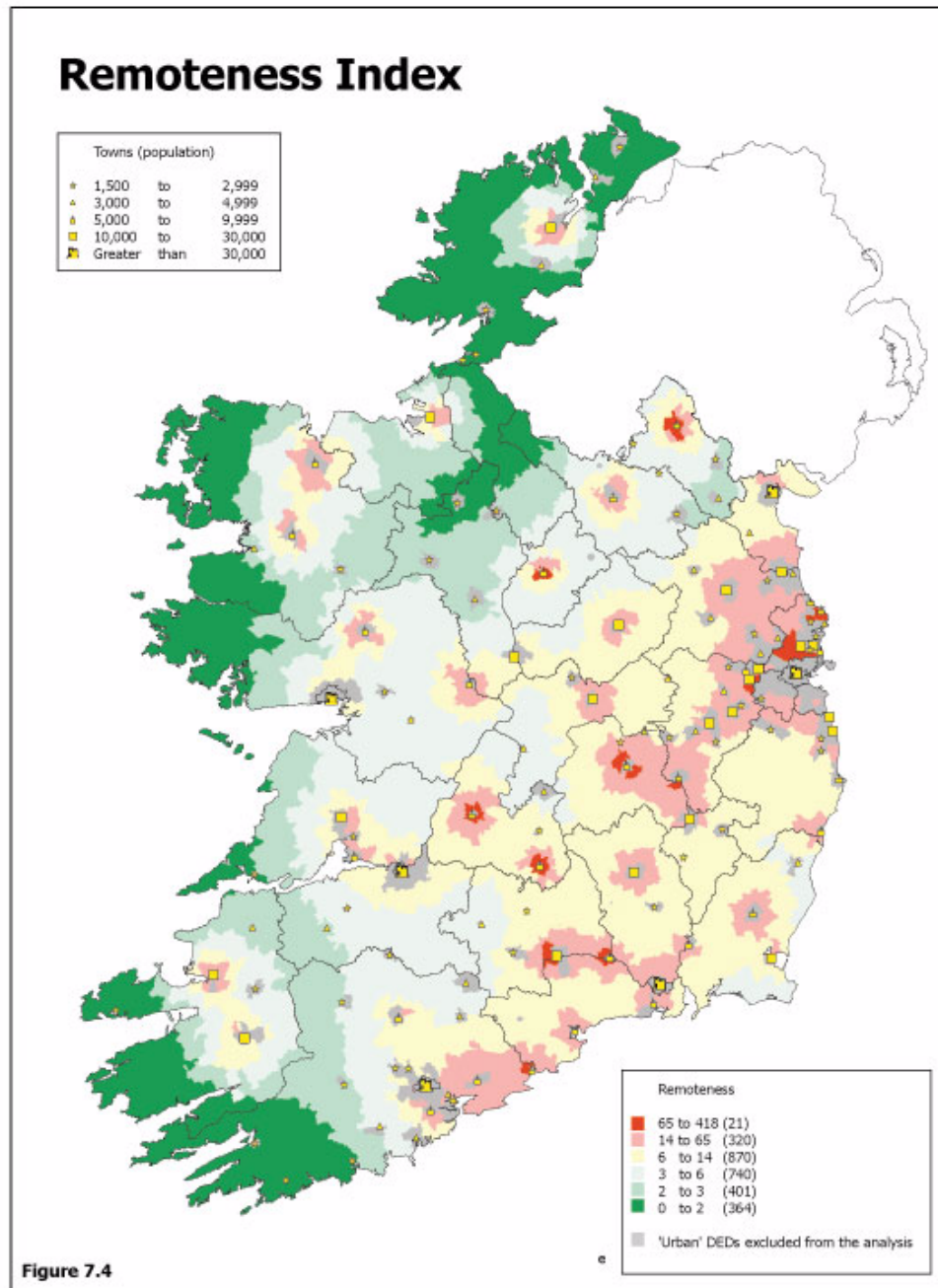


Figure 7.5:

Figure 7.5 - School Transport Catchments, Centres of 5,000 plus Population

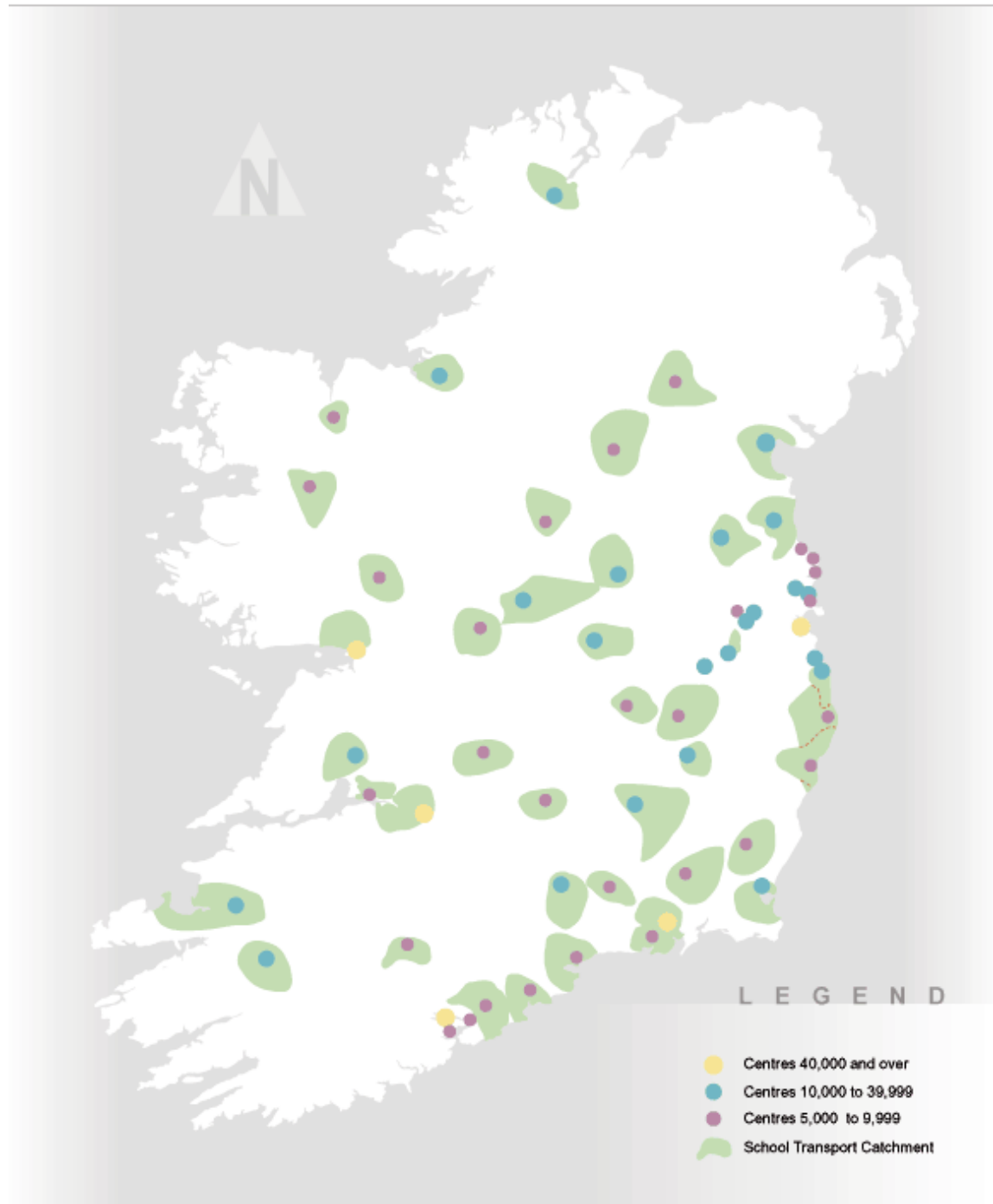


Figure 7.6:

Figure 7.6 - Indicative urban fields of centres over 40,000

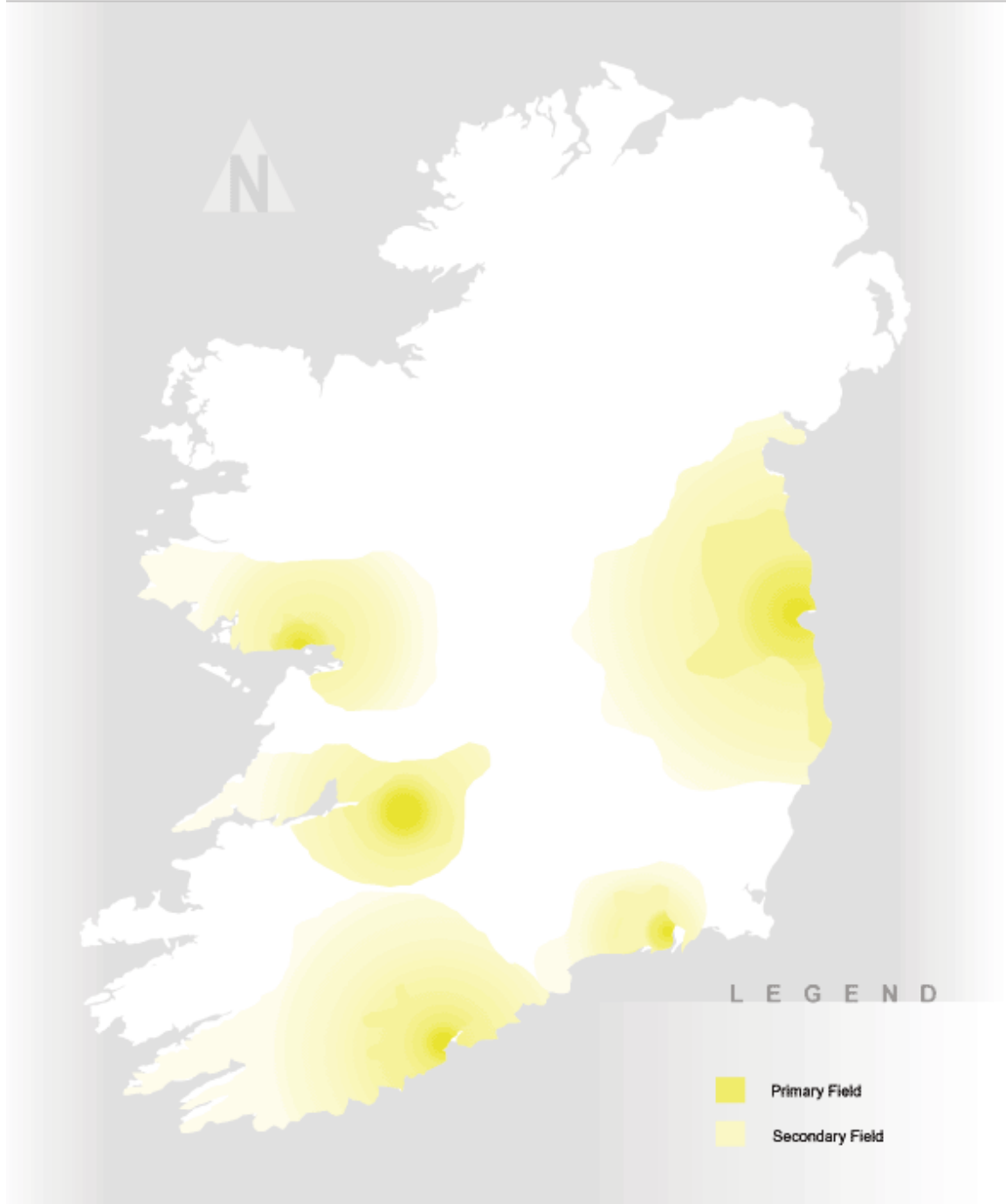


Figure 7.7:

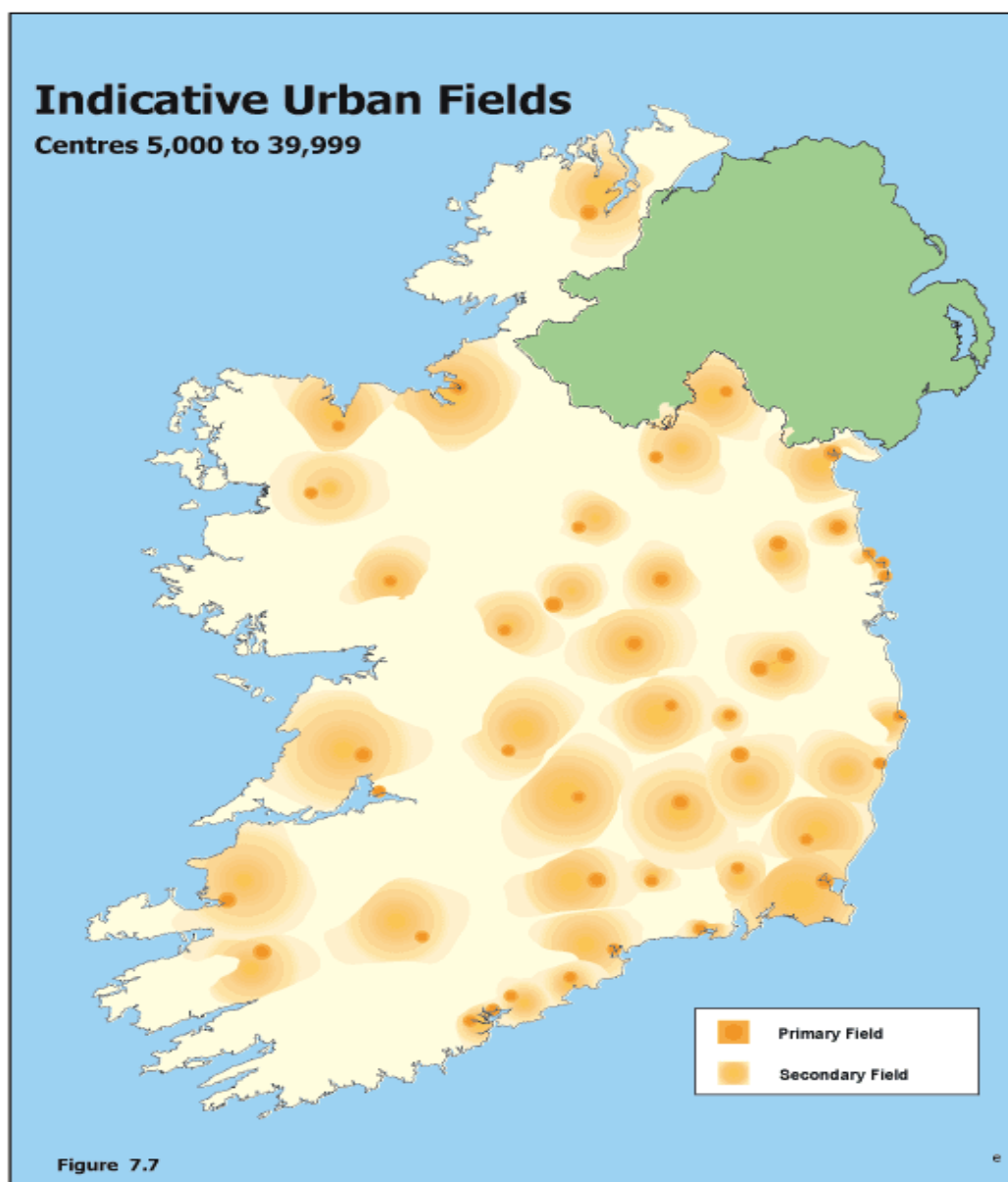
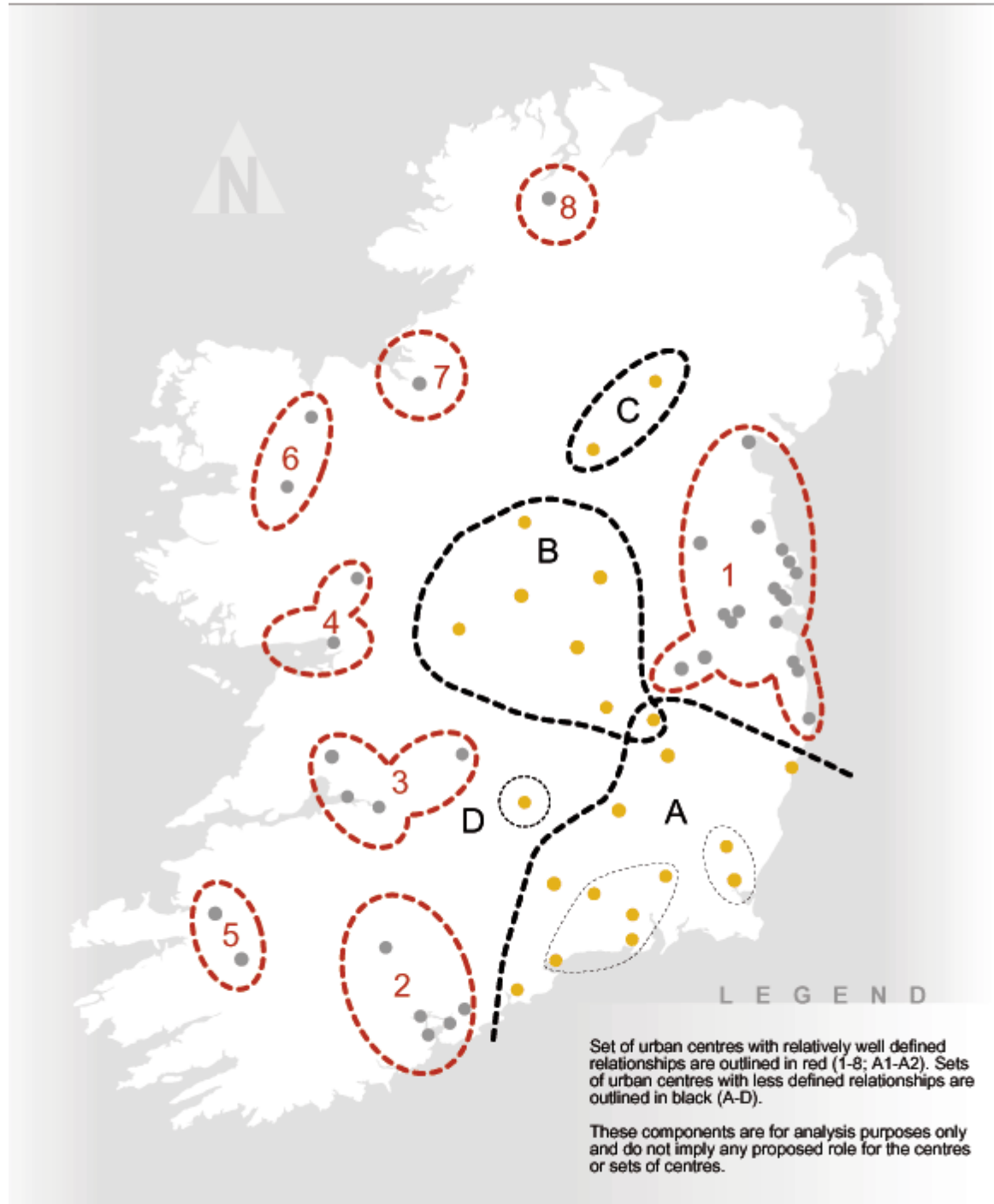


Figure 7.8:

Figure 7.8 - Components of the urban system



8 CONCLUSIONS AND IMPLICATIONS FOR NATIONAL SPATIAL STRATEGY

Consideration of the Irish Urban System and its Dynamics leads to a number of conclusions, each of which has implications for the formulation of the National Spatial Strategy.

Size of Greater Dublin and Potential for Counterbalance

One of the most striking aspects of the Irish Urban System is the primacy of Dublin, which dominates the system in terms of population, function and field. The growth of Dublin has been exerting increasing influence over urban centres in the Greater Dublin Area and beyond, so that much of the east of the country may be regarded as a single urban system of a scale comparable to other European cities.

Issues to be considered in the National Spatial Strategy will include the extent to which the growth of Dublin can be accommodated and controlled. A related issue of national significance is the potential for the creation of a counterbalance to Dublin that can both attract and sustain development in its own right and possibly re-direct some of the development pressure from the capital.

The evidence in the study is that the other major cities, because of their relatively small size and the range and extent of functions, may not have the capacity to be significant counterbalances to Dublin, if considered alone.

However, there is potential to enhance their capacity by linking a number of the larger centres together. For example, utilising two or more of the cities and their city-regions, including the set of medium and smaller centres, it may be possible to create a polycentric urban centre of sufficient scale to provide a real alternative to the Dublin area.

Functions of Commuting Centres

The study identified a set of urban centres developing in the hinterlands of the major cities, especially Dublin, which have not developed a range of functions and services commensurate with their population levels. Whilst some additional functions may be expected to develop in these centres over time, there may be a need to consider how a more balanced provision of services can be achieved, in the interests of sustainability, including the need to reduce the overall demand for travel.

Sustainability of Smaller Urban Centres

Generally, larger centres have shown more consistent growth over the last few decades, whilst many smaller centres have declined in population. The longer-term sustainability of smaller urban centres, especially those in the 1,500 to 4,999 category, is an urban issue that will require consideration in the National Spatial Strategy, whilst the sustainability of other small centres is a rural issue, equally requiring consideration.

A number of urban centres have seen continuous decline in population from 1981 to 1996. These include, as well as small centres, towns such as Monaghan, Ballinasloe and Thurles. Among the reasons for the decline may be the re-structuring of agriculture in the hinterlands of the towns and/or relatively greater growth in the adjacent rural areas. The future of both the towns and the associated rural areas will require further consideration.

Functions of Certain Centres of less than 5,000 Population

The review of the urban system, particularly in relation to functions and fields, concentrated on centres of 5,000 and over in population. Whilst these are the principal centres over most of the country, there are some settlements, especially in the west and north-west, that have relatively high levels of functions and services, as compared to their populations. In considering the future functioning of the country, due regard should be had to the significance of these centres and the role they play.

Spread of Urbanisation into the Countryside

Analysis of urban characteristics on a District Electoral Division basis indicates that, effectively, urban areas are spreading into the countryside, beyond the formal boundaries of cities and towns. Much of this is in the form of ribbon development and/or sporadic urban-generated housing in rural areas. This form of development is contrary to the principles of sustainable development and requires to be addressed and controlled.

Urban Structure of Midlands and South-East

The south and east of the country has a more developed urban structure with generally larger urban centres. However, over much of the south-east and the midlands, the relationships between urban centres is relatively complex and unnecessary competition may act as a constraint on the overall development of the areas. Additional research may be required to establish the detailed nature of the relationships between these centres.

In terms of the National Spatial Strategy, there may be options for the urban centres in the midlands and south-east. One option may be to create formal networks of towns that can complement each other, whilst for some centres, the option of incorporation into the expanding Dublin area may be attractive.

Urban Structure of West, South-West and North-West

In contrast to the east of the country, some elements of the urban structure of the west, the south-west and the north-west are relatively well-defined, but within a weak overall structure. Here, single centres, such as Sligo or Letterkenny, or sets of centres, such as Limerick-Shannon-Ennis-Nenagh or Tralee-Killarney, form units or components that have, or are in the process of developing, recognised links to each other and to the sets of smaller centres in their hinterlands.

The future role and function of these urban components and how they relate to larger and smaller units will be an issue in the development of the National Spatial Strategy.

Components of the Urban System

The components of the Irish urban system, identified as part of the study, are indicative and, of their nature, draft in form. There is considerable potential to develop other concepts from these, such as clustering and networking, which in turn may assist in the identification and definition of potential 'gateways'.

Further consideration should be given to the elucidation of the various components and the verification of the relationships implied in them. This might include additional work on the urban fields of the principal cities and towns, for particular well-defined functions.

Data on Urban Functions and Fields

There is very limited data available, on a comprehensive and comparable basis, concerning the functions of urban centres and, as a consequence, of their fields. Consideration should be given to the assembly of such data in a form that will assist in the on-going monitoring of the National Spatial Strategy and with other spatial planning work.

APPENDIX 1

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APPENDIX 2

Literature Review

A search of the literature relating to the Irish Urban System identified the following as the most relevant works.

Forbes J, (1970), “Towns and Planning in Ireland”

This paper is one of the earliest studies of the Irish central place system. It was written as a response to the weaknesses that Forbes recognised in the Irish Regional Plans of the 1960s. In particular, the paper contested the way in which the idea of growth centres had been applied to each region of Ireland as if it were a discrete spatial unit. Without the guidance of a comprehensive national central place study, the planning groups had separately chosen regional growth centres based on one-off surveys of each region. Forbes strongly advocated instead the opposite approach to growth centre policy, i.e. a “top-down” approach.

“Ideally, an all-Ireland selection of the higher order growth centres should be made first. This would provide a series of major nodes around which meaningful functional regions could be organised. Then the further stage of selecting the support growth centres in each region could follow”. (Forbes pp 298).

The Regional Plans had actually followed the inverse of this sequence of stages. This meant that it was possible, and even likely, that growth centres had been badly positioned in relation to one another. If so, this would lead each planning region to alter their existing central place system in a way which made no sense in a national context. In this case, the cumulative impact of the regional policies on the national economy would be less than the sum of the expectations of the Regional Plans.

Forbes attempted a Central Place Study of the Republic of Ireland and Northern Ireland. Central Place Theory (Lösch 1993 and Christaller 1966 attempts to explain the size and distribution of settlements within an urban system, in which marketing is the most important urban function. The working assumption of the theory is that all systems of urban places are arranged in space in a hierarchical manner based on population size and service function complexity. The most elaborate version of the theory in this field is Christaller’s (1966), although it does not allow for as flexible or varied a hierarchical structure as Lösch’s model (1933). Christaller combined the concepts of range (the maximum distance a consumer will travel to purchase a good or service) and threshold (the minimum volume of business necessary for an establishment to be economically viable) to establish a “marketing principle” which is assumed to be the organising economic principle of business location and therefore the logic which determines the functional organisation of retailing space.

The range and threshold concepts classify functions (i.e. goods or services) as lower- or higher-order services. Lower order services have very limited ranges and thresholds while higher-order services have large ranges and thresholds. Settlements with the lowest-order establishments (with the smallest ranges and thresholds) form a dense network, those in the next order form a less dense network, and so on. At each level every central place contains all the functions available at the lower levels, so that there is a nested group of market areas of lower-order places that it serves. On an isotropic terrain, the most efficient spatial configuration for buyers and sellers is a hexagonal network of retail outlets located in central places (see Fig. A2.1). Defining a hierarchy of urban places in Christaller's model involves bundling service functions into "orders" or levels of importance while in Lösch's model, each function is treated as having a separate range, threshold and hinterland. The Christaller measure of centrality is a numerical expression of the degree to which a town serves its surrounding region.

Forbes chose six indicator services, representative of major social and economic functions i.e. banks, newspapers, secondary schools, principal post offices, employment exchanges and Woolworth shops. These indicators represent functions of a fairly high order as it was her intention to only pick out large enough central places to be considered as potential growth centres. The number of establishments of the selected functions was counted in each central place. The totals for each category were then compared. The most commonly occurring function was the bank. It was assigned the score of one point and all other scores were worked out to reflect the ratio between their respective scores and the bank total. Each central place had a specific numerical description of its importance in relation to all other central places. The rank order was drawn up on the basis of these scores.

Table A2.1 Comparison of the centrality score ordering of central places with the traditional rank/population size of the fifteen largest Irish towns

Rank	Town	Points	1966 Population
1	Dublin	431	650,000*
2	Belfast	293	550,000*
3	Cork	126	122,146
4	Limerick	83	55,912
5	Londonderry	74	55,681
6	Armagh	60	11,000
7	Newry	59	12,214
8	Waterford	57	29,842
9	Ballymena	57	15,992
10	Dungannon	56	7,335
11	Enniskillen	55	7,154
12	Galway	55	24,597
13	Omagh	55	9,587
14	Strabane	54	8,813
15	Coleraine	53	13,578

*Estimates for built-up areas

Source: Forbes 1970

Table A2.1 above, shows Forbes' comparison of the centrality score ordering of central places with the traditional rank/population size method. There are a few surprises: Galway city, large in population terms is ranked in functional terms 12th and the much smaller Armagh ranked 6th. However there is broad agreement between the two ranking systems and it was the author's opinion that a points scoring system is at least as good a method of assessing the relative importance of towns as straight population size is. In so far as the points system can be up-dated (from annually published listings), it is an obviously more practical measure than population size measures which are tied to census years. A points scoring system also reflects the range of services provided by an urban centre, which will ultimately attract or deter new residents or new enterprises.

Fig A2.2 is Forbes' rank/importance graph in the form of a scattergram. Fairly clean breaks are visible at the five, fifteen, thirty, forty-five and sixty point level. These are the implicit six levels of the urban hierarchy that were identified in this study.

The urban centres at these six levels are mapped in Fig A2.3. At the lowest functional level, (i.e. the smallest urban centres) there is a striking spatial regularity in the distribution of the centres across the country. This reflects the relative lack of topographic constraints upon movement, as only the uninhabited, mountainous areas in the cores of Counties Donegal, Galway and Kerry make perceptible holes in the coverage of central places. Progressing up the points scale i.e. up the urban hierarchy, the pattern changes. Gradually the coverage shrinks into the urban plateau of north-east Ulster reflecting the greater density of functions in towns in Northern Ireland, with only isolated points in the rest of Ireland. At the very highest centrality values only the big coastal cities feature. The map series demonstrates the urban dominance of Ulster and Table A2.1 places ten of Ulster's towns in the top fifteen towns of Ireland.

There are limitations to the kind of information a map series like this one can convey. It does not, for example, easily pick out variations in the density of urban services coverage except at the extremes i.e. very high density coverage in Ulster and very low coverage in parts of the West and Midland. A measure of urban density is a useful proxy measure of accessibility to urban services, which is important for understanding the competitiveness and complementarity of central places in multi-nuclear urban regions. Forbes indeed noted the potential of such multi-nuclear regions as growth poles: *"It might conceivably be more suitable to locate one's growth centre in an area where a number of medium order towns are found close together, rather than to crystallise new growth around a single free-standing city, even if it is very big and important"* (Forbes p.307)

Fig A2.4 is an application of a method developed by Hägerstrand for representing accessibility to urban services. Hägerstrand assigned each central place an accessibility quotient, by measuring the length of the radius of a circle required to enclose one hundred points at every central place. Producing these values as spot heights on a map, allows contour lines to be drawn to join up places of equal accessibility to urban services. In this way Fig 2.4 summarises the previous map sequence. It verifies the previous observations about the dominance of the northeast. It shows very clearly that while Belfast sits on an urban service plateau of supporting towns, Dublin is an *"extraordinarily isolated giant"*. This map also indicates medium density coverage of central places in the prosperous farming area of north Munster.

Newman, Jeremiah (1967), "The theory of rural centrality" chapter 3 in New Dimensions in Regional Planning

This is one of the earliest Irish writings on rural centrality. A contemporaneous study of rural Limerick (Limerick Rural Survey 1963), had found a continuous decline in the rural population between 1926 and 1966 due to the migration of people away from the open countryside and small villages towards Limerick city and other towns. The central question behind this essay then, was how it might be possible to stem the drift away from rural Ireland towards urban centres. At the time, the idea of promoting rural development by fostering towns in rural areas was relatively new, and was feared by some as meaning the abandonment of the small villages in favour of towns. On the contrary, Newman believed that it was absolutely necessary for groups of hamlets or small villages to club together in wider units, for the purposes of employment and social provision by linking themselves in satellite capacity around selected strong centres, i.e. rural towns. Each of these towns would be the social and economic centre of a definite rural area with a sufficient population to make the areas as a whole viable.

O'Farrell (1970) "A Multivariate Model of the Spacing of Urban Centres in the Irish Republic.

O'Farrell developed multi-variate (regression) models to investigate any systematic relationships existing between a number of factors (independent variables) and the spacing of urban centres. The first study models thirty-one towns of larger than 5,000 population and the second analyses in the same way, sixty-seven centres with a population of greater than 1,500 (see Fig A2.5). He found that over two-thirds of the variation in the distance (Y) between a specific centre and its nearest neighbour of equal or larger population size in Ireland, could be accounted for by three variables: population of centre (x1), income density (x4) and distance from the nearest city Dublin or Cork (x6). Of these variables, size of centre was the most important, accounting for half of the total variation.

An interesting finding from the study is the importance of regional income level disparities in explaining distinct regional variations in the urban pattern. To isolate the impact of income density, O'Farrell compared the residuals of two regression equations: one in which the income density variable had been omitted (see Fig A2.5) and another regression equation in which income density was included as a variable (see Fig. A2.6).

In general, the inclusion of the income density variable in the model breaks up the area of these large anomalous zones into small localised deviations (Fig A2.6). In other words regional income level (meaning the purchasing power surface of Christaller's model) is the most important element in explaining the unequal regional distribution of central places in Ireland. The one-third of spatial variation not explained by the model reiterates the importance of the chance element in the distribution of all geographical phenomena. To improve

the model's explanatory powers, one would need to include other variables (for example, localised historical and stochastic factors) and more complex interrelationships in the mathematical formulae.

O'Farrell (1968), "A Multivariate Analysis of the Spacing of Central Places in Co. Tipperary"

This paper applied Christaller's central place theory to Co. Tipperary but using three variables, population size of the centres, centrality of the centres and population density. The author in conclusion noted that 21% of the variation remained unexplained by centrality and population density thus emphasising that the spacing of central places is the result of complex inter-relationships between many variables.

Houriha and Lyons (1986) "Service Changes in a Central-Place System: County Tipperary, Ireland, 1966-1986."

In 1986, Hourihan and Lyons updated O'Farrell's 1968 study. Each of the classified central places was revisited and all service functions were recorded. Changes in the social and economic organisation of society in the intervening period were expected to have changed the availability of individual services. In other similar studies, multipurpose shopping centres, increased mobility and the greater range over which rural dwellers travel to purchase goods had been linked to decline within the lower levels of the hierarchy of rural central places.

Table A2.2 (at end of section) organises services into contracting, expanding and relocating (i.e. moving up or down the hierarchy) in order to examine the differences by level, in the hierarchy. Three major empirical conclusions arise from this analysis. First, at the level of the overall central-place system, the 1968 services remained relatively stable, no central place had disappeared and all the 1968 services were still available in 1986. The stability of the overall central-place system was a result of the rising affluence and increased consumer demand, of a sustained rural population base. Second, within the hierarchy the general pattern pointed to a decrease in service provision at the intermediate level (i.e. the village). Services had been replaced by technology shifts (e.g., blacksmiths, bicycle repair), increased specialisation (e.g., paint stores, wallpaper stores as opposed to general hardware) or rationalisation (i.e., the squeezing out of more marginal concerns).

Conversely, increasing services were clustered at the level of the major towns. Over the twenty-year period, the five major towns (Clonmel, Thurles, Nenagh, Tipperary and Carrick-on-Suir) all with urban populations of over 5,000, had gained substantially in their number and range of functional units. The diversification of services in these large towns was most noticeable for higher order functions such as building societies, credit unions, handicraft and hobby shops and more specialised food outlets. New technologies, increased affluence, and changing consumer tastes had given rise to new services (e.g., video rentals,

photocopier services, and sports stores). Also, two broad groups of new services emerged: leisure-hobby services and specialised business-personal services. Invariably, all of these new services clustered at the upper end of the hierarchy. Presumably the reason is largely economic: larger towns offer access to larger potential markets, consequently reducing economic risk to businesses providing new services. In addition, new services are likely to have relatively high minimum threshold populations and ranges, making location in towns a necessary requirement, at least initially. An important conclusion from this study is that a population of 5,000 seems to be an important threshold that must be reached if a town is to diversify its service base.

Bannon (1978) "Processes and Patterns of Urbanisation in Ireland"

The purpose of this study was to define an urban hierarchy for the State and to relate this urban hierarchy to a hierarchy of urban hinterlands or spheres of influence. Bannon produced a hierarchy of towns as retail centres, which is shown in Fig A2.8. A total of seven levels of urban place in the urban hierarchy were identified using a method proposed by P.N. O'Farrell, (Administration, 16 1968). The hinterland areas were based on the theoretical shopping population of Irish towns in 1966 i.e. the population of town and hinterland. The catchment area boundaries (or trade areas) were based on two sources of published material: a study of local and regional newspaper circulations shown in Fig. A2.7 (J.P. Haughton, Irish Geography, 1950) and a list of breakpoints in the inter-urban traffic flows from a survey of traffic flows in 1963 (C. Buchanan and Partners, Regional Studies in Ireland, An Foras Forbartha, Dublin 1969). The author admitted to some difficulty in identifying any trade area for Dublin, in view of its national and "primate" status - the higher the order of the good the wider the Dublin trading area until for cultural, entertainment and high quality durable goods Dublin's region becomes the State.

The second part of this paper sets out to divide up the State into more or less distinct areas based on settlement patterns that the author subjectively notes in the urban pattern of Fig. A2.8. Three areas are identified

- a. where the settlement is dominated by Dublin, representing the Dublin area and a tract of countryside within approximately fifty miles where by 1978, medium sized towns or centres of regional allegiance had not emerged. This area includes almost all of the population of Leinster.
- b. where a "nested hierarchy" of settlement exists in the south and southeast of the country, in those counties where Norman colonisation established a large number of strategic settlements, which have subsequently evolved into a well-developed hierarchy of urban centres. This area includes the fertile farmland of south and southeast Ireland and is arranged around the regional capitals of Waterford, Cork, and Limerick and to a lesser extent Galway.

- c. the large part of the North and West where the territory is arranged around small towns with an absence of higher order places. Here, political, topographic and economic factors have militated against the development of an integrated hierarchy of urban places or the growth of large-scale urbanisation. There exists a pattern of lower order centres in isolation from one another and an absence of higher-level centres. This area includes counties Mayo, Roscommon, Leitrim, Cavan, Monaghan, Sligo and Donegal.

Huff and Lutz (1979), "The Irish Urban System"

Huff and Lutz's study presents a statistically objective approach to delimiting hinterlands through a gravity modelling technique. The study is based on 114 urban centres (of population greater than 1,500 in 1970) at various levels in the urban hierarchy. There are a few critical inputs to the analysis:

- a. a functional score based on thirty two (unnamed) variables associated with functional size which is used as a proxy for urban influence.
- b. an hypothesis that the probability of an individual travelling to an urban place decreases geometrically with increasing distance.
- c. an assumed isotropic surface i.e. that there are no distortions or impediments (topographic, economic or otherwise) to movement in any direction.
- d. a distance parameter calculated as the straight line distance between originating points and urban centres.

The normative assumptions limit the usefulness of the model and of its contribution to an understanding of the dynamics of the Irish urban system. The findings should be interpreted in that light.

The authors came up with a five-tier urban hierarchy, by clustering the urban places on the basis of their factor scores in the functional size category. In view of Dublin's incomparable functional size, it is the only first-order centre identified. Dublin, Dun Laoghaire, Limerick and Cork were identified as second order centres (See Fig. A2.9). Fourteen third order centres were identified, most of which were on the coast (See Fig A2.10). While there may be some disagreement about the assignment of towns to upper levels of the hierarchy, the maps usefully point out the weakness of the urban pattern in the west and north-west in two ways. Firstly, the west and north-west portions of the Republic are characterised by large areas associated with few urban centres. The fewest number of fourth order centres are located in these two regions and this urban sparsity is articulated again at the fifth order level (see Fig A2.11 and Fig A2.12). Secondly, in the north, north-west and south excluding Cork city, second and third order centres do not usually have many, if any, lower order centres in close proximity, unlike the East region where the areas to the north and west of Dublin show the greatest concentration of fifth order centres. Galway in particular was the only centre of any order in the west coast area. This finding suggests that by

1979, only Dublin and Cork among the major Irish cities seemed to have had any spill-over effect in terms of economic development in their immediate areas.

O'Farrell (1979), in NESC "Urbanisation and Regional Development in Ireland"

This study investigated the regional component in the location of new industrial projects from 1960 to 1973. In towns of population less than 25,000 regression analysis failed to reveal a strong relationship with any of the variables analysed such as nationality of firm, proportion of women employees or previous knowledge of the location in Ireland. O'Farrell concluded then that there was a relatively high degree of randomness in the choice of regional location of incoming industrialists. Also, the number of plants per town in each town size category under 25,000 population was independent of region.

Bannon and Blair (1986), "Service Activities, the Information Economy and the importance of Regional Centres"

This is a very useful study because it ranks Ireland's top fifteen largest cities/towns (Letterkenny is also included, because of its location) on the basis of indicators relevant to the functioning of an urban place as a service location. A total of sixteen indicators were used which may be grouped in the following way:

- a. Measures of regional importance including number of headquarters of social commercial or industrial firms, number of electronic firms, and the importance of a place in terms of regional administration and regional offices
- b. Population
- c. Local facilities indicators: the extent of enrolments in higher education, the size and quality of conference facilities
- d. Communication Indicators: the capacity of the local telephone system and the availability of an air facility.
- e. Amenity indicators: including availability of good hotel, theatres and golf clubs

The indicator data collected showed that Dublin possessed an extraordinary lead over other towns in terms of both the range and the quality of services provided. Fig A2.12 brings out the fact that the difference between Dublin and other places is much greater than a comparison of population size would suggest.

If regional centres in Ireland are to prove attractive to service industries and prove counter-magnets to Dublin, then they must provide a sufficient quality and range of facilities and amenities, which are demanded by high technology and service companies. The standardised scores for each of the sixteen indicators shown in Fig. A2.12 shows that even the large urban centres outside Dublin achieve a low score indicating that those centres offer relatively poor environments either for new service firms or for other firms wishing to interface with a range of good quality services. The comparative advantage of Dublin is

evident in regard to all aspects of service activity but it is perhaps best exemplified in respect to the leakage to Dublin for the purchase of producer services i.e. business consultancy, PR, marketing and advertising.

A contact potential coefficient gives a measure of a centre's suitability for business meetings and contacts, and as a general business environment. As seen from Fig. A2.13, contact potential rapidly declines with distance from Dublin and is a further cause and effect of the centralisation of decision-making. Neither Cork nor Limerick, Ireland's second and third city respectively, possessed an adequate business environment for effective interface at higher levels of management. It is suggested that the regional differentials in contact potential can be substantially reduced without any damage to overall levels of national efficiency. It is proposed that this could be best achieved through a combination of improvements in both inter-urban transport and the increased regionalisation of workers requiring business contact.

A survey of the business services purchased by industrial firms in urban locations outside Dublin revealed a high level of leakage from provincial towns towards the capital in terms of both financial flows and employment. While banking, general office and lower order financial services were normally provided by local firms, much of the contracting for such things as accountancy, legal services, market research and computer services was with Dublin firms. The reasons for not using local firms related principally to the poor quality of the local supply and to protect confidentiality. The authors are of the opinion that the failure to implement an urban policy had produced a self-reinforcing situation in which Dublin service firms retained and built upon their historical advantage. And since innovations tend to occur first in the capital city or major metropolis, it seemed likely that there exist strong and recurring forces, which would ensure Dublin's continued, if not increasing dominance. The position of Dublin is greatly reinforced by infrastructural, technological and policy considerations and the authors point out that it would be extremely difficult to promote a regionalised service industries policy in a country with poor inter-urban road links, virtually no internal air service and an absence of either an urban strategy or a regional policy embracing such issues as public administration, education or the various aspects of innovation.

Cawley, (1991), "Town Population Change 1971-1986"

Cawley, (1996), "Town Population Change in the Republic of Ireland: the Need for an Urban Policy Review"

Cawley (1991) mapped the distribution of settlements with over 250 population or over for 1981 and found some interesting patterns. Firstly, there is a higher density of settlements, numerically, and in terms of size, south and east of a line extending from Limerick to Dundalk. Only five towns with a population in excess of 10,000 lie to the north and west of that line, namely Galway, Sligo, Athlone, Ennis and Mullingar. A second distinctive feature is the concentration of settlements along the major transport routes that converge on Dublin: northward and southward along the coast, from Kilcock to the west, and from Kildare town to the southeast. A similar concentration, on a smaller scale, is apparent in the environs of Cork, Limerick and Waterford County Boroughs (CBs) and, as in the case of Dublin, reflects residential overspill, associated with service provision, industrial relocation and greenfield development in proximity to large markets and overseas transport termini (Cawley, 1991 pp 109). Three main findings emerge from the author's 1996 study of the evolution of the Irish Urban System during the 1980s:

1. The continued imbalance in the distribution of population between the east and the west of the state;
2. The emergence of clearly defined city and satellite systems consisting of a major city which is experiencing low growth or decline surrounded by rapidly growing sub-centres; and
3. The widespread decline of towns and villages outside the zone of influence of larger places.

NESC (1997), "Population Distribution and Economic Development: Trends and Policy Implications".

This recent report by the National Economic and Social Council examines spatial patterns and trends in settlement and population since the 1950s. The focus of the report is two-fold: to investigate the key aspects of settlement patterns at regional and sub-regional level and to define the public policy issues arising in the context of these patterns.

The theoretical backdrop to this report is a framework in which economic realities are (almost) the only explanatory variable underlying the factors and forces shaping settlement patterns. Fig A2.14 is a graphical representation of this framework. The left-hand side shows the broad domains of public policy, including regulatory aspects, physical planning the provision of public services and enterprise development. The report is written from the perspective of public policy but emphasises that public policy is only one of several potential factors influencing settlement patterns. The context, in which public policy is framed, is the existing distribution of economic activity. This is influenced by enterprises' locational decisions, which are in turn affected by global supply and corporate factors. The twin forces of public policy and economic imperatives, feed into the settlement decisions of the economic actors (households and firms), who by their individual choices determine in aggregate, the general settlement pattern. The resultant patterns then have a reciprocal effect on future settlement decisions. For example, urban settlements, once established, tend to attract new economic activities and population thereby reinforcing the initial attraction by cumulative causation. Four broad elements provide the basis for the analysis contained in this report. These are (i) existing settlement patterns (ii) patterns of distribution of economic activity (iii) spatial aspects of economic policy and (iv) issues concerning the spatial distribution of public services.

Hourihan, K. (1999), "Population Change in Greater Cork 1966-1996)

This paper is concerned with changes in Cork's population and its spatial distribution in the period 1966-1996. At the beginning of this period, the city was still relatively compact, with just a small suburban area and limited commuting population, but the thirty years saw considerable change. Although the population of the officially defined city has been declining since it peaked in 1979, this has been more than compensated for by a huge increase in the numbers of people living outside the built-up area but dependent on the city for their livelihood and everyday requirements. Cork has been transformed into what the author calls a daily urban system or urban field.

Most of the aggregate population growth over the forty year period occurred in the city suburbs, which increased sixteen-fold from 3,127 in 1966 to almost 53,000 in 1996. The bulk of this happened between 1981 and 1986. The 1990s overall have brought a new dynamic into population redistribution in Cork. Up to 1991, the census figures showed a linear pattern of change, with decline at the city centre and surrounding area and suburban growth. In contrast, the central and inner city areas had the greatest increases between 1991 and 1996, while many of the suburbs in the county borough were in decline although importantly, those outside the city boundary were continuing to increase. A city centre population revival occurred in those parts of the city designated under the Urban Renewal Bill (1986), similar to Dublin from 1991-1996, reversing the trends of the previous quarter-century. Some of the revival of the city centre is due to market forces, which have made it more attractive for investment and the

kind of gentrification, and renewal that has occurred in many Western cities over the past couple of decades. However, Cork Corporation played an important role in its regeneration by being very sensitive to the needs of the city centre. The new residents of the city centre are of a different type than the “urban villagers” type communities that they replaced. They are generally young, single, mobile, renting their accommodation and not intending to make it their permanent home. The authors do not expect the city centre population to increase much further because of the social composition of the newcomers and the ending of the urban renewal initiatives for new building.

The distribution of towns in the LUTS area and the boundaries of Cork’s suburbs in the population census of 1981 and 1996 are shown in Fig. A2.15. There was a massive extension of the suburban boundary for the 1986 census, with an area of almost 130 km² being defined as Cork’s suburbs. Several of the towns in the 1981 map were incorporated into the built-up area. In reality, these areas are not nearly as continuously built up as the term “suburb” implies. The definition used by the CSO (200m. distance maximum between dwellings) is sufficiently large to include large areas of detached one-off housing. The assignment of these areas to suburbs disguises the scale of urban generated housing in the countryside around Cork. Serving these areas by public transport is almost impossible, and this exacerbates the dependency on private cars and the modal constraints that dominate Cork’s transport system.

Similar problems of definition apply to some of the census towns in the area. Several of them are really residential clusters rather than towns or villages with an economic function and local identity. They may have a few shops and pubs for everyday use, but most of their residents’ shopping is almost certainly done in Cork or in the suburban shopping centres on the periphery of the city. One of these settlements, Tower, to the northwest of the city, is one of the fastest growing places around Cork. Between 1981 and 1996, its population increased by 133% from 790 to 1,841, but it is largely made up of low-density detached houses and has almost no services or facilities. It exemplifies the problem of estimating the numbers of people in suburban housing which is contiguous to the city, as opposed to those in low density rural housing, and those in satellites and dormitory towns which have some degree of separation from the city and suburbs proper.

It could well be argued that the distinctions are unimportant since all of these areas are within the immediate vicinity of the county borough and certainly part of Cork’s daily urban system.

Horner, A.A. (2000), "Population Development in a Changing City Region"

This paper traces the spread of Dublin city from a compact "Slum city" at the beginning of the twentieth century to what Horner describes as a "Globalised City Region" which stretches out into the counties of Meath, Kildare, Wicklow and Louth over a radius of over fifty kilometres. Changes in the urban population in the hinterland of the city are considered in relation to a set of four 8 kilometre and one 16 kilometre-wide, concentric zones focused on the city centre.

Table A2.3 gives the "urban" population in the Dublin city-region from 1936-1996. In 1936, over 80% of the urban population within a 48 kilometre radius of the city was actually located in the 0-7 kilometre band. During the Garden City phase thirty years later (1960s) population had halved in the inner city and doubled in the outer parts of the 0-7 kilometre zone as new suburban areas were developed. Outward expansion continued over the next twenty years beyond the eight-kilometre zone of the Garden City. The 1970s witnessed the five and six-fold increases in many places beyond the main built-up area for example at Portmarnock, Malahide, Leixlip and Celbridge. After a period of relatively slow change during the 1980s, population growth again accelerated during the 1990s connected with a wider demographic restructuring marked by a significant shift to smaller household sizes. The increase in the population of the inner city reversed a trend of decline evident since 1936. The population of the 8-15km zone, equates to the inner suburbs accounted for a much smaller share of the population increase in the last decade (43%) than it did during the eighties (143%). The 16-23 km zone accounted for between 10-15% of population growth during the 1970s and 1990s but much more (35%) during the 1980s. The 24-31 km zone displays a similar trend. The share of population growth accommodated in the 32-47km zone rose in the eighties to 18% from 10% in the 1970s and fell off again during the 1991-1996 period to just under 10%.

Table A2.3 "Urban" population (000's) in the Dublin city region 1936-1996

1936	1971	1981	Zonal Share of Pop. Change 1971 – 1981 (%)	1981	1991	Zonal Share of Pop. Change 1981 – 1991 (%)	1991	1996	Zonal Share of Pop. Change 1991 – 1996 (%)
266.5	131.5	97.2	-16.3	97.2	76.6	-36.5	76.6	86.9	19.6
221.1	547.1	587.1	19.0	587.1	539.4	-84.4	539.4	538.7	-1.3
45.2	140	281	66.9	281	362.3	143.9	362.3	385.1	43.3
14.7	28.6	52.6	11.4	52.6	72.8	35.8	72.8	79.6	12.9
12.5	22	39.4	8.3	39.4	52.4	23.0	52.4	60.6	15.6
29.9	51.5	74.1	10.7	74.1	84.4	18.2	84.4	89.6	9.9
589.9	920.7	1131.4	210.7	1131.4	1187.9	56.5	1187.9	1240.5	52.6

Source: Amended from Horner 2000

The revival of the inner city (i.e. the construction of new apartment blocks) has taken place alongside major economic developments like the internationalisation of the high street and the take-off of Dublin as a tourist location. Developments on the edge of the city like the cordon of hi-tech industries of Intel, Hewlett-Packard, IBM, Microsoft and Dell remind us that we are dealing not just with a Globalised City but a Globalised City Region.

Williams, B. and Shiels, P (2000), "Acceleration into Sprawl"

Dublin enters the twenty-first century with a contradictory set of urban development patterns: innovative urban renewal policies which are internationally viewed as relatively successful and management of the peripheral development of the region which is generally seen to be inadequate to deal with the recent phase of economic growth.

The emerging development of Dublin can be described as a result of infrastructure-led speculative development with the notable absence of inter-suburban transport links and essential infrastructure. Partly because fiscal policy interventions in the housing area have tended to support new buildings at greenfield locations, sprawl into peripheral areas has been encouraged around the more desirable centre. This allied with an increased dependence on edge city retail developments, encourages car usage and complements the edge city employment pattern.

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. The East region was estimated to contain 39.4% of Ireland's population in 1999 (CSO 1999) which if correct represented a 5% growth rate from 1996.

Such growth is both a contributory factor to, and a result of greatly increased economic activity in these regions in recent years. (Cawley 1996). The spatial expression of the increased level of economic activity in the East Region has been characterised by a dispersal of population, housing and employment functions from the Dublin Metropolitan Area to an expanded commuter belt. This new zone, according to the authors now encompasses a region of up to 90km from Dublin city centre, well beyond the boundary of the East region, which has been adopted as the zone of Dublin's influence for both strategic planning and transportation purposes. Locations such as Rochfortbridge in Westmeath, Gorey and Bunclody in Wexford and Castelcomer in Kilkenny have experienced new housing development marketed to Dublin commuters. A strongly emerging trend is characterised by the development of housing schemes in small villages that have not previously experienced large amounts of construction. Such villages are widely dispersed throughout the Dublin Commuter Belt and include locations such as Clonard, Stamullen and Ballivor (Meath), Carbury and Prosperous (Kildare), Aughrim and Baltinglass (Wicklow), Kinnegad (Westmeath) and Collon (Louth).

As for the fate of established towns, those adjacent to Dublin are experiencing faster growth than those located in the remainder of Ireland. Between 1991 and 1996, towns of over 10,000 population within Dublin's sphere of influence experienced growth rates of over 80% more than towns outside it. For progressively smaller towns, the disparity in growth rates increases between those adjacent to Dublin and those in other regions in the country. For towns of 1,000-3,000 population, those adjacent to Dublin grew by 11.9% between 1991 and 1996 compared with 0.9% growth for towns outside the city-region.

The move by housing developers to locations increasingly further from Dublin means that the outer Leinster counties (Louth, Westmeath, Offaly, Laois, Carlow and Wexford) beyond the Mid-East Region are increasingly becoming integrated into the Dublin Commuter Belt (see Fig 2.17). There is also a less prominent "pull" factor of an improved transport infrastructure involved here. Growth is not uniform however, with counties Louth and Westmeath experiencing growth in excess of the remainder of the outer Leinster counties.

APPENDIX 3

Population of Cities, Towns and Villages, 1981-1996

Population of Cities, Towns and Villages, 1981-1996

	County	Population 1981	Population 1986	Population 1991	Population 1996
Greater Dublin	Dublin	913638	920956	929090	952692
Cork and Suburbs	Cork	168761	173694	174400	179954
Limerick & Suburbs	Limerick	73934	73991	75436	79137
Galway & Suburbs	Galway	43210	47104	50853	57363
Waterford and Suburbs	Waterford	384730	39529	41853	44155
Dundalk & Environs	Louth	29406	30608	30061	30195
Bray & Environs	Wicklow	22960	24870	26953	27923
Drogheda & Environs	Louth	23686	24681	24656	25282
Swords	Dublin - Fingal	11257	15312	17705	22314
Tralee & Environs	Kerry	17035	17620	17862	19950
Kilkenny & Environs	Kilkenny	16919	17537	17669	18696
Sligo & Environs	Sligo	18002	18018	17964	18509
Ennis & Environs	Clare	14867	15547	16058	17726
Clonmel & Environs	Tipp. S.R.	14417	14895	15562	16182
Wexford & Environs	Wexford	15364	15365	15393	15862
Athlone & Environs	Westmeath	14782	15571	15358	15544
Carlow & Environs	Carlow	12775	13090	14027	14979
Naas	Kildare	8345	10017	11141	14074
Malahide	Dublin - Fingal	9219	9940	12088	13539
Leixlip	Kildare	9293	11938	13194	13451
Droichead Nua & Environs	Kildare	10716	11503	12069	13363
Navan & Environs	Meath	11182	11929	11706	12810
Mullingar & Environs	Westmeath	11726	12127	11867	12492
Celbridge	Kildare	4605	7135	9629	12289
Killarney & Environs	Kerry	9660	10189	9950	12011
Letterkenny & Environs	Donegal	8742	9808	10726	11996
Greystones & Environs	Wicklow	7929	9505	10778	11296
Tullamore & Environs	Offaly	8845	9442	9430	10039
Portlaoighse & Environs	Laois	7784	8384	8360	9474

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Portmarnock	Dublin - Fingal	8204	9055	9173	9145
Ballina & Environs	Mayo	8122	8190	8167	8762
Arklow & Environs	Wicklow	8646	8388	7987	8557
Castlebar & Environs	Mayo	7568	7645	7648	8532
Maynooth	Kildare	3388	4768	6027	8528
Balbriggan & Environs	Dublin - Fingal	6915	7555	7724	8473
Cobh & Environs	Cork	8439	8282	8219	8459
Shannon & Environs	Clare	7998	8005	7920	7939
Carrigaline	Cork	4193	5893	6482	7827
Mallow & Environs	Cork	7611	7685	7521	7768
Enniscorthy & Environs	Wexford	7567	7753	7655	7640
Skerries	Dublin - Fingal	5884	6864	7032	7339
Wicklow & Environs	Wicklow	5341	5498	6215	7290
Dungarvan	Waterford	6631	6849	6920	7175
Longford & Environs	Longford	6707	6835	6824	6984
Thurles & Environs	Tipp. N.R.	7644	7338	6955	6939
Tramore	Waterford	5635	5999	6064	6536
Midleton	Cork	6281	6114	5951	6209
New Ross & Environs	Wexford	6287	6357	6079	6147
Youghal & Environs	Cork	6138	5952	5828	5943
Nenagh & Environs	Tipp. N.R.	5983	5777	5825	5913
Monaghan & Environs	Monaghan	6385	6284	5946	5842
Ballinasloe & Environs	Galway	6481	6227	5892	5723
Tuam & Environs	Galway	6093	6039	5540	5627
Cavan & Environs	Cavan	5106	5219	5254	5623
Rush	Dublin - Fingal	3874	4513	4839	5429
Athy	Kildare	5565	5449	5204	5306
Carrick-on-Suir & Environs	Tipp. S.R.	5566	5353	5143	5217
Ashbourne	Meath	2469	3555	4411	4999
Tipperary & Environs	Tipp. S.R.	5184	5209	4963	4854
Buncranna & Environs	Donegal	4060	4131	4388	4805
Bandon & Environs	Cork	4935	4926	4741	4751

Population of Cities, Towns and Villages, 1981-1996 (continued)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Westport & Environs(Urban District only in 1981 & 1986)	Mayo	3378	3456	3688	4520
Fermoy & Environs	Cork	4904	4885	4462	4469
Trim & Environs	Meath	3599	4124	4185	4405
Kildare	Kildare	4042	4268	4196	4278
Birr & Environs	Offaly	4323	4194	4056	4193
Roscrea	Tipp. N.R.	4217	4378	4231	4170
Gorey & Environs	Wexford	3785	3884	3840	3939
Passage West & Environs	Cork	3754	3704	3606	3922
Roscommon & Environs	Roscommon	3541	3473	3427	3915
Edenderry & Environs	Offaly	3666	3753	3742	3825
Ardee & Environs	Louth	3524	3559	3604	3791
Laytown-Bettystown-Mornington	Meath	2997	3321	3360	3678
Listowel & Environs	Kerry	3764	3693	3597	3656
Newcastle & Environs	Limerick	3652	3674	3612	3618
Carrickmacross & Environs	Monaghan	3392	3465	3341	3617
Ceannanus Mor & Environs	Meath	3663	3693	3539	3542
Loughrea	Galway	3377	3360	3271	3335
Portarlington	Laois	3397	3295	3211	3320
Clane	Kildare	1712	1767	1822	3126
Mitchelstown	Cork	3121	3210	3090	3123
Dunboyne	Meath	1467	1989	2392	3080
Kinsale & Environs	Cork	2445	2581	2751	3064
Ballybofey-Stranorlar	Donegal	2971	2964	2972	3047
Clonakilty & Environs	Cork	2883	2786	2812	2950
Bantry	Cork	2862	2811	2777	2936
Mountmellick & Environs	Laois	3349	3230	3003	2912
Castleblayney & Environs	Monaghan	3086	3035	2938	2808
Rathcoole	Dublin Belgard	2945	2991	2926	2784
Ballyshannon & Environs	Donegal	3066	3015	2838	2775
Muinebeag & Environs	Carlow	2656	2788	2700	2695
Kilcoole	Wicklow	1661	2335	2485	2694
Cashel & Environs	Tipp. S.R.	2817	2829	2814	2687

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Rathluirc (or Charleville)	Cork	2907	2814	2646	2667
Kilrush	Clare	2753	2961	2740	2594
Macroom & Environs	Cork	2495	2449	2363	2574
Newtownmountkennedy	Wicklow	1769	2183	2321	2528
Clara	Offaly	2610	2736	2505	2464
Tullow & Environs	Carlow	2408	2441	2424	2364
Monasterevan	Kildare	2177	2143	2224	2302
Donegal	Donegal	2054	2242	2193	2296
Lusk	Dublin - Fingal	1393	1831	2071	2287
Templemore & Environs	Tipp. N.R.	2560	2383	2325	2244
Cahir	Tipp. S.R.	2177	2118	2055	2236
Castleisland	Kerry	2359	2281	2207	2233
Boyle & Environs	Roscommon	2249	2383	2197	2222
Kinsealy-Drinan	Dublin - Fingal	0	0	2084	2182
Clones & Environs	Monaghan	2596	2542	2347	2170
Dunshaughlin	Meath	474	878	1275	2139
Blarney	Cork	1929	1952	2043	1963
Skibbereen	Cork	2130	1999	1892	1926
Portrane	Dublin - Fingal	2499	2303	2153	1924
Claremorris	Mayo	2036	1992	1907	1914
Donabate	Dublin - Fingal	402	599	1104	1868
Carrick-on-Shannon	Leitrim	1677	1621	1858	1868
Blessington	Wicklow	1015	1322	1408	1860
Tower	Cork	1029	1158	1402	1841
Kilcock	Kildare	1162	1414	1551	1825
Cootehill & Environs	Cavan	1805	1796	1791	1822
Bundoran & Environs	Donegal	1610	1535	1463	1796
Castlerea	Roscommon	1874	1840	1822	1790
Duleek	Meath	1447	1679	1718	1731
Kill	Kildare	1308	1503	1518	1711
Kanturk	Cork	1976	1870	1777	1666
Athenry	Galway	1590	1642	1612	1614
Kilcullen	Kildare	1528	1693	1664	1604

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Thomastown	Kilkenny	1477	1465	1487	1581
Carndonagh	Donegal	1581	1600	1541	1580
Rathkeale	Limerick	1879	1815	1803	1546
Newmarket-on-Fergus	Clare	1504	1678	1583	1542
Dingle	Kerry	1358	1253	1272	1536
Bailieborough	Cavan	1530	1645	1550	1529
Abbeyfeale	Limerick	1409	1483	1501	1486
Ballybunion	Kerry	1405	1452	1346	1470
Moate	Westmeath	1828	1659	1529	1452
Rathnew	Wicklow	1366	1389	1496	1437
Dunmore East	Waterford	811	1041	1038	1430
Dunmanway	Cork	1493	1382	1404	1427
Kenmare	Kerry	1348	1130	1366	1420
Castleconnell	Limerick	1053	1262	1391	1414
Banagher	Offaly	1403	1465	1423	1414
Oranmore	Galway	932	1064	1192	1410
Killybegs	Donegal	1570	1632	1522	1408
Bunbeg-Derrybeg	Donegal	1489	1469	1427	1400
Fethard & Environs	Tipp. S.R.	1352	1391	1431	1397
Moville	Donegal	1281	1331	1392	1394
Swinford	Mayo	1327	1197	1216	1386
Castlecomer-Donaguile	Kilkenny	1548	1490	1396	1380
Graiguenamanagh-Tinnahinch	Kilkenny	1215	1203	1395	1374
Kilkee	Clare	1389	1448	1315	1331
Crosshaven	Cork	1419	1362	1329	1312
Ballinrobe	Mayo	1426	1270	1229	1309
Mountrath	Laois	1453	1402	1375	1298
Newcastle	Dublin Belgard	1144	1149	1200	1289
Ballyhaunis	Mayo	1403	1338	1282	1287
Killorglin	Kerry	1303	1304	1229	1278
Enniskerry	Wicklow	1228	1229	1238	1275
Lifford	Donegal	1461	1478	1359	1275
Ferbane	Offaly	1402	1374	1285	1270

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Abbeyleix	Laois	1402	1468	1299	1259
Cahirciveen	Kerry	1419	1310	1213	1250
Belturbet	Cavan	1138	1228	1223	1248
Ballaghaderreen	Roscommon	1374	1376	1270	1248
Buncloody-Carrickduff	Wexford	1470	1423	1316	1241
Rathdrum	Wicklow	1268	1307	1175	1234
Carrigtwohill	Cork	1198	1272	1212	1232
Kilmallock	Limerick	1378	1424	1311	1231
Millstreet	Cork	1435	1330	1300	1226
Callan	Kilkenny	1431	1266	1246	1224
Ashford	Wicklow	536	782	878	1215
Rathangan	Kildare	1128	1270	1129	1190
Kingscourt	Cavan	1267	1242	1260	1190
Gort	Galway	1096	1021	1093	1182
Portlaw	Waterford	1252	1260	1151	1176
Granard	Longford	1285	1338	1221	1173
Athboy	Meath	909	1055	1083	1172
Ballybay & Environs	Monaghan	1269	1257	1156	1152
Newmarket	Cork	1025	1022	1097	1150
Sixmilebridge	Clare	798	1182	1191	1144
Baltinglass	Wicklow	1055	1089	1068	1127
Crossmolina	Mayo	1335	1250	1202	1103
Lismore & Environs	Waterford	1119	1085	1095	1095
Tubbercurry	Sligo	1156	1250	1069	1089
Buttevant	Cork	1164	1133	1125	1070
Rathdowney	Laois	1101	1095	1092	1066
Raphoe	Donegal	1084	1027	1090	1065
Ratoath	Meath	541	551	593	1061
Stradbally	Laois	1021	1046	1046	1047
Adare	Limerick	798	792	899	1042
Dungloe	Donegal	1008	940	988	1042
Ballygeary (or Rosslare Harbour)	Wexford	753	891	983	1023
Patrickswell	Limerick	510	905	1019	1022

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Croom	Limerick	902	1024	1090	1009
Manorhamilton	Leitrim	972	1031	995	1008
Ballymote	Sligo	1098	1064	1014	994
Dunleer	Louth	1204	1184	1104	988
Portumna	Galway	1118	1062	1017	984
Lanesborough- Ballyleague	Longford	974	1058	1054	984
Ramelton	Donegal	936	989	920	978
Killaloe	Clare	1022	1033	956	972
Falcarragh (or Cross Roads)	Donegal	816	996	951	961
Belmullet	Mayo	1023	1033	986	954
Foxford	Mayo	987	1033	974	944
Rosslare	Wexford	870	704	847	929
Castletownbere	Cork	934	905	921	926
Clifden	Galway	812	896	808	920
Ennistymon	Clare	1123	1039	917	920
Kiltimagh	Mayo	1145	982	952	917
Ferns	Wexford	823	811	859	915
Convoy	Donegal	790	891	911	907
Lisdoonvarna	Clare	677	648	842	890
Kilcormac (or Frankford)	Offaly	1166	1118	973	889
Castlepollard	Westmeath	795	803	863	888
Newport	Tipp. N.R.	824	827	896	873
Fountainstown	Cork	745	757	812	857
Mooncoin	Kilkenny	806	868	810	855
Sallins	Kildare	817	774	783	854
Askeaton	Limerick	1019	951	893	851
Borrisokane	Tipp. N.R.	858	837	784	850
Ardfinnan	Tipp. S.R.	761	827	868	848
Oldcastle	Meath	908	869	847	826
Kilmacanogue	Wicklow	494	462	763	818
Milford	Donegal	905	981	864	816
Prosperous	Kildare	754	765	882	814
Virginia	Cavan	657	699	720	811

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Mohill	Leitrim	1029	930	796	808
Ballyragget	Kilkenny	834	833	814	803
Tallow	Waterford	937	867	858	802
Rosses Point	Sligo	669	598	707	799
Carnew	Wicklow	644	723	737	795
Castlebellingham/ Kilsaran	Louth	836	848	762	792
Ballymahon	Longford	848	859	816	790
Aghada-Farsid-Rostellan	Cork	727	818	793	786
Castlebridge	Wexford	449	655	696	783
Ballinamore	Leitrim	860	810	743	782
Cappoquin	Waterford	950	920	829	780
Clogherhead	Louth	754	765	746	775
Kilfinane	Limerick	741	788	808	766
Strandhill	Sligo	606	683	654	764
Newcastle	Wicklow	297	560	633	763
Scarriff	Clare	873	847	789	763
Doneraile	Cork	920	846	815	761
Oughterard	Galway	779	682	711	751
Aughrim	Wicklow	718	756	713	745
Glenties	Donegal	899	914	802	738
Meathas Truim (or Edgeworthstown)	Longford	683	806	801	737
Ballyjamesduff	Cavan	846	842	829	737
Castledermot	Kildare	805	792	741	733
Killenaule	Tipp. S.R.	660	717	701	725
Rochfortbridge	Westmeath	724	792	721	724
Hospital	Limerick	623	751	723	723
Ballymore Eustace	Kildare	545	575	625	719
Piltown	Kilkenny	634	691	717	716
Bruff	Limerick	745	819	850	700
Castlefin	Donegal	748	694	692	698
Durrow	Laois	704	707	721	696
Dunlavin	Wicklow	583	734	720	693
Inniscrone	Sligo	603	633	610	692

Population of Cities, Towns and Villages, 1981-1996 (continued)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Urlingford	Kilkenny	669	676	689	689
Slane	Meath	690	689	699	688
Coill Dubh (or Blackwood)	Kildare	876	772	693	682
Kilmacthomas	Waterford	593	648	694	681
Daingean	Offaly	602	659	641	679
Ballyheigue	Kerry	581	660	658	679
Charlestown-Bellahy	Mayo	693	754	712	675
Cloyne	Cork	686	721	731	673
Cappamore	Limerick	755	765	744	665
Ballycannon	Clare	78	274	664	662
Killala	Mayo	623	674	713	657
Ardnacrusha (Castlebank)	Clare	416	481	570	655
Moneenroe	Kilkenny	531	616	640	655
Ballyduff	Kerry	593	751	670	649
Ardfert	Kerry	535	622	677	648
Carlingford	Louth	631	635	650	647
Caherconlish	Limerick	505	559	668	636
Ardara	Donegal	667	685	653	635
Drumshanbo	Leitrim	682	622	588	634
Freshford	Kilkenny	747	700	651	632
Tinahely	Wicklow	519	594	628	630
Dromiskin	Louth	376	399	443	629
Hacketstown	Carlow	693	710	707	628
Kilbeggan	Westmeath	693	603	617	627
Miltown Malbay	Clare	742	719	615	626
Ballineen/Enniskean	Cork	548	592	611	624
Rivermeade	Dublin - Fingal	616	667	660	621
Taghmon	Wexford	607	607	676	619
Loughshinny	Dublin - Fingal	568	614	606	614
Ballisodare	Sligo	502	575	581	612
Tarbert	Kerry	730	683	679	605
Moycullen	Galway	228	366	545	601
Bennettsbridge	Kilkenny	516	601	632	601

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Kilmacow	Kilkenny	381	517	596	599
Ballina	Tipp. N.R.	452	507	477	598
Schull	Cork	502	509	579	595
Newtowncunningham	Donegal	644	664	610	594
Annacotty	Limerick	445	532	546	586
Borris	Carlow	559	585	588	584
Lahinch	Clare	498	511	550	580
Knock	Mayo	314	332	440	575
Headford	Galway	734	675	600	574
Passage East	Waterford	528	563	542	573
Collooney	Sligo	752	705	612	573
Strokestown	Roscommon	593	620	568	572
Newport	Mayo	475	492	521	567
Enfield	Meath	387	368	436	566
Borrisoleigh	Tipp. N.R.	583	624	585	564
Foynes	Limerick	775	707	650	558
Cratloe	Clare	370	400	510	557
Glin	Limerick	629	569	608	554
Saggart	Dublin Belgard	695	646	603	550
Mount Bellew	Galway	491	519	539	547
Greencastle	Donegal	547	584	588	547
Ballygar	Galway	462	472	489	546
Elphin	Roscommon	489	513	525	545
Derrinturn	Kildare	413	528	553	544
Littleton	Tipp. N.R.	490	566	566	544
Drommahane	Cork	686	659	622	540
Termonfeckin	Louth	729	741	589	530
Pallaskenry	Limerick	277	438	469	519
Clogheen	Tipp. S.R.	541	502	499	518
Keel-Dooagh	Mayo	602	650	557	518
Kinnegad	Westmeath	427	433	415	517
Killumney	Cork	230	253	265	509
Leighlinbridge	Carlow	527	540	510	508

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Clonaslee	Laois	340	405	483	504
Summerhill	Meath	213	257	368	502
Ballylongford	Kerry	582	523	506	499
Innishannon	Cork	269	286	319	498
Rathmullen	Donegal	582	554	536	491
Avoca	Wicklow	513	490	494	490
Suncroft	Kildare	571	513	520	490
Drumcollogher	Limerick	513	445	387	485
Castlemartyr	Cork	668	585	587	484
Emyvale	Monaghan	468	464	479	484
Kilpedder	Wicklow	305	381	406	480
Shinrone	Offaly	415	479	455	479
Ballycotton	Cork	444	438	444	477
Cloghan	Offaly	478	496	453	477
Gowran	Kilkenny	510	517	477	476
Rhode	Offaly	498	524	500	476
Newtownforbes	Longford	344	393	429	470
Rathmore	Kerry	540	548	505	470
Kilberry	Kildare	383	522	501	466
Waterville-Spunkane	Kerry	484	475	463	466
Brownstown	Kildare	231	453	544	462
Kilsheelan	Tipp. S.R.	275	424	435	461
Johnstown	Kilkenny	420	408	422	460
Rathvilly	Carlow	480	512	531	458
Ballincar	Sligo	319	348	429	456
St. Johnston	Donegal	473	468	442	453
Kilmeage	Kildare	213	382	418	451
Holycross	Tipp. N.R.	281	274	396	447
Boherbue	Cork	442	490	441	447
Cloughjordan	Tipp. N.R.	478	499	476	447
Roundwood	Wicklow	325	371	437	446
Dunmore	Galway	445	445	427	445
Oola	Limerick	401	451	474	444

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Athea	Limerick	420	406	455	443
Kilworth	Cork	402	411	403	441
Meenlaragh	Donegal	426	465	465	440
Ardmore	Waterford	318	343	375	436
Moroe	Limerick	272	393	419	435
Ballyhaise	Cavan	362	430	438	435
Gormanston	Meath	853	870	819	435
Ballyconnell	Cavan	492	466	465	433
Kinvara	Galway	402	425	425	432
Ringaskiddy (or Loughbeg)	Cork	394	426	545	429
Tullyallen	Louth	243	232	393	429
Mountcharles	Donegal	483	480	413	428
Stamullen	Meath	331	372	396	427
Killeshandra	Cavan	503	455	469	427
Julianstown/Whitecross	Meath	323	402	450	424
Castletownroche	Cork	455	474	450	421
Corofin	Clare	405	391	382	418
Shanagolden	Limerick	347	402	416	412
Portroe	Tipp. N.R.	322	285	314	411
Barntown	Wexford	374	429	432	410
O'Briensbridge- Montpelier	Limerick	360	385	380	409
Coachford	Cork	413	423	433	408
Tallanstown	Louth	333	418	439	408
Goresbridge	Kilkenny	434	415	354	407
Clonroche	Wexford	403	412	418	407
Kilmore Quay	Wexford	421	458	424	406
Ballylinan	Laois	359	440	431	406
Rosscarbery	Cork	445	425	455	406
Manorcunningham	Donegal	350	441	455	404
Mullagh	Cavan	436	462	426	403
Louth	Louth	418	435	373	401
Clonlara	Clare	325	394	399	401
Ballinagh	Cavan	413	378	413	401

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Glanworth	Cork	335	379	390	400
Ballyoulster	Kildare	334	392	431	399
Tyrrellspass	Westmeath	314	328	376	396
Campile	Wexford	437	426	410	396
Dunkineely	Donegal	447	442	410	395
Glenamaddy	Galway	368	369	338	394
Spa	Kerry	328	346	398	394
Bellanode	Monaghan	273	312	324	391
Killygordan	Donegal	0	0	0	390
Fenit	Kerry	401	401	403	390
Ballingarry	Limerick	460	427	420	389
Doon	Limerick	416	308	397	388
Ballivor	Meath	362	336	341	383
Glenealy	Wicklow	418	397	361	383
Crocknamurleog	Donegal	355	310	307	382
Rathcormac	Cork	337	356	365	382
Tulla	Clare	453	403	398	382
Shercock	Cavan	412	406	371	380
Kilkishen	Clare	347	408	406	379
Newtownsandies	Kerry	336	357	365	370
Courtown Harbour	Wexford	337	317	343	364
Geashill	Offaly	266	339	375	363
Kilmacrennan	Donegal	410	412	393	363
Killeagh	Cork	309	342	347	362
Inniskeen	Monaghan	416	383	372	362
Toomevara	Tipp. N.R.	427	428	411	362
Mullinahone	Tipp. S.R.	347	385	379	358
Kilmihill	Clare	310	338	339	357
Killucan-Rathwire	Westmeath	347	353	366	357
Coolgreany	Wexford	338	352	380	356
Drumconrath	Meath	317	334	345	351
Dromahair	Leitrim	273	353	329	346
Cappawhite	Tipp. S.R.	406	391	350	345

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Kilcloon	Meath	299	357	351	345
Crookstown	Cork	331	332	353	345
Mucklagh	Offaly	408	390	374	342
Allenwood	Kildare	0	290	303	341
Straffan	Kildare	254	303	341	341
Drimoleague	Cork	397	381	344	339
Shrule	Mayo	321	285	246	337
Eyrecourt	Galway	322	351	358	337
Muff	Donegal	288	259	257	334
Milltown	Kerry	321	347	341	332
Moneygall	Offaly	326	346	344	332
Tinriland	Carlow	301	329	326	331
Farran	Cork	220	296	332	331
Clonbullogue	Offaly	330	378	335	329
Ardagh	Limerick	304	324	316	328
Arva	Cavan	316	331	319	327
Twomileborris	Tipp. N.R.	0	252	298	325
Shillelagh	Wicklow	299	334	326	324
Kentstown	Meath	290	330	333	324
Emly	Tipp. S.R.	299	324	334	324
Cheekpoint	Waterford	302	308	298	320
Pettigo	Donegal	395	360	370	320
Model Village (or Dripsey)	Cork	343	341	319	319
Duncannon	Wexford	346	388	339	318
Ballylanders	Limerick	304	343	348	318
Balla	Mayo	346	368	337	316
Ballingarry	Tipp. S.R.	0	329	293	315
Piercetown	Wexford	0	147	256	309
Collon	Louth	342	346	335	308
Glasslough	Monaghan	196	280	305	306
Cliffoney	Sligo	223	283	292	305
Clonmany	Donegal	0	0	305	305
Delvin	Westmeath	313	309	305	305

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Pallas Grean	Limerick	159	238	318	303
Kilrane	Wexford	175	201	214	301
Kildysart	Clare	372	347	325	301
Creeslough	Donegal	352	340	299	300
Camolin	Wexford	343	312	293	299
Ballinakill	Laois	355	357	319	299
Rannafast	Donegal	359	363	321	299
Newbliss	Monaghan	244	293	326	299
Ballyliffin	Donegal	242	198	334	299
Woodford	Galway	248	242	265	298
Monivea	Galway	164	271	310	298
Milltown	Kildare	299	310	311	297
Ballyboghil	Dublin - Fingal	168	212	207	296
Slieverue	Kilkenny	248	240	275	296
Burtonport	Donegal	335	316	278	296
Sneem	Kerry	319	309	292	296
Ballytore	Kildare	287	290	293	295
Castletown	Laois	307	303	291	294
Ballymakeery	Cork	335	309	303	294
Templetuohy	Tipp. N.R.	215	242	238	293
Donore	Meath	0	239	277	293
Whitegate	Cork	367	327	289	293
Ballyporeen	Tipp. S.R.	319	319	324	293
Mungret	Limerick	332	316	307	292
Fethard-on-Sea	Wexford	202	267	256	290
Frenchpark	Roscommon	283	272	272	290
Dunfanaghy	Donegal	390	314	280	290
Kilcar	Donegal	326	345	307	290
Ring	Waterford	226	265	281	289
Bansha	Tipp. S.R.	307	317	293	288
Kinlough	Leitrim	244	255	305	286
Timoleague	Cork	259	330	304	285
Fahan	Donegal	368	367	309	284

Population of Cities, Towns and Villages, 1981-1996 (continued)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Borris-in-Ossory	Laois	348	365	332	282
Bracknagh	Offaly	328	331	300	281
Liscarroll	Cork	309	292	284	279
Achill Sound	Mayo	0	190	229	277
Kernanstown	Carlow	0	331	287	277
Mullinavat	Kilkenny	357	355	283	275
Drumlish	Longford	235	274	275	274
Knockbridge	Louth	271	309	292	274
Clonmellon	Westmeath	333	334	295	272
Clogh-Chatsworth	Kilkenny	324	319	311	272
Mountcollins	Limerick	213	258	263	271
Ballycanew	Wexford	331	326	287	271
Broadford	Limerick	269	309	295	271
Carrowkeel	Donegal	225	229	249	268
Laragh	Wicklow	182	266	248	267
Riverstown	Sligo	262	280	274	266
Shannonbridge	Offaly	285	310	312	266
Cloonboo	Galway	164	203	252	265
Balreask	Meath	237	251	281	265
Kilronan	Galway	296	282	295	265
Ballynacargy	Westmeath	224	240	245	263
Lixnaw	Kerry	232	255	260	263
Clontuskert	Roscommon	309	273	246	262
Stradbally	Waterford	225	255	251	262
Oilgate	Wexford	301	270	262	262
Loughanure	Donegal	281	325	286	262
Golden	Tipp. S.R.	295	289	293	262
Causeway	Kerry	251	249	233	261
Bruree	Limerick	306	290	265	261
Inistioge	Kilkenny	238	267	261	260
Rockcorry	Monaghan	286	300	278	260
Quilty	Clare	215	263	274	259
Kilkelly	Mayo	217	245	263	258

Population of Cities, Towns and Villages, 1981-1996 (continued)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Ballon	Carlow	0	262	281	258
Ballyvaughan	Clare	156	182	181	257
Gurteen	Sligo	206	230	233	257
Banteer	Cork	230	230	235	257
Churchbay	Cork	237	250	254	257
Carrick	Donegal	316	296	267	257
Belmont	Offaly	190	258	291	257
Ballycumber	Offaly	220	235	248	256
Killimor	Galway	226	258	253	256
Ballinroad	Waterford	217	221	235	253
Kilnaleck	Cavan	273	321	279	253
Watergrasshill	Cork	202	222	250	252
Glenbeigh	Kerry	195	184	230	251
Carrigallen	Leitrim	280	278	243	251
Bangor Erris	Mayo	181	236	262	251
Bridebridge	Cork	270	296	273	250
Omeath	Louth	315	270	249	249
Brosna	Kerry	258	265	259	249
Kinnitty	Offaly	225	261	265	249
Knocklong	Limerick	234	273	257	248
Kilmoganny	Kilkenny	222	256	237	247
Galbally	Limerick	274	248	244	246
Bridgetown	Wexford	265	280	262	246
Killavullen	Cork	199	217	231	245
Carraroe	Galway	275	265	225	242
Quin	Clare	227	250	245	242
Nobber	Meath	208	203	253	242
Roundstone	Galway	255	278	281	241
Ahascragh	Galway	245	264	211	240
Craughwell	Galway	176	193	232	240
Coolagary	Offaly	259	258	232	239
Tievebane	Donegal	245	239	212	236
Glencolumbkille	Donegal	244	237	259	236

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Ford	Wexford	181	206	223	235
Puckaun	Tipp. N.R.	265	275	256	235
Ballycastle	Mayo	203	200	225	234
Scotstown	Monaghan	286	256	244	234
Ballindine	Mayo	220	193	232	233
Jenkinson	Louth	277	273	270	233
Baltimore	Cork	234	158	217	232
Smithborough	Monaghan	160	246	236	232
Raharney	Westmeath	196	260	254	232
Emo	Laois	0	0	0	231
Ballyfarnan	Roscommon	236	250	241	231
Gneevgullia	Kerry	184	214	239	230
Shanagarry	Cork	204	241	242	230
Kilmessan	Meath	137	206	242	230
Kildorrery	Cork	239	243	236	229
Garristown	Dublin - Fingal	157	230	224	228
Ballydehob	Cork	238	238	266	227
Courtmacsherry	Cork	231	192	204	224
Burnfoot	Donegal	251	240	246	224
Keenagh	Longford	159	202	218	223
Ballyclogh	Cork	179	219	232	223
Paulstown	Kilkenny	0	0	234	221
Ballingeary	Cork	168	187	213	220
Doonbeg	Clare	260	239	225	220
Drumkeeran	Leitrim	210	238	244	220
Roosky	Roscommon	220	231	249	220
Dundrum	Tipp. S.R.	225	268	247	219
Ballintra	Donegal	200	173	247	217
Ballyagran	Limerick	0	0	224	215
Coonagh	Limerick	236	240	243	215
Collinstown	Westmeath	0	0	0	212
Ballymore	Westmeath	0	0	219	212
Ballyhack	Wexford	221	232	221	212

Population of Cities, Towns and Villages, 1981-1996 (*continued*)

	County	Population 1981	Population 1986	Population 1991	Population 1996
Killeigh	Offaly	0	0	0	211
Moylough	Galway	208	204	199	209
Conna	Cork	151	180	217	209
Milford	Cork	268	253	256	208
Newtown	Laois	215	240	224	207
Dromina	Cork	243	253	229	207
Unionhall	Cork	224	220	202	206
Rathmolyon	Meath	236	234	211	206
Robertstown	Kildare	257	259	235	206
Annagry	Donegal	208	188	199	205
Ballinlough	Roscommon	258	244	228	205
Durrus	Cork	173	197	188	204
Annascaul	Kerry	242	228	215	203
Silvermines	Tipp. N.R.	0	0	209	202
Ballydesmond	Cork	202	212	211	201
Whitegate	Clare	193	193	193	200
Clonegal	Carlow	180	182	219	200
Glassan	Westmeath	0	0	212	198
Cong	Mayo	177	154	183	197
Lemybrien	Waterford	194	229	222	197
Knocknagree	Cork	285	225	199	193
Swanlinbar	Cavan	235	194	188	191
Knightstown	Kerry	233	204	204	191
Ballyhooly	Cork	197	209	173	190
Maddenstown	Kildare	300	244	215	189
Brittas	Dublin Belgard	186	192	191	187
Longwood	Meath	0	0	0	186
Loughglinn	Roscommon	116	175	184	186
Newcastle	Tipp. S.R.	191	213	193	186
Butlersbridge	Cavan	229	212	188	185
Carrigans	Donegal	254	243	218	185
Newtown	Cork	190	196	184	184
Murrtown	Wexford	0	0	244	184

Population of Cities, Towns and Villages, 1981-1996 *(continued)*

	County	Population 1981	Population 1986	Population 1991	Population 1996
Kilgarvan	Kerry	214	188	171	175
Easky	Sligo	190	190	165	174
Ballyroan	Laois	0	0	0	173
Leap	Cork	181	177	169	168
Mullaghmore	Sligo	150	147	124	164
Castlelyons	Cork	176	188	164	164
Castlegregory	Kerry	181	161	159	163
Donard	Wicklow	136	164	165	162
Feakle	Clare	174	178	161	159
Abbeydorney	Kerry	219	209	179	159
Inchigeelagh	Cork	158	158	149	156
Blacklion	Cavan	0	0	0	153
Gortahork	Donegal	0	0	0	152
Louisburgh	Mayo	258	209	177	150
Kildalkey	Meath	0	0	0	149
Laghy	Donegal	207	192	151	144
Drumsna	Leitrim	178	186	160	143
Castletownshend	Cork	159	153	147	141
Cromane	Kerry	141	157	157	136
Baltray	Louth	184	154	135	130

APPENDIX 4

Population Change, 1981-1996

Population Change, 1981-1996

	Population 1981	Population 1986	Population 1991	Population 1996	Actual population change 1981-1986	Actual population change 1986-1991	Actual population change 1991-1996	% population change 1981-1986	% population change 1986-1991	% population change 1991-1996
Greater Dublin Area	913638	920956	929090	952692	7318	8134	23602	0.8	0.9	2.5
Cork and Suburbs	168761	173694	174400	179954	4933	706	5554	2.9	0.4	3.2
Limerick & Suburbs	73934	73991	75436	79137	57	1445	3701	0.1	2.0	4.9
Galway & Suburbs	43210	47104	50853	57363	3894	3749	6510	9.0	8.0	12.8
Waterford and Suburbs	384730	39529	41853	44155	1056	2324	2302	2.7	5.9	5.5
Dundalk & Environs	29406	30608	30061	30195	1202	-547	134	4.1	-1.8	0.4
Bray & Environs	22960	24870	26953	27923	1910	2083	970	8.3	8.4	3.6
Drogheda & Environs	23686	24681	24656	25282	995	-25	626	4.2	-0.1	2.5
Swords	11257	15312	17705	22314	4055	2393	4609	36.0	15.6	26.0
Tralee & Environs	17035	17620	17862	19950	585	242	2088	3.4	1.4	11.7
Kilkenny & Environs	16919	17537	17669	18696	618	132	1027	3.7	0.8	5.8
Sligo & Environs	18002	18018	17964	18509	16	-54	545	0.1	-0.3	3.0
Ennis & Environs	14867	15547	16058	17726	680	511	1668	4.6	3.3	10.4
Clonmel & Environs	14417	14895	15562	16182	478	667	620	3.3	4.5	4.0
Wexford & Environs	15364	15365	15393	15862	1	28	469	0.0	0.2	3.1
Athlone & Environs	14782	15571	15358	15544	789	-213	186	5.3	-1.4	1.2
Carlow & Environs	12775	13090	14027	14979	315	937	952	2.5	7.2	6.8
Naas	8345	10017	11141	14074	1672	1124	2933	20.0	11.2	26.3
Malahide	9219	9940	12088	13539	721	2148	1451	7.8	21.6	12.0
Leixlip	9293	11938	13194	13451	2645	1256	257	28.5	10.5	1.9
Droichead Nua & Environs	10716	11503	12069	13363	787	566	1294	7.3	4.9	10.7
Navan & Environs	11182	11929	11706	12810	747	-223	1104	6.7	-1.9	9.4
Mullingar & Environs	11726	12127	11867	12492	401	-260	625	3.4	-2.1	5.3
Celbridge	4605	7135	9629	12289	2530	2494	2660	54.9	35.0	27.6

Population Change, 1981-1996 *(continued)*

	Population 1981	Population 1986	Population 1991	Population 1996	Actual population change 1981-1986	Actual population change 1986-1991	Actual population change 1991-1996	% population change 1981-1986	% population change 1986-1991	% population change 1991-1996
Killarney & Environs	9660	10189	9950	12011	529	-239	2061	5.5	-2.4	20.7
Letterkenny & Environs	8742	9808	10726	11996	1066	918	1270	12.2	9.4	11.8
Greystones & Environs	7929	9505	10778	11296	1576	1273	518	19.9	13.4	4.8
Tullamore & Environs	8845	9442	9430	10039	597	-12	609	6.8	-0.1	6.5
Portlaoighse & Environs	7784	8384	8360	9474	600	-24	1114	7.7	-0.3	13.3
Portmarnock	8204	9055	9173	9145	851	118	-28	10.4	1.3	-0.3
Ballina & Environs	8122	8190	8167	8762	68	-23	595	0.8	-0.3	7.3
Arklow & Environs	8646	8388	7987	8557	-258	-401	570	-3.0	-4.8	7.1
Castlebar & Environs	7568	7645	7648	8532	77	3	884	1.0	0.0	11.6
Maynooth	3388	4768	6027	8528	1380	1259	2501	40.7	26.4	41.5
Balbriggan & Environs	6915	7555	7724	8473	640	169	749	9.3	2.2	9.7
Cobh & Environs	8439	8282	8219	8459	-157	-63	240	-1.9	-0.8	2.9
Shannon & Environs	7998	8005	7920	7939	7	-85	19	0.1	-1.1	0.2
Carrigaline	4193	5893	6482	7827	1700	589	1345	40.5	10.0	20.8
Mallow & Environs	7611	7685	7521	7768	74	-164	247	1.0	-2.1	3.3
Enniscorthy & Environs	7567	7753	7655	7640	186	-98	-15	2.5	-1.3	-0.2
Skerries	5884	6864	7032	7339	980	168	307	16.7	2.5	4.4
Wicklow & Environs	5341	5498	6215	7290	157	717	1075	2.9	13.0	17.3
Dungarvan	6631	6849	6920	7175	218	71	255	3.3	1.0	3.7
Longford & Environs	6707	6835	6824	6984	128	-11	160	1.9	-0.2	2.3
Thurles & Environs	7644	7338	6955	6939	-306	-383	-16	-4.0	-5.2	-0.2
Tramore	5635	5999	6064	6536	364	65	472	6.5	1.1	7.8
Midleton	6281	6114	5951	6209	-167	-163	258	-2.7	-2.7	4.3
New Ross & Environs	6287	6357	6079	6147	70	-278	68	1.1	-4.4	1.1
Youghal & Environs	6138	5952	5828	5943	-186	-124	115	-3.0	-2.1	2.0
Nenagh & Environs	5983	5777	5825	5913	-206	48	88	-3.4	0.8	1.5
Monaghan & Environs	6385	6284	5946	5842	-101	-338	-104	-1.6	-5.4	-1.8

Population Change, 1981-1996 *(continued)*

	Population 1981	Population 1986	Population 1991	Population 1996	Actual population change 1981-1986	Actual population change 1986-1991	Actual population change 1991-1996	% population change 1981-1986	% population change 1986-1991	% population change 1991-1996
Ballinasloe & Environs	6481	6227	5892	5723	-254	-335	-169	-3.9	-5.4	-2.9
Tuam & Environs	6093	6039	5540	5627	-54	-499	87	-0.9	-8.3	1.6
Cavan & Environs	5106	5219	5254	5623	113	35	369	2.2	0.7	7.0
Rush	3874	4513	4839	5429	639	326	590	16.5	7.2	12.2
Athy	5565	5449	5204	5306	-116	-245	102	-2.1	-4.5	2.0
Carrick-on-Suir & Environs	5566	5353	5143	5217	-213	-210	74	-3.8	-3.9	1.4
Ashbourne	2469	3555	4411	4999	1086	856	588	44.0	24.1	13.3
Tipperary & Environs	5184	5209	4963	4854	25	-246	-109	0.5	-4.7	-2.2
Buncranna & Environs	4060	4131	4388	4805	71	257	417	1.8	6.2	9.5
Bandon & Environs	4935	4926	4741	4751	-9	-185	10	-0.2	-3.8	0.2
Westport & Environs	3378	3456	3688	4520	78	232	832	2.3	6.7	22.6
Fermoy & Environs	4904	4885	4462	4469	-19	-423	7	-0.4	-8.7	0.2
Trim & Environs	3599	4124	4185	4405	525	61	220	14.6	1.5	5.3
Kildare	4042	4268	4196	4278	226	-72	82	5.6	-1.7	2.0
Birr & Environs	4323	4194	4056	4193	-129	-138	137	-3.0	-3.3	3.4
Roscrea	4217	4378	4231	4170	161	-147	-61	3.8	-3.4	-1.4
Gorey & Environs	3785	3884	3840	3939	99	-44	99	2.6	-1.1	2.6
Passage West & Environs	3754	3704	3606	3922	-50	-98	316	-1.3	-2.7	8.8
Roscommon & Environs	3541	3473	3427	3915	-68	-46	488	-1.9	-1.3	14.2
Edenderry & Environs	3666	3753	3742	3825	87	-11	83	2.4	-0.3	2.2
Ardee & Environs	3524	3559	3604	3791	35	45	187	1.0	1.3	5.2
Laytown-Bettystown-Mornington	2997	3321	3360	3678	324	39	318	10.8	1.2	9.5
Listowel & Environs	3764	3693	3597	3656	-71	-96	59	-1.9	-2.6	1.6
Newcastle & Environs	3652	3674	3612	3618	22	-62	6	0.6	-1.7	0.2
Carrickmacross & Environs	3392	3465	3341	3617	73	-124	276	2.2	-3.6	8.3
Ceannanus Mor & Environs	3663	3693	3539	3542	30	-154	3	0.8	-4.2	0.1
Loughrea	3377	3360	3271	3335	-17	-89	64	-0.5	-2.7	2.0

Population Change, 1981-1996 *(continued)*

	Population 1981	Population 1986	Population 1991	Population 1996	Actual population change 1981-1986	Actual population change 1986-1991	Actual population change 1991-1996	% population change 1981-1986	% population change 1986-1991	% population change 1991-1996
Portarlinton	3397	3295	3211	3320	-102	-84	109	-3.0	-2.6	3.4
Clane	1712	1767	1822	3126	55	55	1304	3.2	3.1	71.6
Mitchelstown	3121	3210	3090	3123	89	-120	33	2.9	-3.7	1.1
Dunboyne	1467	1989	2392	3080	522	403	688	35.6	20.3	28.8
Kinsale & Environs	2445	2581	2751	3064	136	170	313	5.6	6.6	11.4
Ballybofey-Stranorlar	2971	2964	2972	3047	-7	8	75	-0.2	0.3	2.5
Clonakilty & Environs	2883	2786	2812	2950	-97	26	138	-3.4	0.9	4.9
Bantry	2862	2811	2777	2936	-51	-34	159	-1.8	-1.2	5.7
Mountmellick & Environs	3349	3230	3003	2912	-119	-227	-91	-3.6	-7.0	-3.0
Castleblayney & Environs	3086	3035	2938	2808	-51	-97	-130	-1.7	-3.2	-4.4
Rathcoole	2945	2991	2926	2784	46	-65	-142	1.6	-2.2	-4.9
Ballyshannon & Environs	3066	3015	2838	2775	-51	-177	-63	-1.7	-5.9	-2.2
Muinebeag & Environs	2656	2788	2700	2695	132	-88	-5	5.0	-3.2	-0.2
Kilcoole	1661	2335	2485	2694	674	150	209	40.6	6.4	8.4
Cashel & Environs	2817	2829	2814	2687	12	-15	-127	0.4	-0.5	-4.5
Rathluirc (or Charleville)	2907	2814	2646	2667	-93	-168	21	-3.2	-6.0	0.8
Kilrush	2753	2961	2740	2594	208	-221	-146	7.6	-7.5	-5.3
Macroom & Environs	2495	2449	2363	2574	-46	-86	211	-1.8	-3.5	8.9
Newtownmountkenedy	1769	2183	2321	2528	414	138	207	23.4	6.3	8.9
Clara	2610	2736	2505	2464	126	-231	-41	4.8	-8.4	-1.6
Tullow & Environs	2408	2441	2424	2364	33	-17	-60	1.4	-0.7	-2.5
Monasterevan	2177	2143	2224	2302	-34	81	78	-1.6	3.8	3.5
Donegal	2054	2242	2193	2296	188	-49	103	9.2	-2.2	4.7
Lusk	1393	1831	2071	2287	438	240	216	31.4	13.1	10.4
Templemore & Environs	2560	2383	2325	2244	-177	-58	-81	-6.9	-2.4	-3.5
Cahir	2177	2118	2055	2236	-59	-63	181	-2.7	-3.0	8.8
Castleisland	2359	2281	2207	2233	-78	-74	26	-3.3	-3.2	1.2
Boyle & Environs	2249	2383	2197	2222	134	-186	25	6.0	-7.8	1.1
Kinsealy-Drinan	0	0	2084	2182	0	2084	98	0.0	0.0	4.7

Population Change, 1981-1996 *(continued)*

	Population 1981	Population 1986	Population 1991	Population 1996	Actual population change 1981-1986	Actual population change 1986-1991	Actual population change 1991-1996	% population change 1981-1986	% population change 1986-1991	% population change 1991-1996
Clones & Environs	2596	2542	2347	2170	-54	-195	-177	-2.1	-7.7	-7.4
Dunshaughlin	474	878	1275	2139	404	397	864	85.2	45.2	67.8
Blarney	1929	1952	2043	1963	23	91	-80	1.2	4.7	-3.9
Skibbereen	2130	1999	1892	1926	-131	-107	34	-6.2	-5.4	1.8
Portrane	2499	2303	2153	1924	-196	-150	-229	-7.8	-6.5	-10.6
Claremorris	2036	1992	1907	1914	-44	-85	7	-2.2	-4.3	0.4
Donabate	402	599	1104	1868	197	505	764	49.0	84.3	69.2
Carrick-on-Shannon	1677	1621	1858	1868	-56	237	10	-3.3	14.6	0.5
Blessington	1015	1322	1408	1860	307	86	452	30.2	6.5	32.1
Tower	1029	1158	1402	1841	129	244	439	12.5	21.1	31.3
Kilcock	1162	1414	1551	1825	252	137	274	21.7	9.7	17.7
Cootehill & Environs	1805	1796	1791	1822	-9	-5	31	-0.5	-0.3	1.7
Bundoran & Environs	1610	1535	1463	1796	-75	-72	333	-4.7	-4.7	22.8
Castlerea	1874	1840	1822	1790	-34	-18	-32	-1.8	-1.0	-1.8
Duleek	1447	1679	1718	1731	232	39	13	16.0	2.3	0.8
Kill	1308	1503	1518	1711	195	15	193	14.9	1.0	12.7
Kanturk	1976	1870	1777	1666	-106	-93	-111	-5.4	-5.0	-6.2
Athenry	1590	1642	1612	1614	52	-30	2	3.3	-1.8	0.1
Kilcullen	1528	1693	1664	1604	165	-29	-60	10.8	-1.7	-3.6
Thomastown	1477	1465	1487	1581	-12	22	94	-0.8	1.5	6.3
Carndonagh	1581	1600	1541	1580	19	-59	39	1.2	-3.7	2.5
Rathkeale	1879	1815	1803	1546	-64	-12	-257	-3.4	-0.7	-14.3
Newmarket-on-Fergus	1504	1678	1583	1542	174	-95	-41	11.6	-5.7	-2.6
Dingle	1358	1253	1272	1536	-105	19	264	0.0	0.0	20.8
Bailieborough	1530	1645	1550	1529	115	-95	-21	7.5	-5.8	-1.4

