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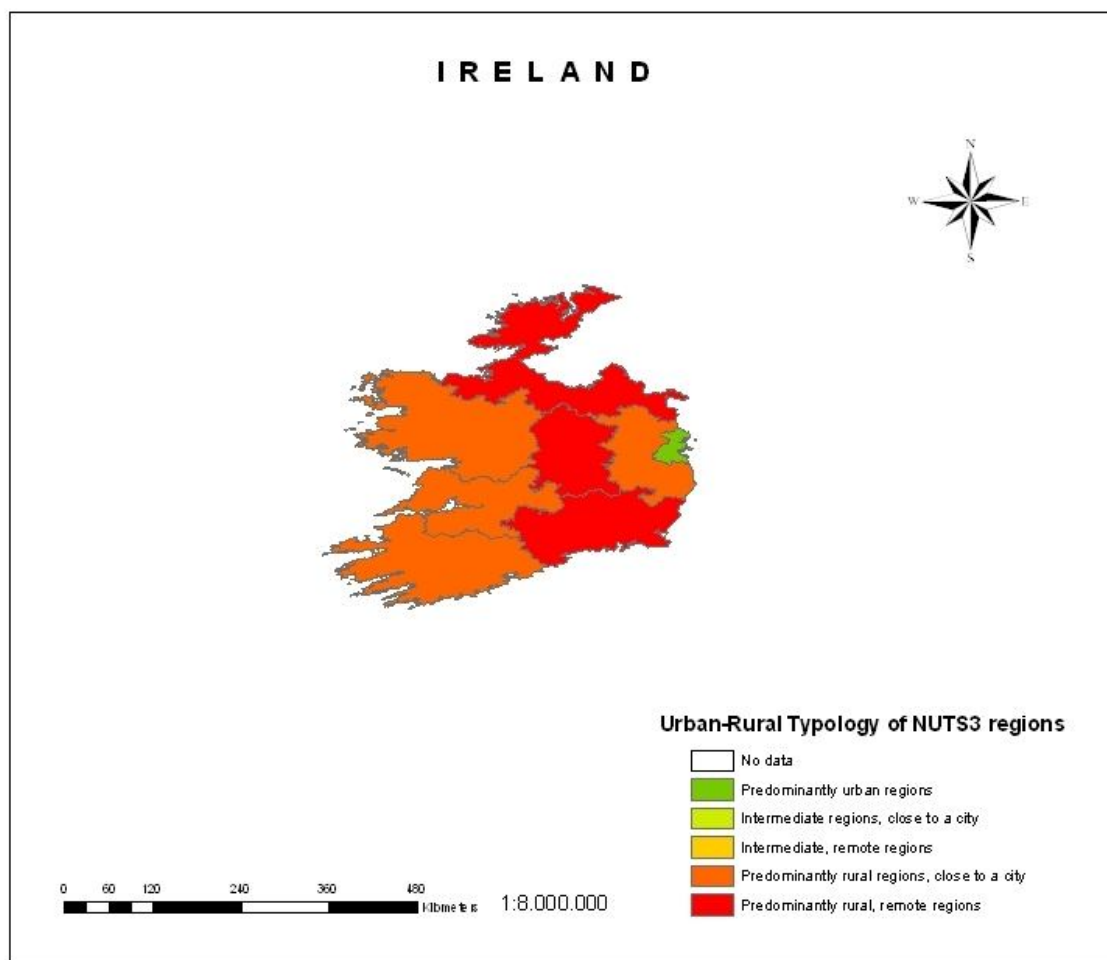
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1. Introduction

The reference typology (Fig 11.1) accurately captures the variable nature of rurality in Ireland. 'Predominantly Urban' and 'Predominantly rural regions close to a city' account for five of the eight NUTS III regions in Ireland reflecting the distribution of three of the larger cities and towns in Ireland; Cork in the Southwest, Limerick in the Midwest and Galway in the West. The Mideast region, immediately west of Dublin, is functionally integrated into the Dublin region. Each of the 'Predominantly rural regions close to a city' have experienced significant growth in population resulting in greater demand for housing and transportation infrastructure and services. Unsurprisingly, the major drivers of changes influencing the development of these regions closely align to the 'Urban – Rural' Grand Narrative.

Figure 11.1 DG Region modified Urban-rural typology of NUT3 regions: Ireland



Source: own elaboration from http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

Three regions, the Southeast, Midland and Border, are classified as 'Predominantly rural, remote regions'. This broad categorisation masks substantial sub-regional differences in accessibility to larger urban centres and recent socio-economic developments. Notwithstanding these, whilst these regions have experienced substantial changes in recent years it is true to say, particularly in the cases of the Midland and Border Regions, that they have generally lagged behind the 'Predominantly rural regions close to a city'. Whilst the 'Urban – Rural' Grand Narrative is appropriate to these regions their development is more closely aligned with the agri-centric perspective with the Border and Midlands following a Peri-productivist trajectory and the Southeast a Para-productivist pathway.

2. Demography

Analysis of national population trends for the 1986 – 2006 period shows an initial decline between 1986 and 1991 of -0.43% before subsequent growth commenced resulting in a 20% increase between 1991 and 2006. At the regional level there was substantial variation in the rate of population change with the Border (PRR) and the Mid-West (PRA) recording 13% and 14% growth respectively between 1986 and 2006 by comparison to the national figure of 20%. At the other end of the spectrum the Mideast (PRA) grew by 53% whilst the Midlands (PRR) and Southeast (PRR) both saw population growth of 21% (Table 11.1.1).

Table 11.1 Demography indicators

DEMOGRAPHY		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS+LI+MK+NO+TR	Average EU 27
Variables		1	21	22	31	32			
Census population 2001	% people aged 0 to 14 years	19.35			21.89	22.77	21.90	16.75	16.70
	% people aged 15 to 64 years	70.59			67.07	65.41	66.89	66.62	66.65
	% people aged 64 years and over	10.06			11.04	11.81	11.21	16.53	16.55
	Age dependency rate	14.26			16.50	18.06	16.81	25.09	25.09
Population*	Population change 2001-2007 (Index pop. 2001=100)	103.81			104.01	104.33	104.10	96.58	96.31
	% pop. 0_14_2007	21.66			22.03	22.64	22.21	16.68	15.97
	% pop. 15_64_2007	74.82			74.39	73.68	74.18	69.75	70.18
	% pop. >64_2007	3.52			3.58	3.68	3.61	13.55	13.84
	Age dependency rate	33.66			34.44	35.73	34.83	44.08	43.17
	Natural increase change_01_06	-100.00			-100.00	-100.00	-100.00	-5.99	-6.09
	Net migration change_01_06	-454.99			85.88	2.54	-12.98	7.09	8.97
Education*	% ISCED 0_2**	40.63			43.13	47.30	44.38	33.62	36.65
	% ISCED 3_4**	37.40			37.27	37.06	37.21	43.29	47.14
	% ISCED 5_6**	29.82			28.24	25.62	27.46	17.03	18.54
	% of farmers with basic or full educational attainment	41.20			31.78	33.33	33.54	35.34	39.54
	Life-Long Learning in Rural Areas*	7.46			6.91	6.01	6.64	7.69	8.61

* Values NUT3 are replaced by values NUTS2

**% ISCED by groups is calculated for population more 15 years.

Table 11.1.1 Regional population change 1986 – 2006 (Percentage)

Region	1986 - 1991	1991 - 1996	1996 - 2002	2002 - 2006	1991 - 2006	1986 - 2006
Border	-1.93	1.07	5.03	8.08	14.73	12.52

Midlands	-2.41	1.26	9.64	11.67	23.98	21.00
West	-1.54	2.73	7.93	8.94	20.79	18.93
BMW	-1.89	1.71	7.07	9.18	18.90	16.65
Dublin	0.38	3.21	6.10	5.73	15.79	16.22
Mid-East	3.38	6.80	20.14	15.34	47.99	52.98
Mid-West	-1.53	2.08	7.10	6.31	16.23	14.45
South-East	-0.46	2.17	8.20	8.79	20.26	19.71
South-West	-0.86	2.70	6.17	7.03	16.70	15.69
S&E	0.13	3.27	8.37	7.90	20.76	20.91
Total	-0.42	2.85	8.03	8.24	20.26	19.75

(Derived from the Census of Population, 1986, 1991, 1996, 2002 and 2006)

Regions with or proximal to large urban centres have consistently gained population over the 1986 – 2006 period; the S&E, where the largest cities, Dublin, Cork, Limerick and Waterford are located, recorded a 21% increase in population whilst the equivalent figure for the BMW region is 17%. In the latter case most of this growth occurred in the 1996 – 2006 period and was largely concentrated in Co.Louth (Northeast corner of the Border Region), which has been drawn into the Dublin hinterland as a result of improved transportation infrastructure, and Galway (West Region), which has witnessed significant population growth in and around Galway City. Notwithstanding this, all Regions have seen the number of residents increase though, once again areas close or accessible to urban centres have seen the largest increases. Conversely, areas that are remote from or inaccessible to towns and cities have seen limited population growth and in some instances, population decline. These pockets of population decline are only observable at the sub-regional level but tend to be concentrated in the peripheries of city and town hinterlands.

The developments outlined above have resulted in substantial changes to the demographic structure of regional populations. In general, one can say that all regions have benefited from population growth as this has added, substantially in some instances, to the population of working age persons and hence have experienced a relative decline in the dependency ratio (the number of persons under 15 and over 65 years of age population expressed as a proportion of the population between 15 – 64 years of age). The increase in the working age population at both national and regional levels was driven by ageing of the population and, from the late 1990s onwards, immigration.

These developments impacted on the NUTS III regional populations to varying extents. With the exception of Dublin, the structure of all regional populations in 1986 was relatively similar in that they followed the classical pyramid shape with many young people and progressively fewer people in each successive age cohort. The large youth

populations reflected the higher GFR during the early 1980s, roughly 234 births per thousand women between the ages of 15 and 44 in the regions comprising the BMW and 198 for women in those making up the S&E region (Figure 7 – 22). The progressive reduction in the older cohorts reflects the impact of emigration and natural decrease on each region's populations. The population of the Dublin region was exceptional at this time as it managed to retain a significant youth population and attract those entering the work force for the first time (Figure 12). In this case the population structure is closer in shape to a mushroom and is representative of regions undergoing rapid change driven by economic expansion.

By 2006 those regions with, or in the case of the Mideast proximal to, larger urban centres had witnessed considerable immigration of people between 25 and 44 years of age and natural growth in older populations. These developments are represented in the population structure by a bulging of these age groups. By comparison to 1986 a slight decline in the General Fertility Rate (GFR) is evident but, relative to the 1990s the GFR has increased. The Mideast, which absorbed much of Dublin's overspill growth during the 1986 – 2006 period is the exception as very substantial growth in all age groups is evident.

Those regions without large urban centres, the Boarder, Midland and Southeast, all PPR, did experience population growth but this was largely driven by retention of the base population combined with some immigration. This is not to suggest that immigration was unimportant to population changes in these areas but, given their history, the cessation of emigration is the more significant development. Migration to these regions is a relatively recent occurrence, since the late 1990s, and is driven by a variety of different processes ranging from those seeking to improve their quality of life, access better employment opportunities and in some instances, to retire.

3. Employment

The significant increase in the Republic of Ireland's population, as outlined above, was driven by, initially, reduced emigration and, ultimately, immigration. These processes were in turn heavily influenced by rapid economic expansion during the 1990s. The combination of population growth and economic expansion saw large numbers of people recruited to the labour force, reduced unemployment and a fundamental structural change in nature of the work force as more and more women entered paid employment.

Using census of population criteria the labour force is considered to comprise the population over fifteen years of age that is either at work, unemployed or looking for their first job. Analysis of census data highlights the rapid growth, +59%, of the labour force between 1986 and 2006; this compares to the 20% increase in the total population. Whilst the labour force did increase slightly between 1986 and 1996, despite significant emigration, 74% of the total increase is accounted for by growth that occurred between 1996 and 2006. The structure of the labour force changed considerably over this period as the proportion accounted for by those classified as unemployed or seeking their first job steadily declined from roughly 18% in 1986 to 8% by 2006. This reflects both increasing employment opportunities and greater employability, particularly of school leavers; the number of people seeking their first job declined by 32% during this period. It may also indicate greater mobility amongst the labour force with those seeking employment willing to travel to other regions or countries to find jobs. In the most recent inter-census period the number of those seeking their first job did increase, it is thought that this was predominantly driven by the very large number of school / college leavers and a slowing economy. One of the key characteristics of Ireland's labour force is how the gender balance shifted from one in which males accounted for 70% of the workforce in 1986 to one where, in 2006, they accounted for 59%. Whilst males still predominate women are increasingly prevalent in the labour force. Assessing these changes between 1986 and 2006 it is clear that the feminisation of the Irish workforce can be traced back to, at least the late 1980s, when, at a time when the male cohort declined by 1% the female component increased 15%. For most of the past 20 years females account for most of the growth in the labour force. The exception to this is the most recent inter-census period, 2002 – 2006, when there was a rapid expansion of the male dominated construction sector and hence a significant increase in the number of males in employment. Notwithstanding this development, as a whole, female participation in the labour force increased by 119% between 1986 and 2006.

Whilst national trends saw growth in the labour force and increased employment combined with declines in the numbers seeking their first job and those classified as unemployed, there was considerable variation in these developments at the regional level. The early part of this period, 1986 – 1996, was characterised by overall slow growth in the labour force much of which was concentrated in the Greater Dublin Region (GDR), comprising the Dublin and Mideast regions. Growth in the Boarder, Midland, West Midwest, Southeast and Southwest regions was below the national figure of 15% whereas the Dublin and Mideast exceeded this level with increases of 16% and 28% respectively. With the exception of the Mideast, Midwest and Southeast, all other regions experienced increased numbers of unemployed persons; the West recorded the largest increase of 13%.

The period 1996 – 2006 was characterised by much more dispersed growth with significant increases in all regional labour forces occurring. This development was, outlined earlier, driven by the rapid increase in the population over 15 years of age. Unprecedented economic growth resulted in considerable growth in the number of persons classified as at work and reductions in the number of people either unemployed or seeking their first job. A new spatial pattern emerged during this decade with employment growing strongly outside of the Greater Dublin Area, particularly in those regions with large urban centres. Of equal significance was growth in the labour forces of regions proximal or accessible to these centres; the Midland (58%), West (49%), Mideast (80%) and Southeast (49%) all recorded increasing in excess of the national figure (48%). At the aggregate level, labour force growth in the Border and Midlands PRR, and also the West (PRA) exceeded, for the first time, the national level. This development was driven by greater dispersion of industry from the major urban centres and significant population growth which increased drove new housing construction. Investment in transportation infrastructure improved inter and intra region accessibility. This factor is particularly important in understanding population, demographic, labour force and employment increases. Greater accessibility to urban centres was particularly significant in facilitating increased female participation in the workforce (Walsh et al., 2008). Female employment climbed during this period from 29% to 41% in the Border and Midlands PRR, and also the West (PRA) and from 33% to 43% in the remaining regions. Assessment of female employment levels indicate that the PU Dublin (+102%) and PRA Midwest (+123%) regions achieved growth that were below the national figure (+135%). It should be borne in mind, however, that Dublin has the highest female employment rate of 45% compared to the next highest, 42%, recorded for the West Region (PRU).

Table 11.2 Employment indicators (a)

EMPLOYMENT		PU	IRA	IRR	PRA	PRR		Average EU 27 +CH+HR+IS +LI+MK+ NO+TR	
Variables		1	21	22	31	32	Average country		Average EU 27
Employment rate*	T15_64 years	69.60			69.10	68.27	68.85	66.40	66.42
	Tmale 15_64 y	77.50			77.35	77.10	77.28	73.05	73.12
	Tfemale 15_64 y	61.50			60.63	59.17	60.19	59.72	59.70
	Total 15_24 y	49.90			49.93	49.97	49.94	39.66	39.67
	T 45_64 years	65.05			64.61	63.88	64.39	62.37	62.34
	Total 45_54	76.00			75.38	74.33	75.06	78.30	78.38
	Total 55_64	54.10			53.85	53.43	53.73	46.44	46.30
%Employment in principal sector	%Emp_primary	0.42			8.07	9.26	7.56	7.95	7.97
	%Emp_secondary	19.11			32.27	31.45	30.32	26.71	26.71
	%Emp_tertiary	80.47			59.65	59.29	62.12	65.33	65.31
Unemployment evolution 2002_05	Total > 15 years	124.00			110.50	178.96	137.86	187.25	188.17
	Total 15_24 years	105.13			107.50	360.94	202.24	255.25	257.16
	Total >25 years	134.01			112.37	105.67	112.56	82.27	82.21
	Male > 15 years	125.17			101.28	79.37	96.05	82.45	82.35
	Female > 15 years	121.79			86.40	114.25	101.27	94.74	94.79
Unemployment rate 2007*	Total >15	4.50			4.58	4.70	4.61	7.61	7.63
	Total Male >15	4.90			4.85	4.77	4.83	7.06	7.05
	Total Female >15	3.90			4.18	4.63	4.31	8.61	8.59
	Total 15_24	8.90			9.13	9.50	9.24	15.80	15.64
	Total >25	3.70			3.73	3.77	3.74	6.66	6.66
Long term unemployment*	% long term unemployment rate_07	29.94			30.01	30.12	30.04	43.07	43.12
	Evolution of long term unemployment2002_07	104.58			100.91	94.80	99.08	111.33	110.94

* Values NUT3 are replaced by values NUTS2

4. Rural business development

The variation in the structure of regional economies arises as a consequence of the interplay between differences in the availability of or accessibility to natural physical and human resources and, more generally, the size of the potential market for goods and services. Whilst there is considerable debate ongoing in the academic literature as to the exact impact of distance from markets has on economic development, given recent substantial investment in transportation and communications infrastructure, there is general agreement that proximity to larger markets is an important factor.

A regional interaction matrix establishes the number of residents living in a particular region and where they work (Table 11.4). These data provide an indication as to the overall size of each region's economy in terms of their labour requirements. They also highlight the level of interaction between regions and provide an indication as to the strength and direction of the relationship. Taking the Midland region as an example one sees that 64,928 people live and work in the region, a further 64,517 live in the region but work in other regions or outside of the jurisdiction of the State whilst the workplace of 43,641 inhabitants is unknown. Consideration of the flows between the Midland and Border regions shows that whilst there is relatively little interaction more people commute into the Midland region than vice versa.

Table11. 2 Regional Workforce Interaction Matrix

		Place of Work												Number of Residents
		Border	Midlands	West	Dublin	Mid-East	Mid-West	South-East	South-West	Mobile	Northern Ireland	Overseas	Unknown	
Residence	Border	131,056	1,099	2,047	7,859	3,818	74	60	66	26,035	4,896	332	12,833	190,175
	Midlands	829	64,928	1,671	6,319	5,822	1,435	2,294	81	45,006	163	897	43,641	173,086
	West	2,645	4,999	124,750	1,147	205	863	78	127	25,470	70	350	15,639	176,343
	Dublin	1,128	534	196	433,688	13,900	249	440	261	13,274	29	138	10,306	474,143
	Mid-East	4,772	2,148	102	70,174	98,483	130	1,785	139	16,938	21	223	11,077	205,992
	Mid-West	51	1,029	1,075	946	198	115,514	2,017	2,968	24,854	34	279	12,382	161,347
	South-East	60	1,203	69	4,004	4,301	2,736	139,458	2,166	32,189	28	481	19,625	206,320
	South-West	44	129	105	1,067	159	2,826	993	204,237	24,782	36	318	12,370	247,066
	Number of Workers	140,585	76,069	130,015	525,204	126,886	123,827	147,125	210,045	208,548	5,277	3,018	137,873	1,834,472

(CSO, 2006 - POWCAR)

The interplay between the number of people who live and work within a region and those to access employment outside the region, expressed as a percentage of the total workforce, is known as the self containment level. This provides an indication of degree to which regions depend on individuals residing outside their areas to support their economies and, conversely, the degree to which populations living in one region depend on the economy of another. To undertake this analysis one needs to exclude individuals for whom we do not know their destination; in Table11. 4 these are the values in the Unknown (no work address was provided to the CSO) and Mobile (this group does not have a fixed place of work) columns. It is also necessary to exclude areas where the flows between regions are unavailable; whilst the numbers working overseas and in Northern Ireland are known we do not know how many people travel from these areas to work in the Republic of Ireland. This result is a matrix that contains the labour flows within and between each of the eight administrative regions in Ireland (Table 11.5).

Table 11.3 Inter and Intra Regional Labour Flows in Ireland

	Border	Midlands	West	Dublin	Mid-East	Mid-West	South-East	South-West	Workforce	Self Containment
Border	131,056	1,099	2,047	7,859	3,818	74	60	66	146,079	90
Midlands	829	64,928	1,671	6,319	5,822	1,435	2,294	81	83,379	78
West	2,645	4,999	124,750	1,147	205	863	78	127	134,814	93
Dublin	1,128	534	196	433,688	13,900	249	440	261	450,396	96
Mid-East	4,772	2,148	102	70,174	98,483	130	1,785	139	177,733	55
Mid-West	51	1,029	1,075	946	198	115,514	2,017	2,968	123,798	93
South-East	60	1,203	69	4,004	4,301	2,736	139,458	2,166	153,997	91
South-West	44	129	105	1,067	159	2,826	993	204,237	209,560	97
Number of Jobs	140,585	76,069	130,015	525,204	126,886	123,827	147,125	210,045	1,479,756	

(CSO, 2006 - POWCAR)

The self containment values for each of the regions reflect their geographic position and composition relative to other regions and, to a lesser extent the location of major employment nodes within the regions. It is clear from the self containment value and labour flow data associated with the Mideast region that it is strongly integrated with the Dublin region's economy. This is unsurprising for a number of reasons not least of which is the relatively small geographic size of the Dublin region and its proximity and accessibility to the Mideast region. It is evident that regions accessible to Dublin, including the Midland, Border and, to a lesser extent, the Southeast all record lower self containment values than those remote from Dublin. The geographic positioning of regions is important in understanding these data; it is to be expected that the workforce residing in the Midland region would access jobs in the West, Mideast and Dublin regions as a consequence of its central location and the accessibility of major employment centres, namely the Galway and Dublin economies. In contrast to this the Southwest, a geographically large region with one major (Cork) urban centre, and a number of smaller but nonetheless significant employment centres, has a very high level of self containment. The absence of any significant employment loci proximal to the region's borders also suppresses labour out-flow.

It is possible, using the POWCAR to explore in great detail each region's economy in terms of the proportion of the workforce associated with the main industrial groups and their demographic and socio-economic characteristics. A comparative analysis of each region's industrial profile highlights similarities between the Southeast and Southwest in terms of the proportional distribution of those who work there between the various industrial groups. The Border, Midland and West regions also share a number of similarities although, proportionally, there are slightly less people in the agriculture and construction sectors and more in the Commerce group in the Border region. The key structural characteristic of these regions is the significance of the public sector (Public administration and defence, Education, health and social work) as the single largest employer. Comparing these economies to those of the Southeast and Southwest and also the Mideast finds that commerce is the most important industrial sector in the latter cases. The Midwest differs from other regions in that manufacturing and the related transportation sector is the most significant industrial group accounting for 30% of all employment in the region. The significance of manufacturing and related activities as a key employer reflects a long running regional strategy which has seen national and local initiatives aim to attract these industries to the region. The Midlands also has an

important manufacturing and transportation element to its economy (26%) but, as stated above, commerce accounts for slightly greater share of regional employment (27%). The Dublin region's economy is characterised by a reliance on commerce related enterprises (41%).

The size of a region's industrial groups, as measured by the number of persons employed in them, is significant as it influences the demographic structure of the workforce. Analysis of the sectoral distribution of male and female employment highlights the gendered nature of employment. This is particularly evident in what are considered 'traditional male sectors', namely agriculture, forestry and fishing and construction. Conversely, 77% of those employed in the education health and social work sectors are female. At the regional level, the mix of employment opportunities for men and women is very important in determining the overall level of employment and female participation rates. Detailed analysis indicates that, with the exception of Dublin and to a lesser extent the Southwest, all other regions are largely similar in terms of the sectoral distribution of male and female employment. The Southwest and Dublin differ in that female employment is spread to a greater extent amongst all of the industrial sectors that is a reflection of the greater range of enterprises, and job opportunities within them, that comprise each sector.

Table 11.6 Rural business development indicators

RURAL BUSINESS DEVELOPMENT		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS +LI+MK+ NO+TR	Average EU 27
Variables*		1	21	22	31	32			
N° FIRMS BY SECTOR OF OPERATION (1_2 digits)_2006	% Mining and quarrying	0.14			0.18	0.24	0.20	0.30	0,30
	% Manufacturing	3.64			4.05	4.72	4.25	14.08	14,05
	% Electricity, gas and water supply	0.06			0.07	0.09	0.08	0.61	0,63
	%Construction	0.00			0.00	0.00	0.00	9.48	9,46
	%Wholesale and retail trade	41.23			39.89	37.65	39.22	23.02	21,83
	%Hotel and restaurants	10.60			12.29	15.09	13.13	6.52	6,15
	%Transport, storage and communication	11.00			12.40	14.75	13.11	8.69	8,46
	%Real state, renting and business activities	33.32			31.12	27.46	30.02	37.29	39,12
EMPLOYMENT BY SECTOR OF OPERATION (1_2 digits)_2006	% Mining and quarrying	0.50			0.60	0.77	0.65	0.58	0,52
	% Manufacturing	18.63			20.43	23.43	21.33	29.18	28,08
	% Electricity, gas and water supply	0.15			0.13	0.10	0.12	1.14	0,89
	%Construction	8.43			7.82	6.80	7.51	9.09	9,14
	%Wholesale and retail trade	28.23			29.08	30.50	29.51	26.14	26,93
	%Hotel and restaurants	12.66			13.67	15.36	14.18	8.27	8,37
	%Transport, storage and communication	9.19			8.26	6.69	7.79	8.65	8,52
	%Real state, renting and business activities	22.19			19.98	16.31	18.88	16.78	17,51
Employment in high and medium technologies manufacturing activities_2004	Employment in high and medium tech manufacturing activities_2004_Media	6.68			6.50	6.19	6.40	6.88	7,42
	Employment in high and medium tech manufacturing activities_2004_%EU 25	96.37			94.75	92.04	93.94	95.89	107,13
%firms with own website		59,90			55.85	49.10	53.83	50.21	50,21

* Values NUT3 are replaced by values NUTS2

5. Rural-urban relationships

Ireland has undergone a period of unprecedented economic growth that has transformed it from one of the poorer countries in Western Europe to one of the richest in the world. In line with economic growth the population has increased significantly; 20% since 1991. A number of drivers underpinned population change the most significant of which were reduced emigration and, more recently, increased immigration. Spatially, the impact of these developments was considerable, extensive and ultimately, uneven. Many rural areas experienced rapid growth and change whilst some urban centres found their population falling.

The population in rural areas with less than 150 persons per Km² increased by 8.50% during the 1991 – 2006 period. Though this may seem a relatively small increase it has substantially impacted on the demographic structure of rural areas and, as a consequence, raises a number of implications for the future of rural places.

Assessment of rural population distribution highlights significant concentration of this population in regions that are classified as either PRA or PRR. From a demographic perspective they are the places where population is growing fastest. They also represent loci where the concept of rurality as an agriculturally dominated space is increasingly contested. There are however a number of important exceptions to the concentration of population around urban centres. Remote coastal areas in the Border and Southwest Regions contain significant proportions of the rural population. These rural spaces are important as they represent the continuation of rural communities and, in most cases, are culturally significant in that they are Gaeltacht Areas (Irish Speaking).

The rapid change in settlement patterns in Ireland, driven by suburbanisation, was one of the drivers underpinning the development of the National Spatial Strategy 2002 – 2020 (NSS). This document sets out a territorial development perspective to guide Ireland's future socio-economic development by drawing on the European Spatial Development Perspectives (1999). The NSS recognises the role of urban – rural linkages though it does not specify how these are to be fostered. In the absence of a national strategy in this area there are few 'urban – rural' initiatives that can be identified at this point in time. Notwithstanding this, an evaluation of urban – rural praxis suggests that in PRA regions rural spaces are increasingly being defined by their use as residential sites or leisure spaces whilst urban centres are the foci of most employment opportunities. As such, these developments firmly fix the PRA regions within the 'Urban-Rural' Grand Narrative. It would however be a mistake to assume that these developments are uncontested as 'traditional' rural activities, namely agriculture, remain locally and nationally, very significant from a social and economic perspective.

6. Cultural heritage

Ireland has extensive natural and cultural resources related to the long history of human settlement that are increasingly recognised for their importance in supporting continued cultural development and as a resource vital to the tourism industry. The State's primary cultural resources are threefold; the natural landscape, the built environment including ancient and modern human activities and the cultural assets associated with the Irish language and associated traditions. These resources are widely distributed throughout the State and, from an economic perspective, form a very important component of the country's tourism industry. Perhaps more importantly these resources are intrinsically bound to Irish identity and nationalism.

The State, in line with EU regulations, plays a significant role in protecting and managing the development of much of the country's cultural heritage. The Department of the Environment, Heritage and Local Government has primary responsibility in this regard and oversees the Office of Public Works, a State Agency, in their role as managers of Ireland's publically and privately owned cultural heritage resources. The *National Monuments Acts* 1930-1994 give the State authority to protect archaeological sites and monuments that have been identified under the Archaeological Survey of Ireland. More recent developments have seen the drafting of legislation to protect the built environment. Ireland's natural heritage is protected under the Wildlife Act (2000), which brings into legal force the EU Habitats Directive in Ireland. The Wildlife Act designates Special Areas of Conservation, Special Protection Areas and Natural Heritage Areas. These areas are distributed throughout the State but can be said to be largely concentrated in coastal areas and regions with larger rivers running through them. These are largely rural areas.

The primary cultural and heritage resources of rural areas include the landscape, historic buildings and monuments, the Irish language and associated traditions. These are widely distributed although areas with large concentrations of Irish speakers, outside of the major urban centres, are located in Predominantly Rural, Remote regions along the west coast. Due to historic settlement patterns and changes in land use much of the ancient built heritage is also located in these areas whereas more modern built heritage tends to be concentrated in are located in Predominantly Rural, Accessible areas.

Cultural resources and the natural and built heritage are very important resources supporting social and economic development in rural areas. The natural landscape, combined with ancient built resources, are the two primary assets used in the promotion of rural tourism in Ireland. Increasingly these are 'packaged' with cultural activities to provide an experience that is predominantly marketed to older, wealthier tourists from mainland Europe and the UK. This marks a significant development for Ireland's rural tourism industry.

7. Services of General Interest

Comparison of access to services of general interest in Ireland to EU averages highlights a number of challenges facing Ireland (Table 11.5). Relative to EU averages, rural regions in Ireland compare poorly in terms of road and rail infrastructure and access to both hospital and universities.

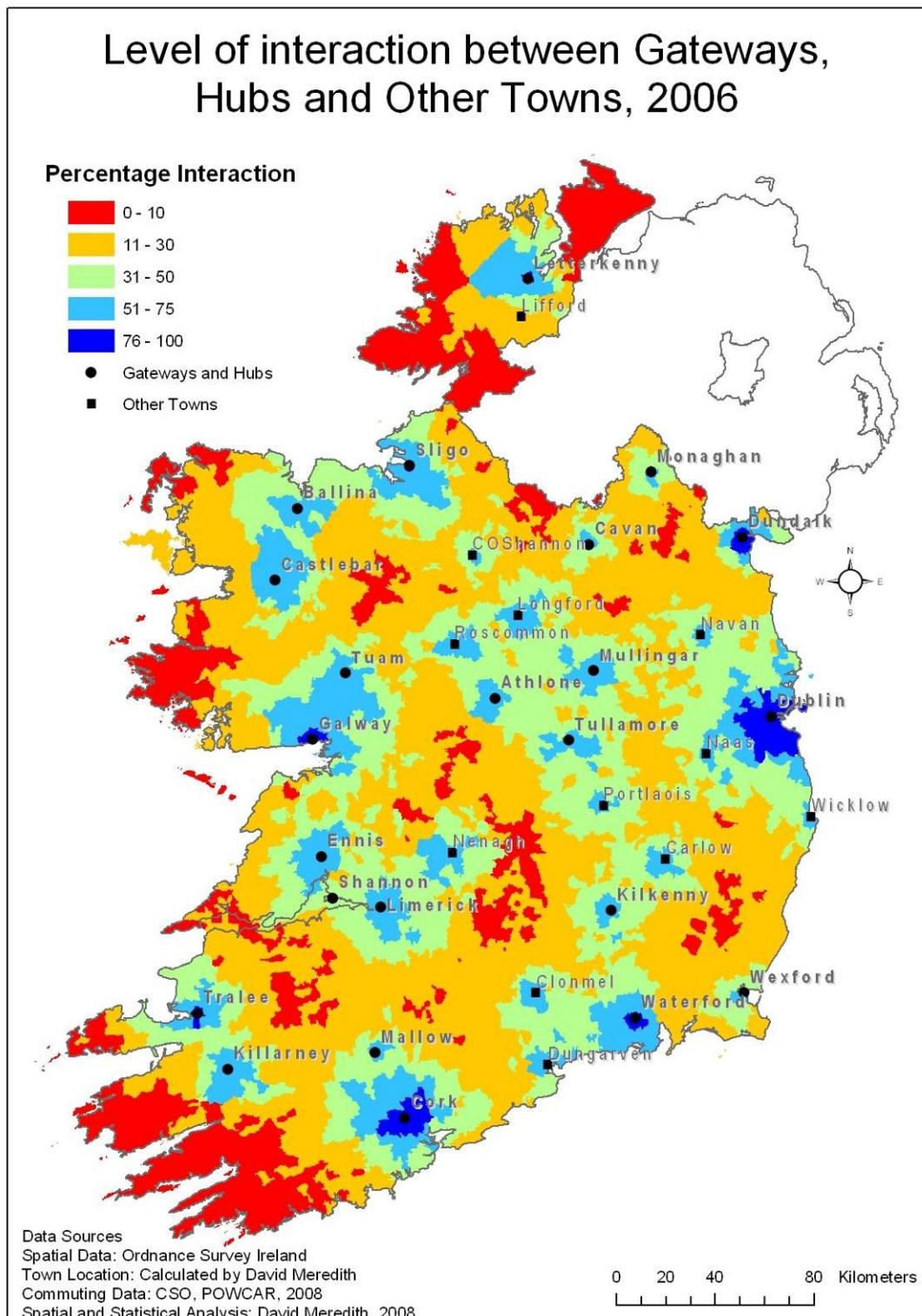
Transport Infrastructure

Road Accessibility

In recent years Ireland has invested substantially in developing road infrastructure through upgrading national primary roads to motorway status. Notwithstanding this significant parts of rural regions continue to experience long travel times to access larger urban centres. Analysis undertaken of interaction of the workforce with key cities and towns in Ireland classified as either Gateways, Hubs or Other Towns (GHOTs) in Ireland's National Spatial Strategy demonstrates that there are extensive areas, classified as either PRR or PRA, that are inaccessible to much of the rural population. Spatial analysis of travel-to-work patterns between rural areas and these key urban centres highlights the limited nature of interaction (Figure 11.3). The spatial patterns evident in Figure 11.3 highlight two issues. Firstly there are a number of towns that are locally important, although not particularly large, which have not been classified as either a GHOT. This accounts for much of the interaction pattern in areas where less than 10% of the population travels-to-work in a GHOT. Secondly, there is a clear pattern of distance decay in the pattern of interaction evident in Figure 11.3. As one moves further from the GHOTs the level of interaction declines. This suggests that the friction of distance is a key factor in understanding travel-to-work patterns. Comparing larger cities, e.g. Cork, Galway and Dublin, that are served by motorways, one finds their hinterlands are significantly larger than other towns. This highlights the impact of road infrastructure investment on accessibility and, ultimately, travel-to-work activities.

In addition to making it difficult for those parts of the workforce living in rural areas to access employment, Ireland's poor road infrastructure, combined with limited public transportation services in rural regions, can result in social, economic and cultural isolation. Recognising this, the State developed the Rural Transport Programme (RTP) which provides funds for 34 community-based groups to provide local transport services. The primary objective of the RTP is to provide transport services to socially-excluded groups rather than the development of a public transport service for rural areas. The RTP is limited in terms of its geographic coverage and scope as new services introduced under the programme cannot compete with existing commercial services. A review of the programme in 2006 found that it was successful in providing locally appropriate transportation solutions that increased accessibility of those at risk of social exclusion, particularly women, the elderly and the unemployed (Fitzpatrick Associates, 2006).

Figure 11.3 Percentage of the workforce that travels-to-work in a Gateway, Hub or Other Town



Air Transport

Only in the area of access to airports do rural regions in Ireland out perform their EU counterparts although the figures in Table 11.5 cannot capture the level of connection between airports in rural regions and other regions both in Ireland and internationally. Interconnections between airports located in rural regions in Ireland and other countries tend to be low or seasonal.

Education

Analysis undertaken by Kalogirou and Foley (2006; p.59) show that for the 20 percent of the population nearest to an acute hospital the maximum distance is 2.68 km, whereas for the upper quintile (the least accessible 20%), this maximum distance has increased to 91.32 km. Unsurprising to those who have knowledge of Ireland's geography, those regions with higher levels of inaccessibility to hospital services are predominantly classified as PRR and include the Southwest, Border and parts of the West Regions (Figure 11.4). An analysis of health and place in Ireland also identifies the Midlands and parts of the South-East regions as having poor access. (Kalogirou and Foley, 2006).

Table 11.5 Services of general interest indicators (a)

SERVICES OF GENERAL INTEREST		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS+LI+MK+NO+TR	Average EU 27
Variables		1	21	22	31	32			
Density of motorways		0.05			0.00	0.00	0.01	0.04	0.04
Density of trunk road		0.22			0.08	0.07	0.09	0.17	0.17
Density of railways		0.10			0.02	0.02	0.03	0.10	0.10
Area (km2)**		921.30			40516.70	28359.10	69797.10	5659749.80	4600910.40
DENSITY	Evolution density 2001_06*	5.06			10.80	14.02	11.29	96.58	96.31
	Density of population 2006	1279.68			50.37	41.44	200.69	3712.44	4066.61
Daily population accessible by car		3846.00			2264.25	3531.66	2937.25	18078.54	19285.23
Time to nearest hospital		7.20			35.24	81.67	49.15	22.83	22.83
Time to nearest university		7.20			63.69	82.47	63.67	45.10	45.10
Time to nearest airport		11.26			61.74	82.31	63.14	83.44	83.44
%households with broadband access		NA			NA	NA	NA	49.07	48.00
% households with internet at home		NA			NA	NA	NA	81.46	81.20

* Values NUT3 are replaced by values NUTS2

** The findings of these variables are the sum of values, not the average, as the others.

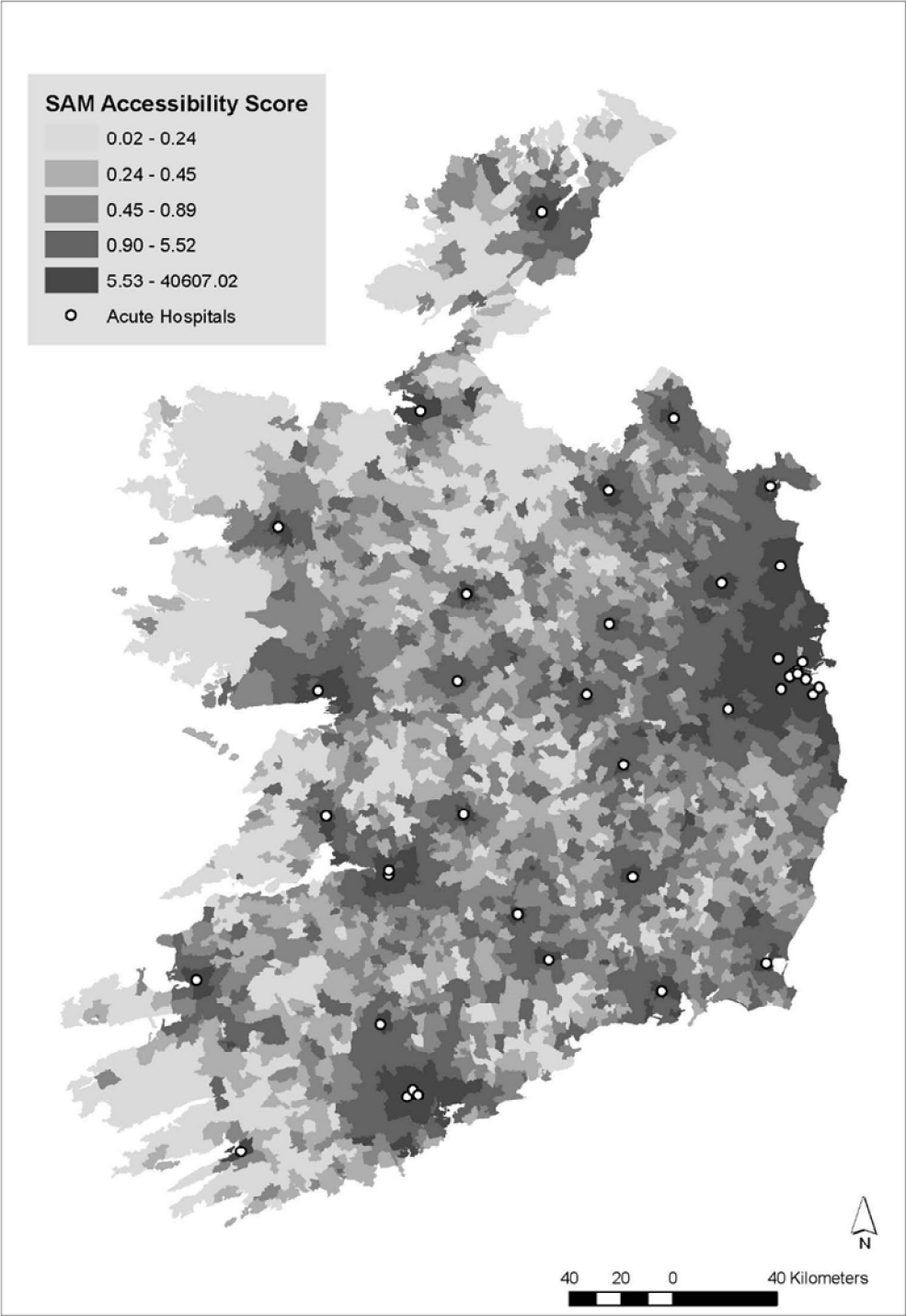
*** These values are only indicatives and aren't real because in the calculation there are values NUTS2 and NUTS3.

Table 11.6 Services of general interest indicators (b)

SERVICES OF GENERAL INTEREST		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS+LI+MK+NO+TR	Average EU 27
Variables		1	21	22	31	32			
N° STUDENTS ISCED 0_6	N°students ISCED_0 per 1.000 inhabitants	NA			NA	NA	NA	29.59	29.46
	N°students ISCED_1 per 1.000 inhabitants	NA			NA	NA	NA	61.66	60.76
	N°students ISCED_2 per 1.000 inhabitants	NA			NA	NA	NA	43.21	43.28
	N°students ISCED_3 per 1.000 inhabitants	NA			NA	NA	NA	48.05	48.03
	N°students ISCED_4 per 1.000 inhabitants	NA			NA	NA	NA	3.06	3.10
	N°students ISCED_5_6 per 1.000 inhabitants	NA			NA	NA	NA	37.37	37.23
BEDS IN HOSPITAL PER 100.000 inhabitants*	N° of beds in hospitals per 100.000 inhabitants_05	554.10			546.85	534.76	543.22	696.91	704.88
	Evolution nbeds 2000_05	NA			NA	NA	NA	91.53	91.94
	Density of hospitals	5.42			0.11	0.09	0.86	5.44	5.44
	Hospital beds per head	2.55			1.17	1.13	1.35	4.98	4.98
	Doctors per inhabitant	0.00			0.00	0.00	0.00	171.35	171.35

* Values NUT3 are replaced by values NUTS2

Figure 11.4 Accessibility to Acute Hospitals



(Kalogirou and Foley, 2006 p.62)

8. Farm structural change

While agricultural restructuring in Ireland was broadly similar to other countries, the development of the Irish economy accelerated the processes leading to a reduction in the number of farms, increasing farm size and marginalization of those farm households unable to adapt due to resource limitations (Shucksmith *et al.*, 2005). The primary drivers of these developments include the changing regulatory environment and, consequently, increasing competition in domestic and international commodity markets.

In recent years the agricultural industry, in line with EU policy, responded to increasing competition from producers both within and outside the enlarged EU with further consolidation, specialization and intensification. This response is referred to as the productivist model of agriculture (Crowley *et al.*, 2008). These developments have combined to drive increasing farm sizes through accumulation of land by farmers through either direct purchase or, more commonly, leasing. One of the side effects of this development is a reduction in the number of farmers. There has also been a significant restructuring in the geography of agricultural production in Ireland culminating in the present situation where large-scale productivist agricultural activities are concentrated in the Mideast, Southeast and Southwest Regions though there are important pockets of productivist agriculture in the other regions.

Peri-productivist agriculture, a model based on what is loosely referred to as the European Model of Agriculture, predominates in the Boarder, West and Midland regions. As not all farm households are in a position, due to limited financial resources, unfavorable physical or climatic conditions or low levels of human capital to engage with the productivist model, an extensive form of agriculture, based on extensive livestock production and delivering public goods, which are supported by EU payments, has emerged as the dominant form of farming. Due to the limited economic returns from this form of agriculture many farm households found the farm enterprise to be increasingly unviable. Fortunately many were in a position to mitigate some of the negative implications of agricultural restructuring through greater engagement with the broader economy. Rapid expansion of the economy enabled many farm-based households to increase household income through engagement with alternative strategies to those associated with the productivist model of agriculture. Unsurprisingly, given the increase in employment opportunities, many farmers and other farm household members chose to engage in off-farm employment as a means of generating additional income to support the household. This trend has recently been interrupted by the current economic downturn.

Table 11.7 Farm structural change indicators (a)

FARM STRUCTURAL CHANGE		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS +LI+MK+ NO+TR	Average EU 27
Variables		1	21	22	31	32			
% HOLDINGS 2005	< 2 ESU	9.11			11.47	11.53	11.20	33.42	33.89
	2 to 100 ESU	87.97			86.44	86.42	86.62	57.56	57.02
	>100 ESU	2.92			2.09	2.06	2.18	8.33	8.38
%CHANGING N° HOLDINGS 2000-2005	% Change in number of total holdings 2000-2005*	-6.36			-7.09	-6.67	-6.84	-9.53	-9.19
	% Change in number of holdings less 2 ESU 2000-2005	-22.63			-14.80	-13.18	-15.17	-2.22	-0.65
	% Change in number of holdings 2 to 100 ESU 2000-2005	-3.92			-5.14	-6.11	-5.35	-13.91	-13.73
	% Change in number of holdings over 100 ESU 2000-2005	-15.67			-12.67	-5.26	-10.26	32.21	31.28
HOLDERS	% Holders working full time 2005	52.50			52.37	53.06	52.65	35.42	35.50
	% Change in Number of Holders working full time 2000 - 2005	-8.69			-12.53	-12.02	--11.08	-0.00	0.33
	Economic Farm Size (RDEU07)	50.50			20.42	21.46	24.57	41.93	41.93
	Farmers with OGA (RDEU07)	43.40			42.52	42.30	42.55	37.55	37.55
	% holders > 55 years 2007*	47.11			48.87	51.80	49.75	50.19	50.61
	% holders < 35 years 2007*	7.78			7.38	6.71	7.18	6.35	6.32
	% change in holders > 55 years 2000 - 2005	19.44			22.05	20.44	21.12	5.88	5.61
	% change in holders < 35 years 2000 - 2005**	-34.10			-37.96	-36.69	-37.00	-34.00	-33.95
% farmers with basic and full education in agriculture attained (RDEU07)		41.20			31.77	33.33	33.53	42.29	42.29

* Values NUT3 are replaced by values NUTS2; ** Some values NUT3 are replaced by values NUTS2

9. Institutional Capacity

Though Ireland has a multi-level governance framework, with the exception of local planning decisions, most power is concentrated in State level institutions, particularly Ministries and their attendant development agencies. There are two of regional assemblies (NUTS II) in Ireland and eight regional authorities (NUTS III), although these administrative bodies have very limited powers. Local planning control rests with 34 Local Authorities. This power allows the council that directs the local authority to draft development plans and zone land for different functions. These decisions can however be overruled by the Minister for the Environment who has responsibility for spatial planning and development.

From a rural social and economic development perspective there are a number of critical agencies including the Department of Enterprise, Trade and Employment, the Department of Environment, Heritage and Local Government, the Department of Agriculture, Fisheries and Food the Department of Community, Rural and Gaeltacht Affairs. Between these bodies they are largely responsible for directing economic development at national, regional and local levels. As such, much of the policy and regulatory framework in Ireland could be described as top-down focused. This, however, is somewhat, although not totally, misleading. Many of the national sectoral development bodies and regional development agencies have governing boards comprised of politically appointed representatives. With regard to agencies with a rural remit most, if not all, of the governing boards include representatives from the larger farmer's unions, larger employers and other rural stakeholders. The LEADER model of area-based rural development is widely applied in Ireland and is the dominant bottom-up administrative structure with responsibilities for rural economic development.

As a consequence of the centralised nature of Ireland's administrative system rural issues, rather than sectoral issues i.e. farming and the agriculture industry more generally, can be underrepresented or of minor significance within policy development fora. This can and does result in inadequate resources being allocated to support rural social and economic development.

Table 11.9 Institutional capacity indicators

INSTITUTIONAL CAPACITY		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS+LI+MK+NO+TR	Average EU 27
Variables		1	21	22	31	32			
GDP DISPERSION OF GDP_2005	GDP in Mio. Euro 2005	60974.6			16621.07	11346.23	20187.2	9722.69	9856.11
	GDP in PPS per inhabitant 2005	43303.1			29102.57	23882.16	28919.98	20926.83	21110.46
	GDP in euro per inhabitant in percentage of the EU average 2005	233.70			157.08	128.87	156.08	94.38	95.48

10. Climate change

11.7.1 Background

This section of the report draws heavily on the work of Sweeney et al, 2008. For further information or to consult the report please see: Sweeney, J. Fealy, R. Charlton, R. "Climate Change in Ireland: Refining the Impacts for Ireland". Associated datasets and digital information objects connected to this resource are available at: Secure Archive For Environmental Research Data (SAFER) managed by Environmental Protection Agency Ireland <http://erc.epa.ie/safer/resource?id=fccf9279-85fd-102c-9c91-0a68ec663af0> (Last Accessed: 2009-09-10)

11.7.2 Evidence of Climate Change in Ireland

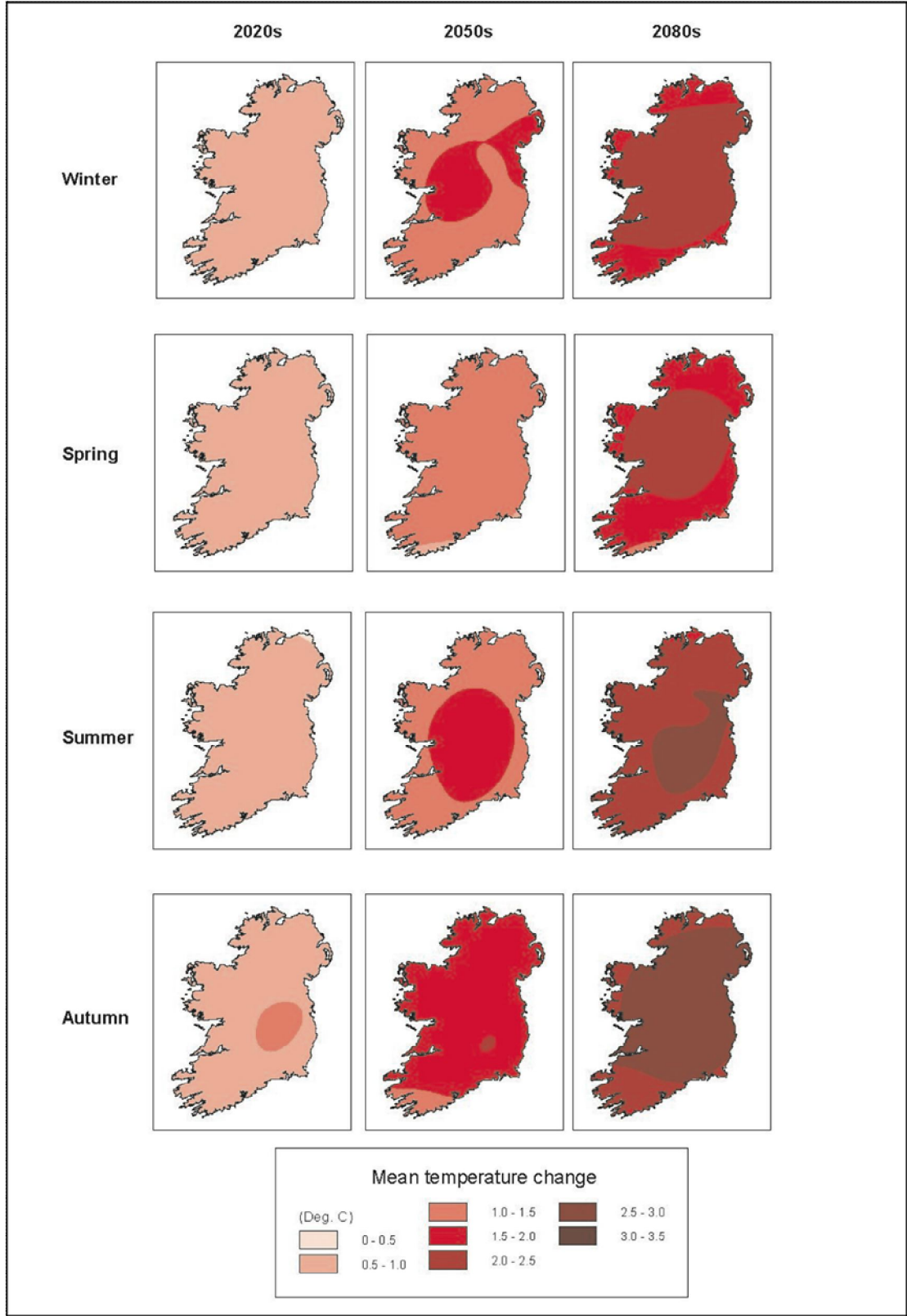
Ireland is situated on the western fringe of Europe and is situated in the Northeast Atlantic Ocean. Arising from proximity to the North Atlantic Ireland's climate is predominantly maritime in character. Research undertaken by McElwain and Sweeney (2007) found that "mean annual temperatures in Ireland have risen by 0.74°C over the past 100 years". "This increase largely occurred in two periods, from 1910 to the 1940s and from the 1980s onwards, with a rate of warming since 1980 of 0.42°C per decade. In Ireland, 6 of the 10 warmest years have occurred since 1995 with the warmest year within this period being 1997. Increases in minimum temperatures were greater than maximum during summer while in winter the opposite is the case (Sweeney et al., 2002)" (Sweeney et al., 2007, p.3).

Impact of Climate Change on Ireland

Research into the downscaling of global climate change models published by Sweeney et al. (2008) found that Ireland is likely to experience increasing temperatures for all seasons and increasing precipitation during the winter period and dryer summers. "By the 2050s,

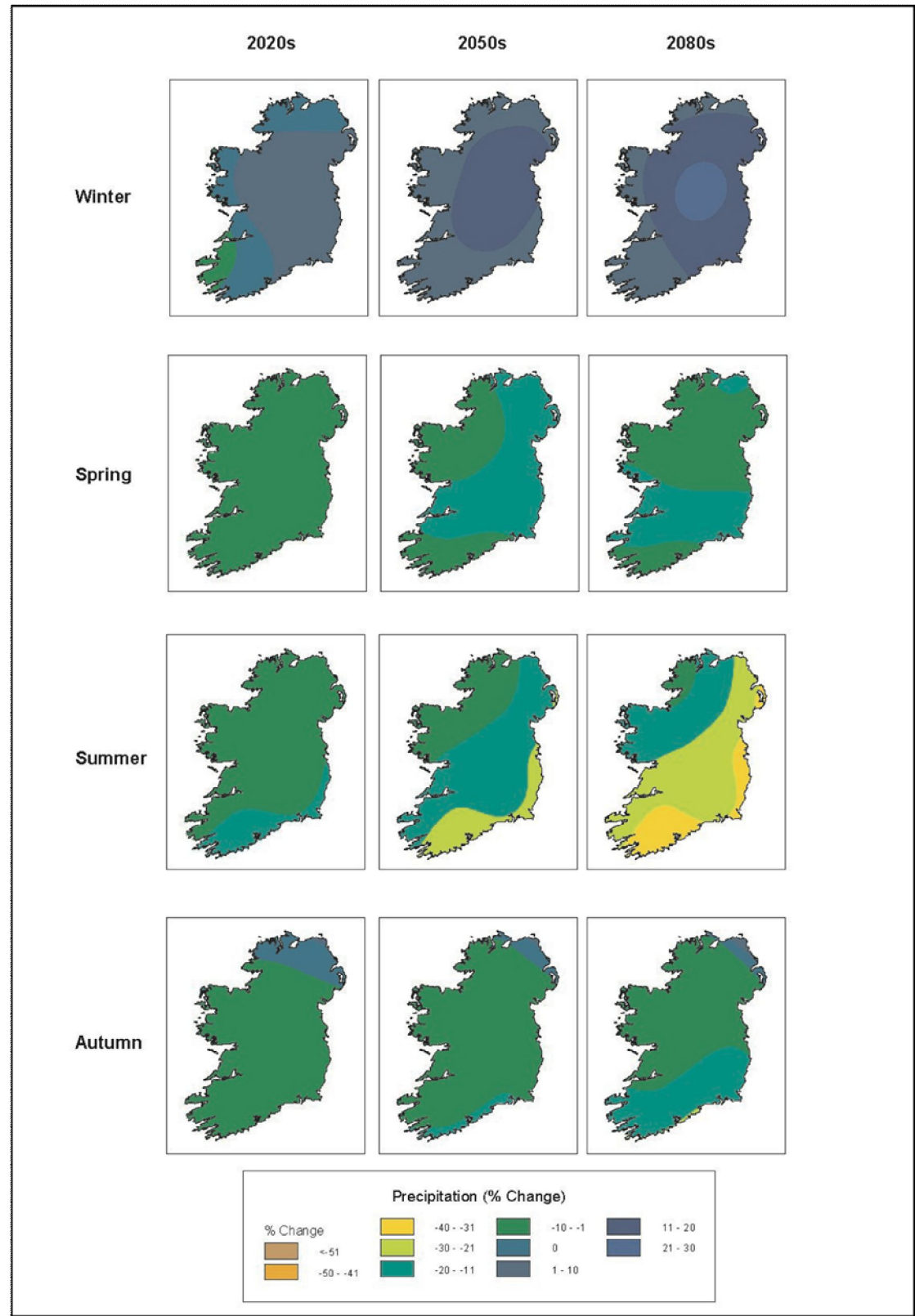
Irish temperatures are suggested to increase by 1.4– 1.8°C, with the greatest warming occurring during the autumn." (Sweeney et al., 2007, p.26). Figures 11.2 and 11.3 provide summary assessments of the spatial impacts of climate changes. Whilst it is evident that all of Ireland will experience significant changes in the years ahead it is worth noting that the South and East region, where most of the population is currently concentrated, will see substantial reductions in rainfall (greater than 30% reductions). These developments will undoubtedly challenge public authorities in the years ahead if these models prove accurate. Given the significance of the agriculture and agri-food industries to Ireland climate change poses significant challenges to the sustainability of these sectors, as they are currently constituted, and those individuals and communities that depend on them. Work by Charlton and Moore (2003) indicate that climate change is likely to substantially impact on Ireland's hydrological cycle with annual run-off reductions most marked in the east and south- east of the country and winter run-off likely to increase in the west. The reduction in run-off in Southern and Eastern regions may have detrimental impacts on some sectors of the agriculture industry with dairying, which is predominantly pasture based in Ireland, particularly vulnerable.

Figure 11.3 Ensemble mean seasonal temperature increases projected for the 2020s–2080s



Sweeney et al., 2007, p.28

Figure 11.4 Ensemble mean seasonal precipitation changes projected for the 2020s–2080s



Sweeney et al., 2007, p.28