



An Chomhairle Náisiúnta Eacnamaíoch agus Shóisialta  
National Economic & Social Council

# Challenges and Opportunities for Rural Ireland and the Agricultural Sector

Research Series

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# Executive Summary

There is a prevailing narrative around the decline of rural areas in Ireland. This is not unique to the Irish context with international studies also looking at concerns around rural vitality. This narrative is associated predominately with a decline in the agricultural sector, urbanisation and the decline of opportunities in rural areas. This paper aims to quantitatively establish how rural areas have changed and qualitatively identify opportunities based on a group of an expert group.

Rural areas are not homogenous spaces; this paper looks at these differences using longitudinal data based on the national census at two points in time over a ten-year period. Data examines population change and demographic structure but also looks at the labour force characteristics. The unit of analysis is at Electoral District (ED) level. These EDs are categorised into seven types, based on the National Spatial Strategy, six rural areas and an urban areas. The six rural area types cover 77% of the land area of Ireland and over the period 2006-2016 the population increased just over half a million people (552,017) or 12% nationally, but the average in rural areas was half that at 6%.

There are population challenges across all areas, in particular with demographic experiencing significant increase in the numbers of people in the over 65 years of age cohort, and declining numbers in the 20-39 year old cohort. These demographic challenges are uniform issues across the country, as the aging population is an important issue socially and economically, and a strong labour force is necessary to support an ageing society.

When further breakdowns in demographic ratios are considered the results indicate there are statistically significant differences, not only between rural and urban but also across the rural areas in demographics and vitality indicators. In some instances however there are no statistically significant differences between typologies for example the vitality ratio between very strong rural areas and urban areas is not statistically significant.

The preliminary recommendations include:

- Rural typologies need to be revisited and a reclassification of these typologies may be necessary with the next census. This should also include the inclusion additional data such as the deprivation index, commuter data, national expenditure, the development of a diversity index etc. to facilitate more informed approaches reflecting a changing Ireland.
- Need to look at baseline data at the “local” level (database development).
- Trends across typologies needs to be considered, beyond a binary urban and rural classification.
- Identify needs of communities in terms of change in demand for services to ensure a vibrant rural community is sustained in rural areas.
- Policies to attract talent into the country and integration policies (at national and regional level) to retain and support working families should be considered.
- A co-design policy approach is necessary if recommendations are to be made for future rural communities.

# Introduction



The economic outlook for 2021 remains uncertain. The global Covid-19 pandemic, trade challenges arising from the UK exit from the EU and global geo-political uncertainty pose significant threat to international economic performance at macro and micro levels.

For rural Ireland where agriculture plays a key role, reforms of the Common Agricultural Policy and changing consumer trends and attitudes to food present significant challenges for the wider agri-food sector. These are coupled with two wider societal challenges which relate to rural communities: climate change and digitalisation in the economy. In addition, global urbanisation trends are being experienced in Ireland with implications for rural areas.

These global transformations create serious challenges for rural Ireland and give rise to the need for an analysis examining the current “status quo” and a search for new opportunities for future policies to meet the needs of rural populations.

The purpose of this paper is to look at rural change from three perspectives:

- **Empirical Assessment — Where Are We Now?** The first perspective is to empirically examine socio-economic and demographic changes in rural Ireland. This is achieved by using national Census of Population data over a ten-year period from 2006-2016. This includes an analysis of changing rural demographics, including population density, labour force participation and vitality in rural areas. Mapping these changes at Electoral Division level aids in demonstrating and developing an informed narrative surrounding changes in rural areas.
- **Expert Opinion — Where are the Opportunities?** Secondly, the paper identifies challenges and opportunities for change for rural Ireland from an economic, social and environmental perspective based on qualitative data generated through a Delphi study with a group of expert academics.
- **Policy — How is policy shaping change?** Thirdly, analysis of rural change is reviewed within the context of international, European and national rural policies.

Examining rural change from these perspectives provides an understanding of the nuances of rural socio-economic change in Ireland, and provides evidence for a research and policy agenda, that ultimately will provide policy recommendations, an agenda which should be co-designed with rural communities to assist in ‘building back better’ towards a more resilient and vibrant future<sup>1</sup>.

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<sup>1</sup> It is important to note this paper does not define or empirically classify what a resilient or vibrant rural community is based the data available. At best we can use the data to look at change in indicators at ED level.

The paper is structured as follows:

- **Chapter 1** provides an overview of rural change, urbanisation and demographics and economic indicators. It also describes key aspects of policy for rural areas.
- **Chapter 2** outlines different rural Irelands using a typology framework with 7 categories to consider difference in demography, age profiles, dependency and labour participation.
- **Chapter 3** reports the results of stage one expert Delphi method which identifies social, economic and environmental opportunities.
- **Chapter 4** makes a number of initial policy recommendations.

**Appendix 1** describes the research methodology and data sources used in this project.

# Chapter 1: Rural Change

## 1.1 Thinking About the Future of Rural

Changing population structures, decreased numbers of rural populations working in on-farm employment, and more varied employment opportunities in urban areas have led many to question what the future of rural areas is.

In addition, a propensity to romanticise or 'idyllise' the countryside, nostalgia for past rurals, can detrimentally shadow efforts for evidence-based decision-making. The idea of 'living countrysides' as a concept to address how the goals of sustainable development align with rural futures has been developed (McDonagh et al, 2009). For policy makers, the struggle is about addressing all three pillars of sustainable development – economic, social, and environmental – in a balanced and realistic way. In reality, particularly given the political context and emotional attachments so many nations have with the countryside, this has proved consistently difficult to achieve.

Rural regeneration is a cyclical process where there has been a buoyant economy that has fallen into decline and requires remedial action (Woods, 2010). In this context, rural places are broadly considered as 'problematic' in terms of the social, economic and environmental challenges they pose in an increasingly urban society. This problem has been the subject of top-down state intervention in a range of forms over decades that include attracting Foreign Direct Investment (FDI), and has largely been concerned with economic development dominating as a policy instrument until the 1990s.

Since then, bottom-up place-based approaches have attempted to deal more broadly with socio-economic processes; with the natural environment gaining in significance more recently. Following the financial crisis in 2008, there has been a renewed political focus on regenerating rural places that addressed sustainable development.

Currently, issues such as rural employment, service provision and environmental protection remain at the core of policies for rural revitalisation. We are now positioned at the epicentre of the 'next' crisis, i.e. the COVID-19 global pandemic, where planning for the post-COVID future is important to consider. Ironically, there is hope and potential within this crisis for rural places. Anecdotally we are witnessing a renewed interest in the countryside as a place to work and live, with short-term evidence suggesting some relocation of the workforce which is facilitated by working from home scenarios, but at this point it is too early to capture the medium- to long-term impacts or potential of counter-urbanisation.

Ultimately, rural places are 'messy' due their complexity, and pose challenges for policy makers at all levels because of the broad range of issues and opportunities present within the diverse rural. The global post-productive shift has had a series of impacts on rural areas which has seen a transition from synonymy with countryside and agriculture to a disconnect between rural residence and 'working the land or sea' (Marsden 1998, 2006). In simple terms, rural residents in Ireland and in Western Countries are no longer predominately working in agriculture (or other natural resources) (Stockdale, 2010). So, what then for the future of rural Ireland? Since the rise of the modern urban-industrial economy (since the 1960s for Ireland) (Kitchin and Bartley, 2007), earlier for other European countries (McDonagh, et al, 2015; Woods, 2010)), the disconnect between living and working in the countryside has complicated policy formulation and decision-making for rural dwellers and urban policy-makers. While agriculture is the pre-dominant land use, it is not the principal source of employment. Tensions can arise from the various representative voices that demand a sustainable rural future, but their vision on what that future is has not always been clear.

Despite global and national change, agriculture continues to be the central theme of spatial, economic, and regional policy for rural areas in Ireland. Wilson and Burton (2015) argue that for rural areas, rapidly globalising world contexts have a stronger influence on agricultural change nationally than local practices and systems. The need to address intensifying global pressures from urbanisation, food demands, and population growth is now central to understanding agricultural change and rurality.

What might be framed as the 'rural debate' has highlighted the tension in a national understanding of what is 'rural' particularly in acknowledging that there is (largely) a separation between farm and countryside; agricultural production and the rural population. This separation of the once synonymous terms has resulted in a greater understanding of the rural that goes beyond the farm gate. This increasing understanding of a heterogenous rural led to significant changes in how farming and rural development has been supported (1992 CAP; commonly referred to as the MacSharry Reforms).

The focus of this 'post-productivist' era in both academia and policy was on the producer and diversification, with the broader rural economy addressed through programmes such as LEADER. The CAP reforms since have a clear focus on the environment with what is considered the "Greening" of the policy. This reflects the negative externalities associated with agriculture but it is also designed to reward positive improvements on farms with more recent reforms focused on results based policies designed at member state level to best reflect regional disparities across the EU. Reforms also recognise the societal challenges of climate change and digitalisation in agriculture. While Ireland is less reliant on agriculture in terms of employment, with fewer people directly employed in the sector and increased numbers of part-time farmers, agriculture still remains a very strong part of our culture and is still valued in terms of its indigenous economic contributions in the local and national economy.

## 1.2 Urbanisation

Much of the challenges facing rural areas are centred on the changing relationship between rural and urban places.

How the countryside, and its relationship with urban, is viewed in times of boom versus times of crisis varies. During the Celtic Tiger period, for example, the demand for housing and levels of construction meant that countryside encroachment (urbanisation/suburbanisation) took place, and outer rural areas, thought to be too distant in the past for commuting to large urban centres became a part of new commuter zones. In the post-2008 period, rural areas that had been supported by, and reliant on, both high levels of construction employment and commuters collapsed economically and socially.

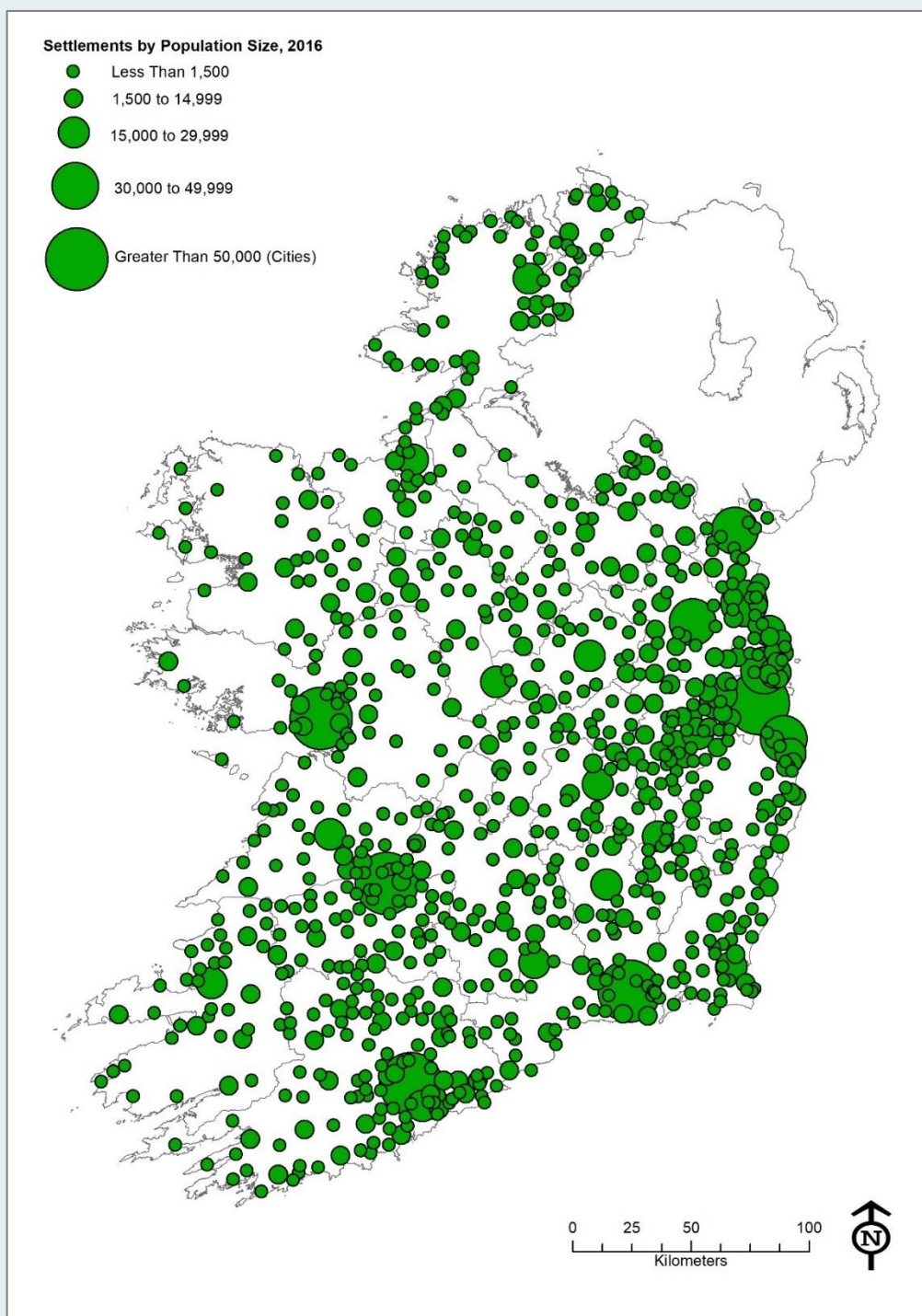
Urbanisation is not just a spatial phenomenon; it is a process of change that dominated Europe and beyond since early industrialisation. Ireland has had a contested relationship with urbanisation. Planetary urbanisation, which contends that there is little in the world that is non-urban, tends to identify rural places as hinterland or as a space to provide for urban places (Brenner & Schmid, 2015; Rickards, Gleeson, Boyle, & O’Callaghan, 2016).

Nationally Ireland’s population is growing year-on-year. Since 1911, the population has doubled, growing from 3,139,688 people in 1911 to 4,588,252 by 2011, an increase of 46%<sup>2</sup>. In Ireland, while the rural population has grown along with the population of the country, it is consistently declining as a proportion of the total. The long-term trend of movement from rural areas to rural towns (or close to towns) continues, with population declines in rural areas and increases in rural towns (O’Donoghue et al., 2017). Conversely, during the ‘Celtic Tiger’ years, in larger towns there is on-going ‘emptying out’ of centres, and population growth in peri-urban, adjacent spaces (Keaveney, 2009). Map 1.1 highlights Ireland’s urban structure. Historically, the east of the country has the largest urban centres, and most defined structure, i.e. centres greater than 1,500 hundred people, with strong functions. As can be seen in the map, to the West towns tend to be smaller, and are more likely to be below 1,500 in population size. This East-West urban structure has spatial as well as economic and social implications for its populations (Breathnach, 2019). Weaker urban structures are associated with less variance in job opportunities, higher rural populations, and greater vulnerabilities to shock and change (OECD, 2018; 2020).

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<sup>2</sup> <https://www.cso.ie/en/releasesandpublications/ep/p-1916/1916irl/people/population/>

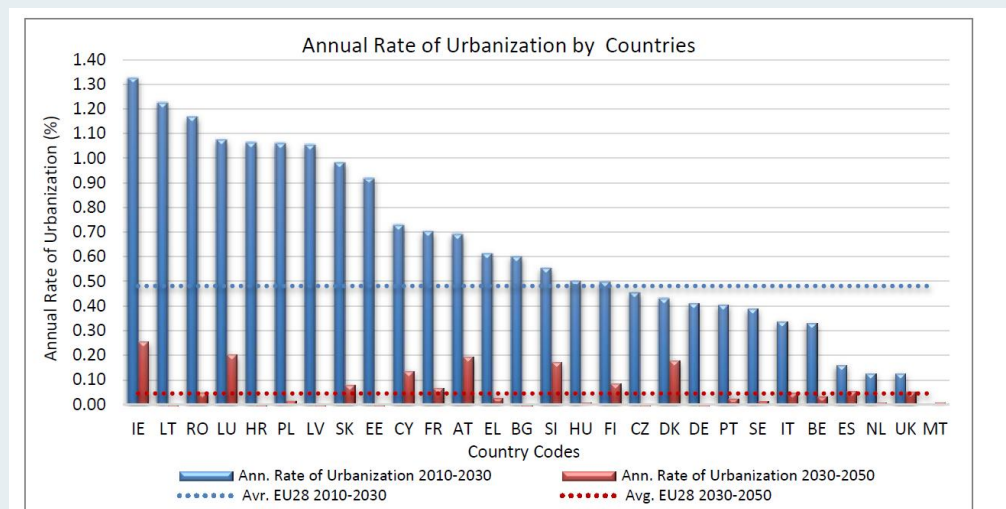
Map 1.1: Urban Centres by Settlement Size, 2016



Projections from the European Commission Joint Research Centre (JRC) identify increased urbanisation as a steady trend to 2050. Ireland is projected to see the highest rate in annual urbanisation of 1.3%, across the EU, which is from a low base (JRC, 2015). From 2010-2050 the urbanisation rate is set to increase from just under 70% in 2010 to reach over 90% by 2050 (Figure 1.1 & Figure 1.2).

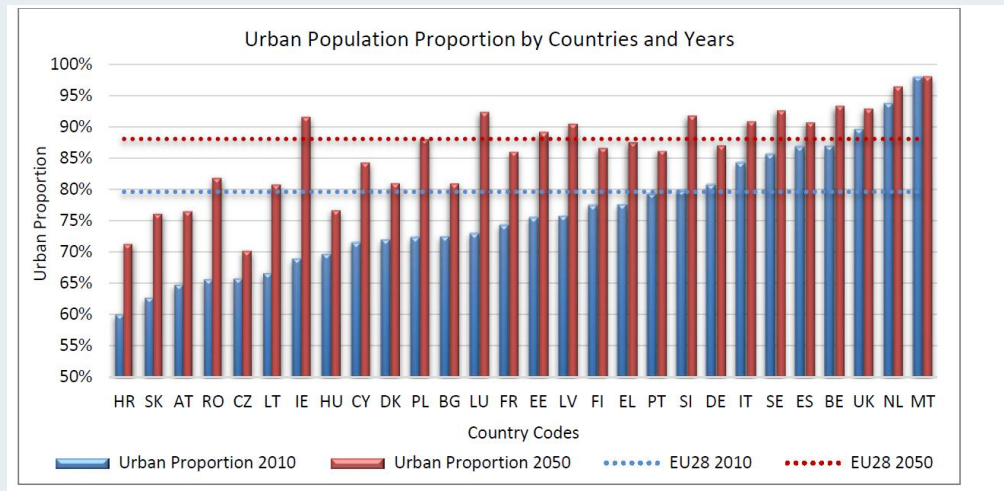
In any analysis of rural areas, urbanisation can sometimes be the elephant in the room. This paper very much reflects the shift in recent decades towards the recognition that not only do rural-urban linkages exist, but that they are integral to the development of rural areas. Indeed, one influences the other, and vice versa. In addition to that vital relationship, rural areas are not homogenous. Prior to more complex analysis, the rural was often defined very simply as anything that was not urban (Hoggart, 1988, 1990; Pacione, 1984). Fortunately, both qualitative and quantitative conceptualisations of the rural have transformed our understanding of localities and places. Scholars and policy makers now recognise the heterogenous nature of the countryside. However, particularly for policy formulation in Ireland, while there is a broad acknowledgement of a diverse countryside, it has been challenging to develop spatial specific policies, especially from the national level.

**Figure 1.1: Projected rate of EU Member State urbanisation 2010-2030, 2030-2050 (JRC, 2015)**





**Figure 1.2: Projected Urban population proportion of EU Member States 2010-2030, 2030-2050 (JRC, 2015)**



### 1.3 Demographics and Economics

Understanding the state demographic is fundamental to understanding future economic performance and challenges. It is important that it is not overlooked as an indicator of change and opportunity from a social and policy perspective. The ten-year period examined in this study spans one of the most significant economic crises in our history, the financial crash in 2008 (Figure 1.3).

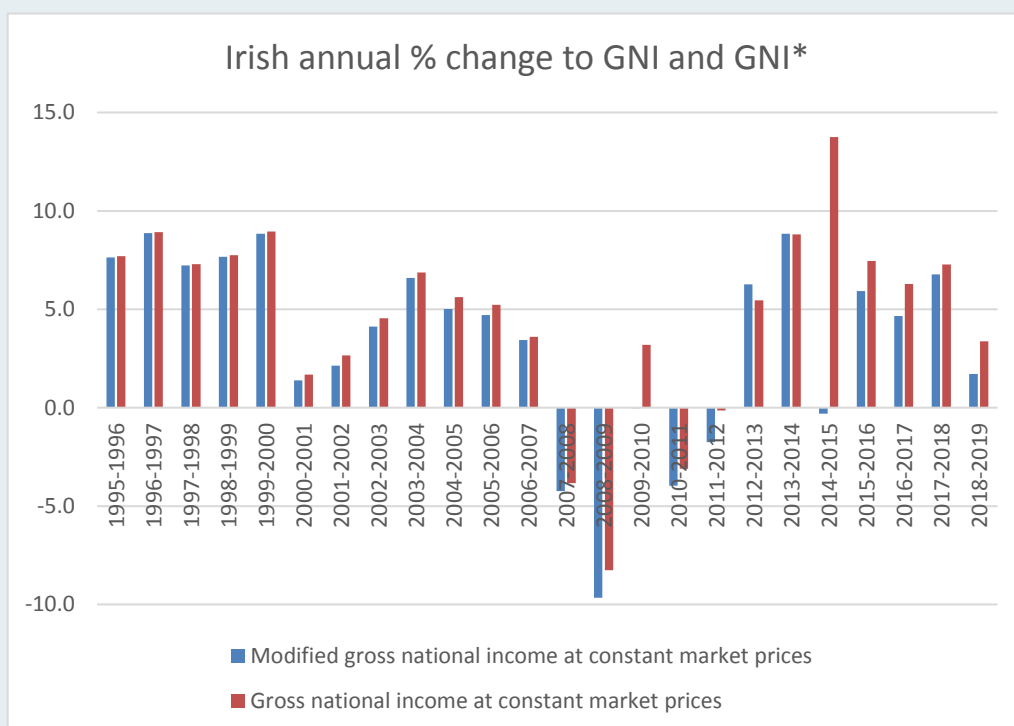
However, our recovery from this was swift and our debt to GDP ratio was nearing zero by 2016 (Figure 1.4). By 2016 the Irish economy had made a stable positive recovery from 2010 where the state the debt to GDP was at -32% recovering to -0.7% in 2016.

The link between recession and movement of labour is widely studied and Ireland was no different during the last recession with GNI\* falling by almost 10% between 2008/2009 (Figure 1.3), employment opportunities were significantly affected causing many highly skilled to emigrate. In 2008 and 2009 the proportion of debt to GDP reached -7% and -13% respectively. In 2018 for the first time since the boom we reached a small surplus with €95m surplus and a small positive debt to GDP (0.075% of GDP) while most recent data available for the first half of 2020 reflects our debt levels reaching over €5000m (-6%) akin to 2008 levels, due to the global pandemic and consequent restrictions. A return to negative levels of debt to GDP is again likely in the short term.

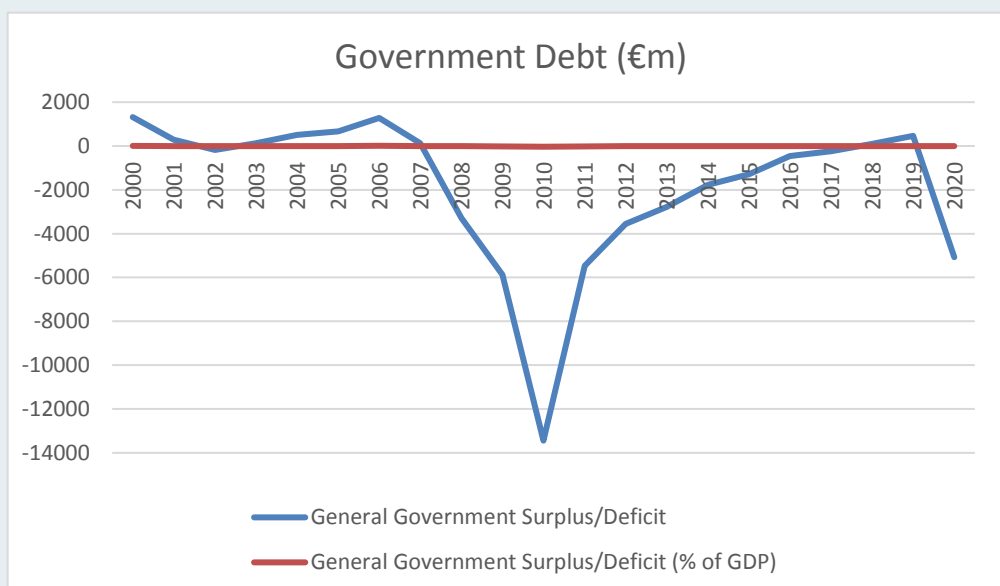
Economic growth can be fundamentally affected by demographic change, these are strongly linked variables, while this link is not specifically examined in this paper, it is important to note the level of resilience in the economy, considering our more

recent dip into debt in 2020. The difference with this crisis is that every country in the world has been affected by the pandemic. The result is the global economy has been negatively affected. Hence opportunities to emigrate are limited by opportunities in the labour market and travel restrictions. This is an apt time to examine our potential path to recovery by identifying areas likely to be affected and identifying areas where opportunities may arise.

**Figure 1.3: CSO data: Annual change to Irish GNI and modified GNI (constant prices 2018 ref year)**



**Figure 1.4: CSO data: General Government Surplus/Debt as percentage of GDP (€ Millions)**



Considering the recent Covid-19 restrictions our ability to work from home and potentially to reduce our travel to urban centres is being widely discussed. What we first must establish is how exactly have our demographics changed.

## 1.4 Policy for Rural Areas

*Rural Policy 3.0 Framework* (OECD, 2018) highlights the challenges and opportunities for rural regions globally. *Rural 3.0* arose from the *New Rural Paradigm* which was published by the OECD in 2006. Ageing populations are identified as having some of the greatest impacts on rural areas, in particular on the quality and accessibility of public services. For many rural areas, “these trends have torn the social fabric of many rural communities” (OECD, 2018: 3). Policy approaches that are based on subsidies and protection are in reality, preventing rural communities from addressing challenges and opportunities in their territories. The *New Rural Paradigm* set out the case for a shift from sectoral to territorial approaches to rural development. In doing so it recommended that to unlock the potential of rural areas, and improve well-being of rural dwellers, that OECD countries should implement a ‘people-centred’ approach to rural policy, that:

- Considers economic, social and environmental objectives;
- Recognises the diversity of challenges and opportunities across different types of rural areas;
- Prepares rural areas to embrace digital technologies;

- Lifts productivity and adds value to economic activities;
- Supports adaptation to demographic change and high-quality public services; and
- Facilitates the transition to a climate neutral economy.

In 2018, these recommendations were further built upon in the *Rural Policy 3.0 Framework* by:

- **3 objectives:** from only economic objectives to encompassing social and environmental issues;
- **3 types of rural:** from simple rural dichotomy to a continuous view of territories where rural is everywhere; and
- **3 types of stakeholders:** from government alone to working with the private sector and civil society

Partnership is central to these policy recommendations, between governments at all level, the private sector and civil society, and in building on the existing linkages between rural and urban areas.

In Ireland, there have been many iterations of direct rural policy (for example, the White Paper for Rural Development: *Ensuring the Future - A Strategy for Rural Development in Ireland* (Department of Agriculture and Food, 1999)) and indirect spatial and sectoral policies such as the aforementioned *National Spatial Strategy*, and more recently, the sectoral National Bioeconomy Strategy. In more recent years, two key national policies have been adopted by Government, namely, the *Action Plan for Rural Development*<sup>3</sup> (2017; due for renewal in 2021); and the *National Planning Framework*<sup>4</sup> (2018).

Positively, in rural policy-making there is an increased movement towards opportunity approaches, and a concurrent move away from decline narratives, i.e. rather than focusing on negatives and the challenges for rural areas only, there has been a shift in funding models and policies to embrace possibilities rather than problems. This reflects to some extent the OECD approach to the rural which explicitly identifies rural potential coupled with strong investment and regional understanding to develop rural areas in partnership with the urban. In Ireland, rural policies are changing to identify potential of rural places that can co-exist with agriculture, and that may address climate justice, for example. The *Action Plan for Rural Development* recognises that “... the perception that “rural” is synonymous with “decline” is wrong. Ireland’s economy and heritage are heavily dependent on the contribution of rural areas” (Government of Ireland, 2017: 7).

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<sup>3</sup> <https://www.gov.ie/en/publication/091dba-realising-our-rural-potential-action-plan-for-rural-development/>

<sup>4</sup> <https://npf.ie/>

Despite growing recognition of rural potential, the current COVID-19 crisis has highlighted the vulnerabilities of rural areas, which have been particularly vulnerable because they have (OECD, 2020):

- A large share of population who are at higher risk for severe illness, notably the elderly and the poor;
- A much less diversified economy;
- A high share of workers in essential jobs (agriculture, food processing, etc.) coupled with a limited capability to undertake these jobs from home. This makes telework and social distancing much harder to implement;
- Lower incomes and lower savings may have forced rural people to continue to work and/or not visit the hospital when needed;
- Health centres that are typically not well suited for dealing with COVID-19 (i.e. lack of ICUs and doctors with specialised skills) and
- Larger distance to access hospitals, testing centres, etc.; and
- A large digital divide, with lower accessibility to internet (both in coverage and connection speed) and fewer people with adequate devices and the required skills to use them.

For Ireland, a central vulnerability in the rural population is the higher proportion of older people living in rural places, coupled with access to services and proximity to specialised care (Meredith, McNamara, van Doorn, & Richardson, 2020; Ranscombe, 2020). The crisis, while identifying existing vulnerabilities, has the potential to find a new path for rural areas where opportunities may emerge from existing structures together with transformations in the digital economy and renewed importance of geographic scale and location. The OECD (2020: 6) identify a series of opportunities for rural areas in the wake of the COVID-19 pandemic:

- Higher relevance to enhance quality and use of digital tools/broadband in rural regions;
- Remote distributed work might increase linkages between rural and urban;
- Shift into consuming habits can favour local products and destinations;
- Greater awareness to ensure accessibility to quality services (e.g. e-health, e-education);
- Reshoring of strategic industries that were once delocalised (i.e. raw materials);
- Momentum to accelerate a just transition towards a low-carbon economy for rural communities; and
- Mobilise and strengthen local networks and co-operatives structures to face future shocks.

In this paper, we are building on previous work that identified and mapped diverse rural areas in the late 1990s and early 2000s for the development of the National Spatial Strategy (Walsh, 2000; McHugh, 2001). In setting out baseline data here, we are positioning this paper as re-starting that 'conversation' around diverse rural areas, and arguing that appropriate decision-making cannot take place for rural regions until there is a strong quantitative and qualitative evidence-base for policy formulation.

## Chapter 2: Different Rural Irelands

## 2.1 Introduction

A mixed methods approach was employed for this study using both quantitative and qualitative data (the quantitative element, Expert Delphi Method, is discussed in Chapter 3).

The quantitative the approach was adopted to analyse socio-economic and demographic change, using the typology that was developed in Maynooth University by Jim Walsh and Céline McHugh: The Rural Typology. The paper also uses CSO data from the Small Area Population Statistics the most detailed level at Electoral District (ED), comprising of 3,409 areas nationally. Appendix 1 provides an overview of the analytical frameworks and data sources.

## 2.2 Rural Typologies: Population Change 2006-2016

The extensive empirical work carried out by McHugh (2001) to create the Irish Rural Typology provides a workable definition of the rural. It is this typology, that will be used as a practical and easily applicable definition of the rural and as the basis of a spatially defined area for the paper<sup>5</sup>. Box 2.1 describes each of the area types.

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<sup>5</sup> The Rural Typology is still relevant for rural Ireland, but undoubtedly requires a complete and detailed update based on the 2022 Census of Population, yet to be carried out.



### Box 2.1: Rural Typology (Based on McHugh, 2001)

**Area Type 1 — Peri-Urban Areas:** These are areas that are characterised by high population densities with an advanced transition into higher socio-economic profiles, for example a large proportion of the population work in professional services, and have a low level of reliance on agricultural employment. Peri-urban areas tend to dominate in the east, but are present in the direct hinterlands of all medium to large towns and cities throughout the country. These areas accounted for 15% of total population growth over the period 2006 to 2016, representing 40% of the state's rural population expansion. Peri-urban areas experienced the greatest increase in population overall during the period of study with an average growth of 15%.

**Area Type 2 — Very Strong Rural Areas:** These areas are most dominant in the east and southeast, and have a strong agricultural base coupled with an average level of transition to non-farming employment associated with 'good farming land'. The rate of population expansion is similar to that in peri-urban areas (just over 12% from 2006 to 2016) and accounted for a substantial proportion of total rural growth (31.5%).

**Area Type 3 — Strong Agricultural Areas Undergoing Adjustment:** Again, these areas have a strong agricultural base but due broader socio-economic change, long-term employment in the agricultural sector is weakening. Population growth experienced from 2006 to 2016 was 8.8%, accounting for 4% of the state total, and 11% of total rural, which represents an expansion based on previous periods of stagnation. For example, from 1991 to 2002 there was a barely discernible increase of 0.02% (Keaveney, 2009). In 2016, population density is lower than in peri-urban and strong rural areas at 19 people per square kilometre, it half that of strong rural areas.

**Area Type 4 — Structurally Weak Rural Areas:** Area types four (and five, below) represent parts of the country that are most economically and demographically disadvantaged. Weak rural areas rely on a fragile farm structure with an elderly population and traditionally high levels of out-migration. Structurally weak areas are most extensive in the west and northwest. However, similar to area type 3 above, after periods of population growth stagnation, there was expansion in these areas (7.3% from 2006 to 2016) coupled with pockets of decline (see Map 2.1). Overall, these areas accounted for 4% of the state population growth (10.5% of the rural increase).

**Area Type 5 — Marginal Rural Areas:** Marginal areas are also characterised by weak farm structures and low population growth. They are peripherally located along the western coast and in inland pockets mainly in the West. In the period 2006 to 2016, there was a population increase of 2.4%, accounting for 1% of total national growth.

**Area Type 6 — Highly Diversified Rural Areas:** Diversified areas are mainly located in traditionally peripheral areas but are characterised by scenic and high amenity landscapes where the potential for alternative rural industries is higher such as tourism. There tends to be higher levels of off-farm self-employment and more women participating in the labour market. Over the period 2006 to 2016, these areas experienced the higher levels of population growth than in weak and marginal areas, having a similar increase to the Strong agricultural areas undergoing adjustment with a rise of 8% (2% of national population growth; 5% of rural growth).

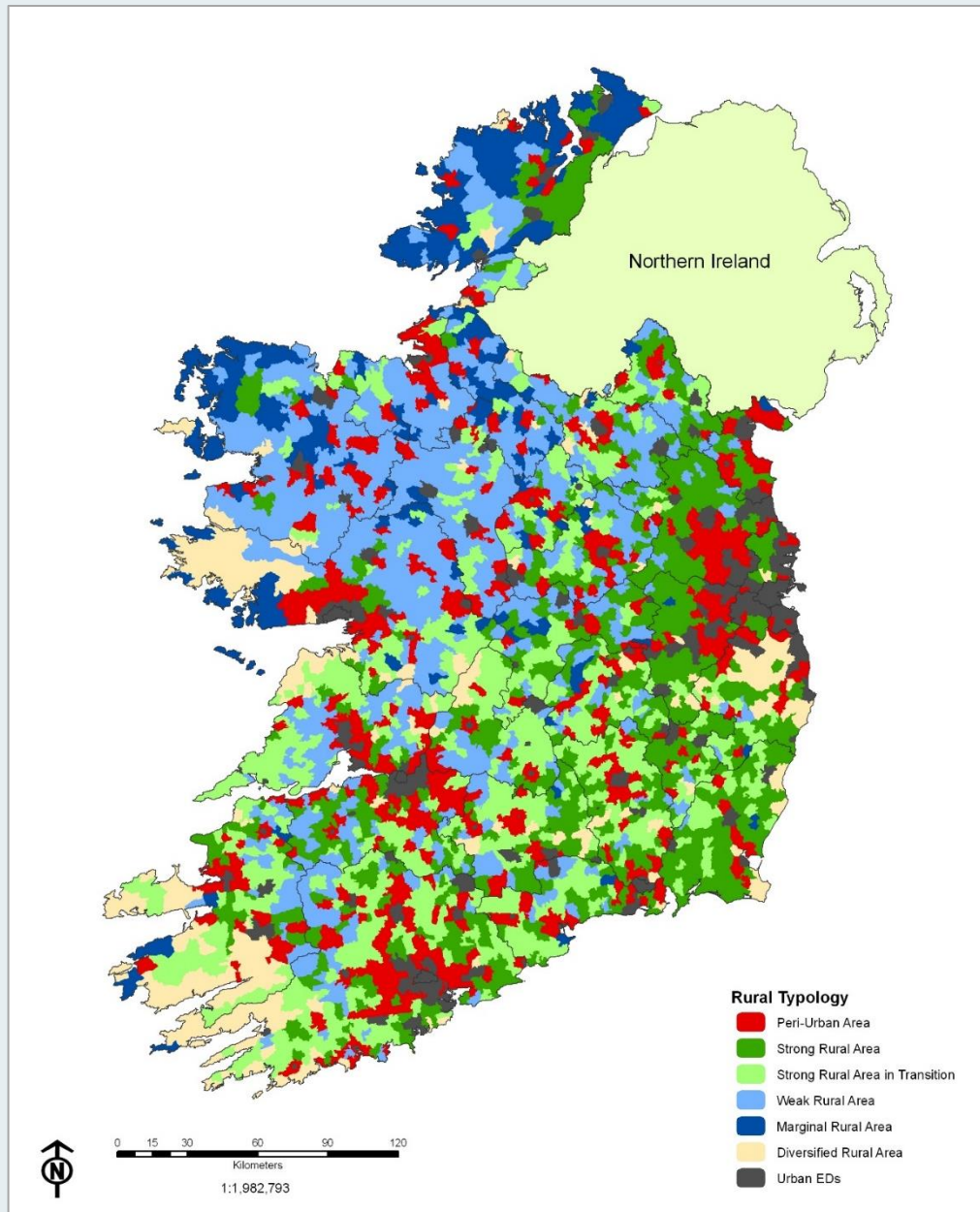
While urban areas represent a significant portion of changes in our population, spatially they only represent 6.24% of the land area (Table 2.1, Map 2.1 & Map 2.2).

This represents significant concentration of population in urban areas. This urbanisation trend places increased pressures on amenities and services. While the structurally weak rural areas and the strong agricultural areas represent 43% of the total land area, these areas collectively only contribute 8% of the total change in state population over that period. Marginal rural areas, which represent a further 8% of the land area, experienced a very small 1% contribution to increase in national population. These areas are thus undergoing a period of decline relative to the other areas.

**Table 2.1: Spatial representation of typologies (KM2)**

<b>Typology</b>	<b>Area (Km sq)</b>	<b>Area representation</b>
Structurally weak (4)	15939.7	22.91%
Strong agricultural (3)	13811.03	19.85%
Very strong rural (2)	13437.61	19.31%
Peri-urban (1)	10075.27	14.48%
Marginal rural (5)	6186.04	8.89%
High diversified rural (6)	5785.28	8.32%
Urban (7)	4340.48	6.24%

Map 2.1: Rural Typology, based on McHugh, 2001



### **2.2.1 Comparison with Urban Areas**

Population increases in urban areas represent 62% of the overall change in state population from 2006-2016 (Table 2.2). All of the seven areas experienced an increase in population over the period 2006-2016, ranging from 2.4-10.8% increase in population over the ten years examined.

The striking difference within the rural typologies is that peri-urban areas experienced the largest average population increase, over six times that of the marginal rural areas. This also reflects the previously identified trends from the CSO and O'Donoghue et al. (2017).

Of interest, however, is where change is happening, and how the imbalance and spread of population change is captured to some extent using population density.

The population density, is the number of persons in an ED per sq km. The largest change in population density over the period is not surprisingly in urban areas but it also increased considerably in peri-urban areas when compared to other rural areas with an average increase of approximately 10 persons per sq km (Table 2.3). Population density increased in very strong rural areas also with an average increase of approximately 5 persons per sq km, while the other three rural areas experienced a 1-2 person increase per sq km.

This trend should be considered in terms of the breakdown in demographic change in these rural and peri-urban areas. The needs of these communities need to be identified in terms of change in demand for services to ensure a vibrant rural community is sustained in these rural areas.

**Table 2.2: Electoral Districts and Typologies: Population 2006, 2016 (CSO)**

Areas	Eds #	Population (mean persons) 2006	Population (mean persons) 2016	Actual pop increase	Percent of state pop change
Peri-Urban	439	1162	1341	78,707	15%
Very Strong Rural Areas	627	718	817	62,186	12%
Strong Agricultural Areas	605	371	407	21,984	4%
Structurally Weak Rural Areas	640	409	441	20,773	4%
Marginal Rural Areas	197	579	599	3,991	1%
Highly Diversified Rural Areas	183	517	627	10,123	2%
Urban	718	3586	4038	324,253	62%
State	3409	4,239,848	4,761,865	522,017	100%

**Table 2.3: Electoral Districts and Typologies: Population 2006, 2016 (CSO)**

Areas	Eds #	Population density (mean persons/KM ²) 2006	Population density (mean persons/KM ²) 2016	ED pop change 06- 16 (mean)	Pop increase 06-16 (mean %)
Peri-Urban	439	52	61	179	14.9%
Very Strong Rural Areas	627	35	40	99	12.3%
Strong Agricultural Areas	605	17	19	36	8.8%
Structurally Weak Rural Areas	640	18	19	32	7.3%
Marginal Rural Areas	197	20	21	20	2.4%
Highly Diversified Rural Areas	183	23	25	55	8.1%
Urban	718	3089	3283	451	10.8%

## 2.3 Rural Typologies and Age

While population change provides an overarching view on demographic dynamics, how that change is occurring is much more revealing in terms of policy implications. In the previous section we looked at population change by typology; in this section we look at proportional changes across age categories, dependency and vitality ratios, characteristics of the labour force and social class across the six rural typologies and the urban areas.

In terms of age cohort selection, the population is divided here into four categories to look at age structure. The “youth” population is considered those from 0-19 years; the “revival” population aged 20-39 years are those likely to be of child bearing age or have young families, while the 40-65 year old category are considered to be “active in the community<sup>6</sup>”, those over 65 years are considered the “aging” cohort.

As established, the state population increased from 2006-2016 by 522,017 persons. This population increase is examined to determine the drivers of this change across the four age cohorts at state level. When the ten-year change is broken down by age cohort (Table 2.4) what can be seen is that 50% of the total increase in population came from the 40-65 age cohort while the aging population saw the second biggest contribution to the overall change in state population at 32%. The 12% fall in the revival category may reflect the level of migration post-recession, which may have recovered more recently with anecdotal evidence to suggest returning diaspora from abroad.

**Table 2.4: State demographic: change in age population cohorts 2006-2016**

	Age cohort (years age)			
	Youth (0-19)	Revival (20-39)	Active (40-65)	Aging (65+)
<b>Actual pop 2006</b>	1,154,706	1,387,019	1,230,197	467,926
<b>% of State pop 2006</b>	27%	33%	29%	11%
<b>Actual pop 2016</b>	1,309,368	1,322,467	1,492,463	637,567
<b>% of State pop 2016</b>	27%	28%	31%	13%
<b>Proportional change 2006-2016</b>	30%	-12%	50%	32%

<sup>6</sup> This does not imply other cohorts are not active but it is assumed many in this age group may have their families raised and consequently more time to give to the community.

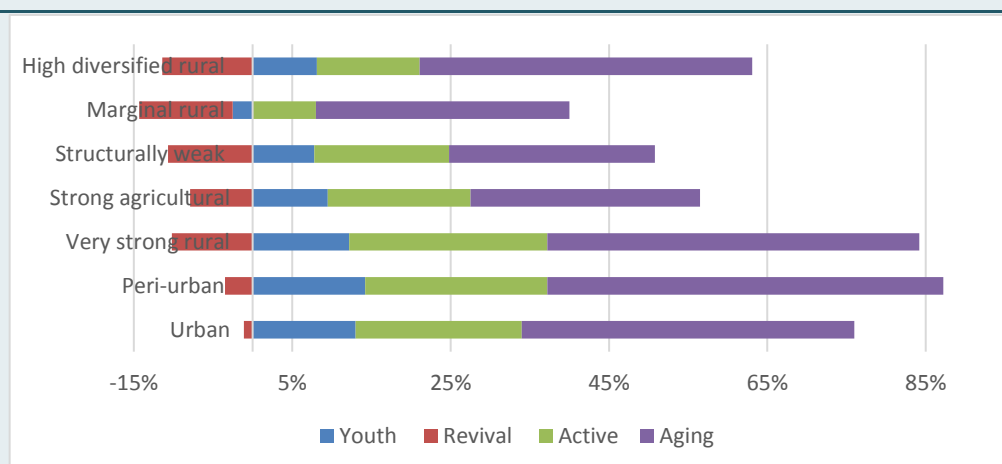
The actual state change needs to be considered at ED level also. Table 2.5 looks at each of the four age cohorts across the typologies and identifies the percentage change in the average numbers of persons in that age cohort from 2006-2016. When considering the age cohort 0-19years, the highest mean change in number of persons in this category was 14.2% in rural peri-urban areas but numbers in the same category fell by 2.5% in the rural marginal areas. The actual changes can be very small for example, that 2.5% fall equates to a 3-person change. For the older ageing category (65+years) the peri-urban areas experienced the greatest change (50%), with a 47% change in the mean number of persons living in very strong rural EDs in 2016 compared 2006, followed closely by urban areas. Typically, these are individuals with low levels of economic output and higher levels of consumption who require State support in terms of fiscal responsibility.

In terms of the family or the revival category, those aged 20-39 years, the mean number of persons in this category fell across all EDs reflecting the overall state decline (Table 2.5). These changes range from a decrease of almost 12% in marginal rural areas to -1.1% in urban areas. The biggest concern for the ten-year trend in demographic changes across the state is the population imbalance, with a significant increase in the ageing cohort (65+years). The active and ageing cohorts contribute to 82% of the increase in overall state population (Table 2.4). This poses serious questions around the future economic burden in the next ten years. This is not unusual in developed countries with many states forecasting a pensions crisis on the horizon. Attracting and retaining a strong youthful workforce is paramount to support this shift.

In further examination of the aging cohort, an analysis of variance test (Anova) is used to establish if differences exist between groups or in this case area typologies. The results conclude there is no statistical difference (0.05%) between the mean change in population of >65year across the stronger areas (peri-urban, very strong rural, high diversified rural and urban areas). Results indicate they are similar to each with between 42-50% increase in this age cohort, while the weaker areas (strong agricultural, structurally weak and marginal rural areas) all indicate there is no statistically significant (0.05%) differences between these areas i.e. these areas exhibit a similar level of change, at the lower rates of between 26-32% increases in this age cohort. The weaker grouping exhibit near consistent changes across the age cohort and other socio-economic indicators. While in the revival cohort again urban and peri-urban exhibit statistically different changes, with very little differences in the mean change across all other rural area. This raises questions around the attractiveness of rural areas (except for peri-urban) for those who are aged between 20-39 years. As women are choosing to have their first children later in life (Table 2.6) it is appropriate to look at attractiveness to live for families for an older cohort also.

**Table 2.5: ED Typology: Percentage change in average persons by age cohort, 2006-2016**

Typology	Change Youth (0-19 years) (mean)	Change Revival (20-39 years) (mean)	Change Active (40-65 years) (mean)	Change Aging (65+ years) (mean)
High diversified rural	8.1%	-11.4%	13%	42%
Marginal rural	-2.5%	-11.8%	8%	32%
Structurally weak	7.8%	-10.7%	17%	26%
Strong agricultural	9.5%	-7.9%	18%	29%
Very strong rural	12.2%	-10.2%	25%	47%
Peri-urban	14.2%	-3.5%	23%	50%
Urban	13%	-1.1%	21%	42%



Data indicates that the urban, peri-urban and very strong rural areas are outperforming weaker rural areas in terms of retaining persons aged between 35-49 years. Availability of housing and affordability along with employment opportunities may also be key drivers of this change, with those in older years more likely to own their house.

While revitalisation and generational renewal is important for a vibrant community the flip side of this must also be considered in looking those who are dependent on the state and are not likely to contribute to economic output. These are considered using dependency ratios in the next section.



## 2.4 Dependency ratios

Three dependency ratios, reported as percentages, are considered in this section:

- total dependency ratio: ratio of total dependents (<15 and >65 years) in a population to the working-age population (>15 and <65 years)
- youth dependency ratio: population under 15-year-old to the working-age population and
- elderly dependency ratio: those over 65-year-old to the working-age population.

The paper also looks at the vitality ratio, that is the ratio of the population aged 20-39 to those ages 65+ years

The lower the dependency ratios, the lower the dependency burden in an economy (Wei and Hao, 2010). While changes in demographic structure may provide a significant economic advantage, in 2016 an Australian study recognised that such advantages may also disappear as the ageing population increases leading to a slowdown in the economy and a recognition of the need to look at demographic and immigration policies to increase the skilled work-force as a counterbalance (Uddin et al., 2016).

Demographic transitions are important to monitor; these reflect periods where the population evolves from high levels of fertility and mortality to low levels. For example, if the working-age cohort (aged 15-65 years) increases more rapidly than the dependent groups (aged <15 and >65 years), this reflects an early stage of transition (Wei and Hao, 2010), where economic growth is expected. This period is also characterised by increased female participation rates in the labour force and smaller family size. The wider macro-economic impact results in increase accumulated savings and investment which in turn contributes to economic growth and development (Bloom, Canning and Sevilla, 2003). Appropriate economic and social policy is required to yield what Bloom and Williamson (1998) termed demographic dividend.

The value of output per capita, which is a broad indicator of economic performance, tends to increase as the population of those in the “working-population” increases. The working population is characterised by saving, reproduction and working, while the young and the old tend to consume more that they generate (Bloom, Canning, and Malaney, 2000).

Changes in demographic structure has much greater impact on the economy than overall population change or growth in workers. While our population has increased, it is important to consider how and to disentangle where changes have occurred. It is for these reasons this study considers three dependency ratios, total dependency, youth dependency and elderly dependency. These indicators look closely at the proportions of these cohorts in a population. Higher dependency ratios reveal a greater economic burden. This paper is specifically interested in the spatial changes and again examines these variables using the seven typologies.

The total dependency ratio at state level was 72.3% in 2006 increasing to 78.7% in 2016. This increase is driven by a 6% increase in the elderly dependency ratio and

the youth dependency ratio remaining stable. When these indicators are considered for urban versus rural areas the results reveal that across all three dependency ratios there are statistically significantly different results (Table 2.6). The statistical analysis indicates there is a significant difference between urban and rural areas in terms of the total dependency ratio ( $p < 0.001$ ) and the elderly dependency ratio ( $p = 0.001$ ) or the youth dependency ratio ( $p < 0.001$ ). To investigate this further the next stage aims to establish if there are statistically significant differences between the urban and the six rural typologies.

**Table 2.6: Dependency ratios urban and rural split 2006-2016**

Dependency ratios (number of Eds)	2006 Mean (Std Dev)	2016 Mean (Std Dev)	2006 Mean (Std Dev)	2016 Mean (Std Dev)	T-Test Urban v Rural 2006 p-value	T-Test Urban v Rural 2016 p-value
	Rural (2696)		Urban (713)			
<b>Total</b>	75.1% (13)	81.3% (12)	61.8% (19)	69.1% (19)	<0.001***	<0.001***
<b>Elderly</b>	28.2% (10)	34.4% (10)	26.6% (10)	31.8% (15)	0.001**	<0.001***
<b>Youth</b>	46.9% (9)	46.9% (9)	35.2% (13)	37.3% (13)	<0.001***	<0.001***

From Table 2.7 the mean change in the ratios indicate that on average the urban areas increased their youth dependency ratio (YDP) by 2.15% while the marginal rural areas and highly diversified areas saw a fall in the YDP of -2.49% and -1.2% respectively. These two areas also saw the highest increases in the elderly dependency ratio (EDP) from 2006-2016 at average rates of 8.4%. This is a worrying concern as the imbalance is shifting more significantly towards the older population, which also increases the economic burden, which is examined separately. While the differences are significant there are many more rural EDs than urban. The overall mean may be more telling, what is clear is that rural areas in 2006 were at higher levels of dependency than urban.

**Table 2.7: Dependency ratio change (%) from 2016-2006**

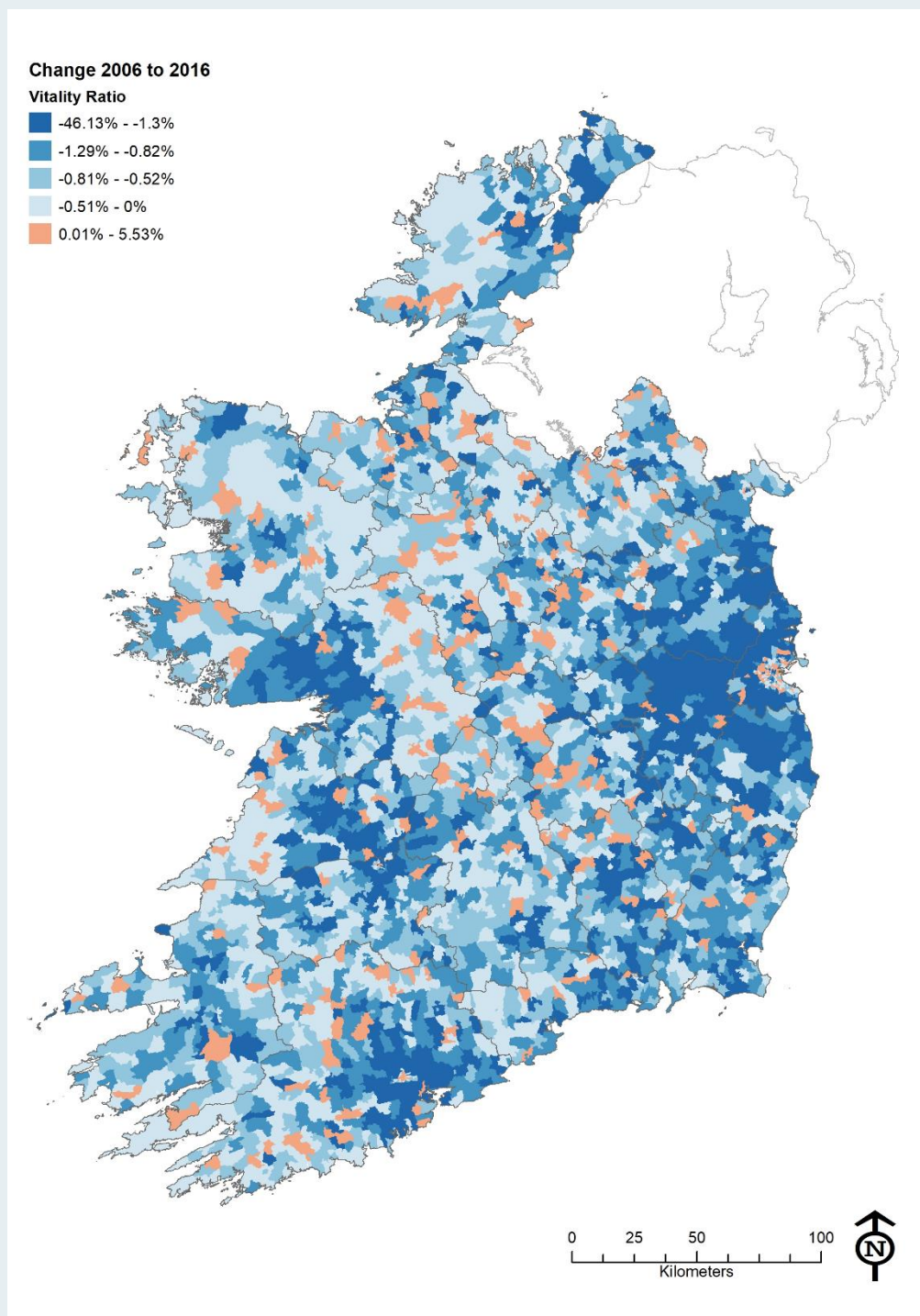
Typology	Description	YDP mean change (%)	EDP mean change (%)	TDP mean change (%)
1	Peri-urban	0.49	7.61	8.10
2	Very strong rural	0.77	7.23	7.99
3	Strong agricultural	-0.11	4.55	4.44
4	Structurally weak	-0.28	4.62	4.34
5	Marginal rural	-2.49	8.39	5.90
6	High diversified rural	-1.20	8.40	7.21
7	Urban	2.15	5.21	7.36

The differences across typologies may look large but must be considered in proportional terms, they are given as proportional to the population in the base year 2006. These figures indicate higher elderly dependency ratios across all typologies over the ten years examined ranging from 4.5-8.4%. The average change in YDP is -0.1% while the average change in EDP is an increase of 6.6%. The data indicates that 46% (1,582) of all EDs are aging at the average rate or higher. In marginal and high diversified areas the EDP is falling at higher than average rates and they are experiencing largest decline in YDP. These two indicators, highest average fall in youth population and the highest increase in the elderly to the working age are particularly worrying for renewal in these rapidly aging areas.

#### 2.4.1 Vitality ratio

The vitality ratio amended<sup>7</sup> from Walsh (2000), measures the ratio of the population aged 20-39 to those ages 65+ years. The change maps indicate an interesting pattern, supported by the summary data in Table 2.8 and the ANOVA matrix in Table 2.9. These findings indicate significant differences between many of the typologies (see also Map 2.2).

<sup>7</sup> Increase upper age from 60+ to 65+ to reflect increase in retirement age.

**Map 2.2: Change in Vitality Ratio by ED, 2006 to 2016**

**Table 2.8: Vitality ratio (mean) by typology 2006-2016**

Typology	Description	Vitality ratio 2006	Vitality ratio 2016	Vitality ratio (mean change)
1	Peri-urban	2.6	1.6	-0.9
2	Very strong rural	2.8	1.7	-1.1
3	Strong agricultural	2	1.4	-0.6
4	Structurally weak	1.9	1.3	-0.6
5	Marginal rural	1.8	1.2	-0.6
6	High diversified rural	1.9	1.2	-0.8
7	Urban	4.2	2.9	-1.4

In looking at the change in the vitality ratio over the ten-year period we see a fall across all typologies. This is driven by different factors, with falling numbers in the 20-39 years old categories and significant increases in the population over 65+years at state and ED level (Table 2.4 & 2.5). Urban areas experienced the greatest fall in the vitality ratio (-1.4) reflecting a relatively stable 20-39-year-old cohort (average change 35 persons) but a significant increase in the 65+ year cohort (average change 133 persons).

To establish if differences exist across the typology a one-way Anova test is run to look at variance. The results indicate very similar changes across typologies with the exception of the weaker rural areas (strong agricultural, weak and marginal areas) which exhibit very little difference in the change in their vitality indicator over the period. While urban areas and very strong rural areas share some similarity in terms of their vitality ratio change.

To explore these vitality ratios a little more is it important to establish the drivers of change. Through looking at the raw data change (Table 2.9) across the typologies, the age category change indicates where greatest changes on average are occurring. There are limitations to looking at the mean figures, however it assists with further exploration of the data (Table 2.5) indicating the greatest driver of change on average is from an increase cohort in the 65+years. This represents an aging population across the typologies. What is important to highlight is the areas where increasing aging population is combined with a large proportional fall in the revival age cohort (20-39). This is particularly relevant in very strong rural areas (Table 2.5), structurally weak and marginal areas but also the high diversified area once again the areas most affected.

### 2.4.2 Economic dependence

Another way in which dependency can be viewed is looking at economic dependence. This the OECD believe should get more attention from a political standpoint. It measures the cohort who are in the long-term unemployed category due to disability or long term illness and those in receipt of the pension (old age, early retirement) relative to the working population (Wöss and Türk, 2011). The economic burden<sup>8</sup> ratio is developed using data available for the Irish context looking at the proportion of those retired and unable to work due to permanent sickness or disability to the total labour force. Data on early retirement is not available. The mean change in economic burden, reveals the actual change of those dependent on the state for income relative to the labour force from 2016-2006, while the percentage change looks at the change in 2016 relative to the burden in 2006 as a percentage.

**Table 2.9: Economic burden (change) by typology 2006-2016**

Typology	Description	Economic Burden 2006	Economic Burden 2016	Economic Burden (mean % change)
1	Peri-urban	0.26	0.34	36.25
2	Very strong rural	0.24	0.31	32.88
3	Strong agricultural	0.27	0.32	21.72
4	Structurally weak	0.30	0.35	23.53
5	Marginal rural	0.35	0.44	27.33
6	High diversified rural	0.32	0.39	25.69
7	Urban	0.30	0.36	29.29

The greatest change in economic burden is experienced in peri-urban areas and very strong rural areas with no statistical difference ( $p=0.57$ ) in the level of change experienced on average in these areas. These areas present an increase of over 30% in economic burden over this period.

The average change in economic burden across typologies shows some level of differences. The weaker rural areas (strong agri, weak, marginal and diversified areas) exhibit similar levels of change in economic burden to other areas, with rural peri-urban and strong rural areas indicating similar changes ( $p=0.57$ ) in the economic burden change.

<sup>8</sup> This is a term used in the literature, but may be considered derogatory; this is not the intention of the authors.

## 2.5 Labour force participation

During the boom increased job opportunities provided greater opportunity to increase labour force participation<sup>9</sup>. It is of particular interest to establish if there are changes in female participation in the labour force and to establish if these differences are evidenced across the typologies. Female participation in the labour force has seen a steady rise in Ireland since the 1980s. Numerous factors influenced this including culture, education, favourable economic conditions and policy (Russell et al. 2009). The increase was seen in the years prior to the Celtic Tiger and stabilised over the recession period. Women's participation in the labour force was less impacted during the recession when compared to males, due to the sectors in which they were employed and their higher levels of education (Bercholz and Fitzgerald, 2016).

This continues to be of interest in the current study as more women with lower levels of education leave the workforce and are replaced by more highly educated females. Because of the interest in rural areas the agricultural sector is also examined in terms of changes in the importance of agriculture across typologies.

### 2.5.1 Female Participation

Over the ten-year period, overall labour force participation rate<sup>10</sup> has increased across all typologies by 1% in urban areas to 5% in highly diversified areas and 4% in strong agricultural areas and marginal rural areas (Figure 2.2). In 2006 the participation rate was between 69-72% across typologies and this increased across all typologies in 2016 by between 1-5%. The smallest increase was in urban areas with the largest increase in highly diversified rural areas.

In terms of participation the biggest change over the period was in the female participation rates of between 4-9%.

There are several factors which influence increases in female participation rates. Across OECD countries, studies indicate that tax incentives (such as a more neutral treatment of second earners, childcare subsidies, and paid maternity and parental leave) have a positive impact on female participation, while policies which have an income effect such as increased child-benefit contribute to reduced female participation rates (Jaumotte, 2003). In the Irish context Russell et al. (2009) and Bercholz and Fitzgerald (2016) explore many factors contributing to increases in the participation of women in the workforce. These align with the findings of Jaumotte (2003) who identifies female education levels, changes in positive cultural attitudes and improved general economic conditions as all contributing significantly to determining female participation rates.

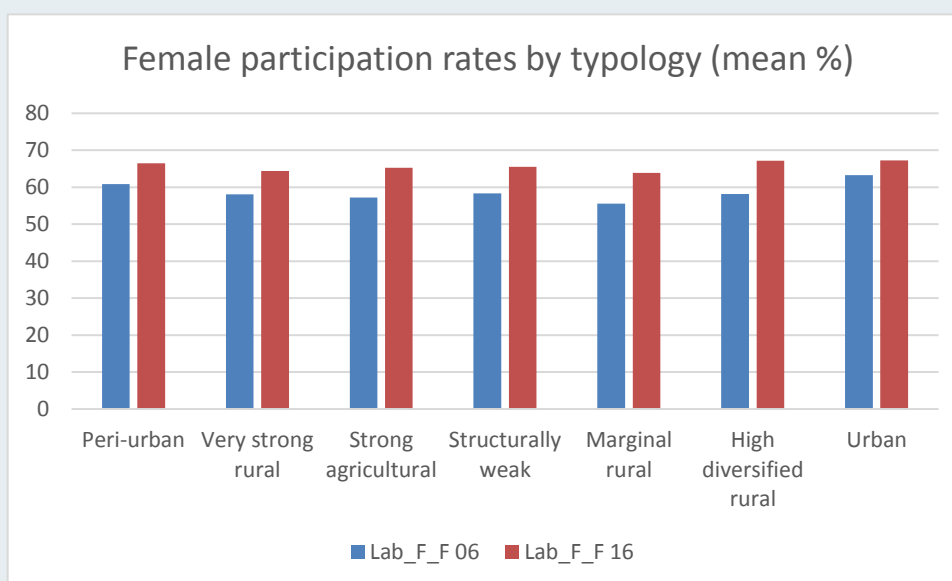
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<sup>9</sup> The labour force is characterised by those who are 15 years and over, who are in work, looking for their first job or who may have been recently made unemployed. It does not include students or those looking after the home.

<sup>10</sup> The participation rate, as per the OECD definition, measures those aged 15 years and over in employment, looking for their first job or unemployed having lost or given up a previous job to the working age population, which is considered as being ages 15-64 years.

The data in this study looks at change variables and the average increase in female participation rate ranges from a 4% increase in urban areas to 8-9% in strong agricultural, marginal rural areas and highly diversified areas. Marginal areas had the lowest levels of female participation rates in 2006 at 56% while urban areas had the highest at 63%. Over the period examined the increases were greatest in the marginal, highly diversified and strong agricultural areas, which increased from a lower base in 2006, while very strong rural and structurally weak typologies experienced a smaller increase.

**Figure 2.2: Female participation in workforce**



### 2.5.2 Social class

The population is categorised in social class groups determined by their occupation (coded using Soc90<sup>11</sup>) (Figure 2.3). Occupations are grouped into categories with similar levels of skills to identify social class. It does not take account of differences in terms of education levels etc., and the level of skill ranges from highest (professional) to lowest (unskilled), other accounting for residual and unknown occupations.

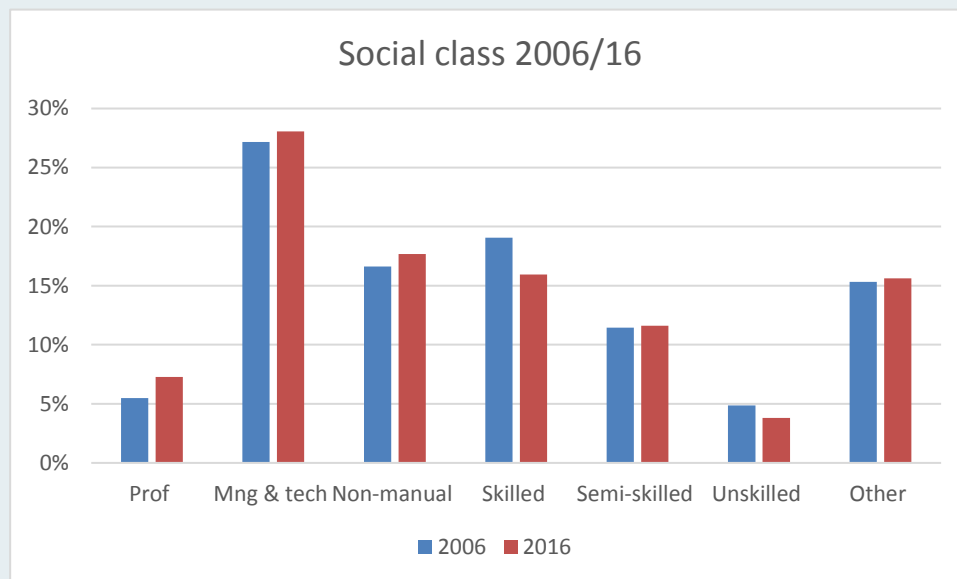
At state level there are positive results which indicate a greater proportion of society is classified in social classes 1,2 and 3 with fewer on average in the skilled,

<sup>11</sup> For CSO Soc 90 classification see Appendix 8 "Social classes-list of constitution occupations: <https://www.cso.ie/en/media/csoie/newsevents/documents/census2016summaryresultspart2/Appendices.pdf>



semi-skilled and unskilled groups when examining changes from 2006 to 2016. This, from a supply side, is likely to be reflected in higher levels of education and upskilling after the recession in 2008 but also from a demand side as Ireland has been seen as an attractive location for international firms requiring a skilled workforce. The greatest fall is seen in the skilled class which again is not surprising considering the timeline under consideration, with the construction sector one of the most adversely affected during the recession.

**Figure 2.3: Social class mean change, State**



When looking at social classes across the typologies there are several interesting similarities. In looking at the social classes the proportion of the population in each category (1-7) by typology (Table 2.10) gives an overview. The numbers in social class 1 increased from 2006-2016 while small positive changes were experienced in social class 2 and 3. The social class 4 and 6 reflect a negative effect over the ten year period while class 5 and 7 experienced little or no change.

The social classes which experienced the greatest change, social class 1 and social class 4, are interesting. In terms of social class 1 across the typologies there is no statistically significant difference between peri-urban areas, the high diversified areas and urban areas in 2006 or in 2016. Peri-urban, highly diversified areas and urban areas exhibited the highest proportion in the highly skilled social class compared to the other typologies. There is a statistically significant difference between strong agricultural areas and high diversified areas in terms of social class 1 in both years, with no statistically significant differences between very strong rural, structurally weak and marginal areas in both years. These areas experienced lower levels of representation in social class 1 in both years.

In terms of social class 4 (skilled), representing much of the construction sector, there was a fall in this category across all typologies. The biggest changes occurred in very strong rural, structurally weak and marginal rural areas (-4.2%); the changes in these areas are statistically different from all other areas. The peri-urban, strong agricultural and high diversified areas experienced similar levels of change in this social class 4 grouping (-3.3%) with urban areas experiencing the lowest level of change (-2.5%) in this category compared to all other typologies. The reasons for this may vary however; the availability of work in this category in urban areas may have meant some work was still available and recovery was experienced faster but also urban areas offer more diversified opportunities. The marginal differences are greater in very strong rural, structurally weak and marginal rural areas with the urban reliance on this category in 2006 much lower than in other typologies. While in the other areas in the years preceding the boom the opportunities in this occupational social class increased steadily, with little opportunity to recover or diversify post-recession.

**Table 2.10: Social class by typology 2006-2016**

<b>Social class</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Typology</b>	<b>Prof 06</b>	<b>Mng &amp; tech 06</b>	<b>Non-manual 06</b>	<b>Skilled 06</b>	<b>Semi- skilled 06</b>	<b>Unskilled 06</b>	<b>Other 06</b>
Peri-urban	6.6%	30.5%	17.1%	18.5%	10.1%	3.9%	13.2%
Very strong rural	5%	26.9%	17%	21.1%	11.7%	5.4%	12.9%
Strong agricultural	5.9%	30.1%	17.6%	18.7%	10%	4.7%	12.9%
Structurally weak	4.4%	27.3%	17.8%	20.8%	11.9%	4.6%	13.2%
Marginal rural	3.3%	23.2%	15.4%	20.9%	14.2%	6.5%	16.5%
High diversified rural	6.2%	28.3%	14.9%	18.1%	10.8%	4.6%	17%
Urban	7%	23.9%	16.5%	15.3%	11.4%	4.3%	21.6%
	<b>Prof 16</b>	<b>Mng &amp; tech 16</b>	<b>Non-manual 16</b>	<b>Skilled 16</b>	<b>Semi- skilled 16</b>	<b>Unskilled 16</b>	<b>Other 16</b>
Peri-urban	8.8%	31.2%	17.6%	14.9%	10.1%	3.1%	14.3%
Very strong rural	7.2%	27.8%	17.9%	16.8%	11.4%	4.2%	14.7%
Strong agricultural	8.1%	29.4%	18.2%	15.5%	10.9%	3.6%	14.4%
Structurally weak	6.5%	27.2%	19%	16.7%	11.9%	3.7%	14.9%
Marginal rural	4.9%	23.6%	17%	16.8%	13.9%	4.9%	18.9%
High diversified rural	8.2%	29.2%	16.4%	15%	11.4%	3.3%	16.5%
Urban	8.5%	26%	16.9%	12.8%	10.3%	3.8%	21.7%

# Chapter 3: Opportunities and Challenges

## 3.1 Introduction

The purpose of this Chapter of the paper is to scope out the challenges and opportunities for rural Ireland against the backdrop of an anecdotal negative narrative surrounding the decline of rural areas.

This is considered by a group of 25 academic experts from across the School of Agriculture and Food Science at UCD. Approximately 70 academics across the School were invited to participate from disciplines representing animal and crop husbandry, horticulture, forestry, food science, human nutrition, agri-environmental science, agribusiness and rural development. Experts were asked to voluntarily participate in an online survey to identify current and future challenges and opportunities facing rural Ireland generally, and the agricultural sector specifically. They were also asked to identify up to three current and three future barriers associated with achieving a positive outcome in each case. These expert opinions are collated qualitatively and analysed using thematic analysis in MSEXcel. The survey<sup>12</sup> was carried out in between November and December 2019, with all results submitted before the COVID pandemic.

The results provide a basis for developing a range of tangible strategies for future policy but while many are generic, such as “develop local business”, others are technical such as “improved animal feed efficiency”. The findings can inform a broad conversation on opportunity identification among a wider stakeholder grouping. The findings do not give policy-ready opportunities in all cases where possible examples are provided. The purpose of this Chapter is to highlight the areas where opportunities may arise, through first identifying the challenges, rather than defining and presenting a polished opportunity. This would require further research. There is a need to provide rural dwellers with a clear vision of what their future might look like but also there is an opportunity to consult with rural dwellers to establish what their vision is for their communities in the future. This Chapter presents the view of an expert academic group. It is important to bear in the mind at this point the majority of the experts, research and work in the agricultural sector so there is more emphasis in this stage of Delphi study on specifically farming related areas (See Appendix 1).

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<sup>12</sup> See Appendix 1



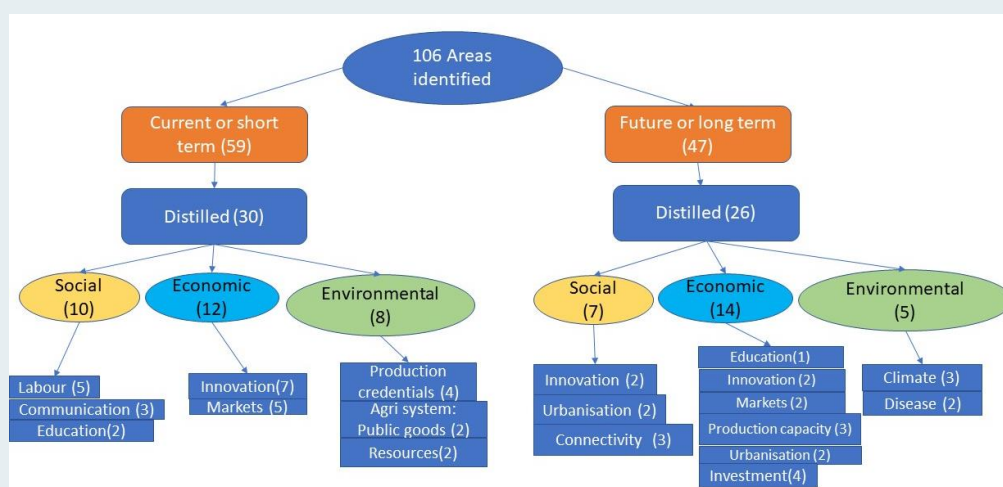
top ten refer to economic issues. This reflects the diverse range of economic issues associated with rural areas and agriculture. While there is a clear consensus surrounding climate issues, with a common aim to reduce our contribution to climate change the economic and social issues identified are more complex. Therefore, it is difficult to identify clear opportunities as they involve challenges outside of our control such as ageing and Brexit and are dependent on local resources such as skills required for employment.

**Table 3.1: Top 10 issues**

<b>Top 10 current challenges</b>	<b>Sustainability theme</b>
Climate	Environment
Production	Economic
Market	Economic
Profitability	Economic
Succession	Social
Ageing	Social
Brexit	Economic
Employment	Economic
Connectivity	Social/ Economic
Consumer	Economic

The 106 areas for change identified by the expert group were submitted in terms of short-term initiatives (59) and longer term initiatives (47). The areas were then distilled, and some areas combined due to duplication. This reduced the larger list of 106 to 56 topics, 30 short term areas and 26 longer term areas for consideration (Figure 3.2). These were then split into three themes based on the sustainability framework for ease of analysis. Each contribution was classified as either a social, economic or environmental contribution to the survey. This separation is difficult as many initiatives overlap.

**Figure 3.2: Initial thematic analysis**



In the analysis below each pillar of sustainability is discussed below separately, first in terms of current and then in terms of future opportunities. The focus of this section is to draw out any opportunities identified by the expert group.

### 3.3 Social

The findings are discussed under the three themes, first in terms of current and then in terms of future opportunities.

#### 3.3.1 Current or short-term social opportunities

Three broad themes are considered under current social opportunities, labour, communication and education. Many of these are linked; for example under the communications theme experts identify various different aspects of communications such as risk planning and public engagement opportunities. These are linked and reflect the need for strategic thinking for rural areas to address certain challenges.

##### **Labour**

The labour theme is primarily based on diversifying the rural labour force, as follows:

- Attract skilled migrant labour: training, increase alternatives to land-based employment.
- Attract younger educated population to return.

- Retaining younger farmers, jobs.
- Relocate and diversify services-based jobs.
- Gender balance in the agri-food sector.

The opportunities identified focus on, broadening the skills base, upskilling and attracting inward migration in areas of non-land-based employment. In this case permits for workers outside the EU is also highlighted as a challenge; this may become an issue with free movement of workers to and from the UK if Brexit deal terms are altered. The second opportunity looks at making rural areas more attractive for the many young educated individuals who leave rural areas to attend third level education and often never return. The major barriers identified here by experts is the mismatch of job opportunities for those who have level 8 qualifications. The prospects for those who seek professional employment in rural areas are often slim and consequently there are limited professional employment openings. Remote working, which has arisen since the COVID pandemic, offers an obvious opportunity here. To address these issues additional research would be required to speak with these candidates to establish what are the factors which prevent them from returning to rural areas post-education. The third labour opportunity also focuses on retaining labour, in this context the focus is on farming by increasing the opportunities for young farmers. This includes the development of more focused strategies on succession and inheritance but also in terms of employment such as the development of forestry hardwood industries or wood processing facilities. The wood processing industry however suffers from lack of market development. While this is land-based it may also present a further future opportunity for rural Ireland in terms of a diversified industry which is site-specific and more likely found in rural areas.

The option for relocation of service-based jobs is also highlighted as an opportunity (for new and existing local businesses). Access to a local workforce is identified as an opportunity and businesses benefit from having a local workforce with the advantage of local economic spin-off and wealth is retained in local areas. Service-based jobs are well suited to remote working also in particular as technology advances and broadband improves. This has proved successful during the recent COVID-19 pandemic. The final current labour opportunity specifically focuses on gender balance as an area which merits focus in terms of opportunities. Tradition here is highlighted as a potential barrier. Additional supports for rural based women in agriculture or otherwise outside of agriculture could be worth pursuing further. The recently launched ACORNS<sup>13</sup> (Accelerating the Creation Of Rural Nascent Start-ups) programme running from October 2020 to April 2021, is a peer-knowledge network and provides knowledge, support and networking opportunities for 50 entrepreneurs. It is designed to instil a stronger level of entrepreneurship among rural females. This programme goes some way to addressing the current opportunities. These types of programmes should be developed strategically with commitment to more long-term funding for this type of rural activity. Based on CSO data diversity in employment in primary production which includes agriculture,

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<sup>13</sup> For further information see: <https://acorns.ie/>



forestry and fishing, was approximately 4:1 (males:females) in urban areas while in other rural areas this was over 8:1. The ratio of males to females employed in the sector follows a very similar pattern when classified based on rural typology.

Further discussion is required to look at these opportunities, for example, strategic considerations of rural dwellers or what might attract potential new dwellers to rural areas. Programmes which might assist with relocation and integration of “new” rural dwellers would have to be considered. Examples of these are the WDC ‘More to Life’ Campaign and supports to attract workers to the West of Ireland<sup>14</sup>.

There are many positives which rural areas are endowed with such as access to schools or a slower pace of life. However, this is not attractive to all, but it may have an appeal for some. Further discussion with stakeholders or specific target groups may be necessary to develop policy recommendations on this topic.

### ***Education***

Two themes on educational investment emerged:

- Mental health training.
- Continual professional development (CPD) for rural educational professionals.

These educational opportunities address issues which are again linked. The first identifies a major rural challenge of stigma and isolation synonymous with rural mental health. This is of particular interest in farming communities where farmers operate with fewer employees and often single handily manage farms, having very little interaction with others day-to-day. In turn this leads to potential social challenges. The opportunity identified here is to provide mental health “first aid” training to interested groups such as agricultural professionals including rural advisors, educators and agribusiness representatives. This would contribute to improving resilience among farmers. The second opportunity highlighted relates to certified pedagogical training for agricultural educators at vocational and higher education levels. This innovative approach is changing across Europe with more bottom-up and co-design approaches to agricultural policy interventions and design emerging. It is necessary to upskill our agri-educators and to develop their capabilities in the area of mental health but also in the areas of innovative techniques to allow farmers to become more engaged with policy and practice through advancing educators, pedagogical capabilities. There are other examples of alternative approaches to addressing mental health such as Social Prescribing<sup>15</sup>.

### ***Communications***

Three communication themes were identified each addressing broad and specific areas within communication. They are as follows:

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<sup>14</sup> <https://www.itsligo.ie/more-to-life-wdc-launches-campaign-to-encourage-more-people-to-make-the-move-west/>

<sup>15</sup> <http://www.rosleaderpartnership.ie/?pagid=roscommon-well-connected-social-prescribing-project>

- Public engagement and education: Food waste, balanced arguments.
- Engagement and confidence: farmers.
- Risk planning.

Communications is a broad theme; for current opportunities three main aspects emerged from the delphi study. The first is on how we communicate information to the public. There was a strong consensus that the current disjoint between wider society and farming needs to be addressed; the opportunity to address this is the presentation of more balanced views around our food systems and an opportunity to “tell the story” in a balanced format where extremes of views are not positioned against each other on media platforms just to get a soundbite.

While the climate challenge is real the issues from an agricultural standpoint need to be addressed in a balanced and positive way. Addressing questions and presenting solutions in a digestible way so the wider public is more informed and aware of the challenges faced by agriculture is important. The public needs to have an appreciation of what must be done and what is currently being done in the agri-food sector. There is an opportunity to do this through TV debates with farmer and industry; participation which address the complexity of the issues rather than putting forward views which are too simplistic and worlds apart. The role of agriculture in terms of our landscape also needs to be understood and discussed. Other areas of public engagement opportunities rest with a focus on consumer behaviour and habits surrounding food waste; campaigns to inform consumers on best before dates and packaging should be considered as an opportunity to engage with wider public.

Engagement with farmers is also highlighted as an opportunity which is linked to the previous contributions on consumer communications but this theme deals with restoring farmer belief and confidence in leadership in the agri-food sector. The negativity surrounding food production and the opportunity is to have open and honest dialogue within the farming community but also with wider rural communities. There needs to be general acceptance that there are environmental issues and concerns which need to be addressed. There is no point in being defensive but there is an opportunity to be more inclusive in discussions with a focus on strategies that will benefit farmers, rural communities and wider society. The challenge relates to farmer confidence; this has been attributed to perceived lack of involvement in the decision-making process with reactive rather than proactive attitudes. There is an opportunity for change here. The final communications theme relates specifically to risk mitigation and planning at household and business levels. Planning at a time of calm is preferred to putting forward reactive plans.

### 3.3.2 Future or long-term social opportunities

The future social opportunities are more focused on longer term issues for the sector; three broad areas are identified, connectivity, innovation and urbanisation.

#### ***Connectivity***

The connectivity theme relates to the communications theme identified earlier. The loss of connectivity between urban and rural populations as well as the rural divide between farming and non-farming dwellers needs to be grappled with. Three areas of opportunity are identified:

- Knowledge exchange.
- Having discussion on future issues such as animal welfare.
- Presenting factual information.

There is an opportunity to find common ground among groups, as identified in the first theme such as an educational opportunity to share knowledge on growing your own food and learning about how food is produced. This may also reflect the earlier comment on having an appreciation of what agriculture and food production entails and improving understanding. The Agri-aware project is one such example of this however there are opportunities to grow and develop this space with the aim to reduce knowledge barriers. The second area of connectivity addresses the opportunity to discuss future issues such as animal welfare. As this is something which is on the general agenda of agriculture communities greater debate and education on how farmers take care of their animals needs to happen, with the aim of reducing misinformation around the treatment of animals. Protecting farmers against animal welfare activists also was mentioned in this area as something which needs to be addressed. Other issues which are cropping up as a result of intensive production systems in pigs, poultry or more recently in dairy systems need to be addressed also. In dairy systems “bobby calves” are an issue which has become a very serious social challenge in places like New Zealand; again having a proactive strategy to consider these challenges should be considered an opportunity. The third element of connectivity relates to accuracy in communications; weeding out “fake news” is a challenge again similar to earlier contributions on the deepening divide between farming and non-farm-based communities. The opportunity is based on a need to address a loss in cultural, ethical and personal values. The opportunity rests with looking to restoring a “middle ground” in such debates. With very little mediation on social media there is no personal responsibility or room for the presentation of balance.

#### ***Innovation***

This theme addresses two specific areas under future social opportunities:

- Continue to attract enthusiastic individuals to pursue a career in agriculture.
- Reacting to changes in consumer trends.

The innovation challenges of attracting and retaining good quality trained professionals in the sector is more important than ever. This is usually connected

with the growth of the economy. This opportunity emphasises the need to explore diversified educational programmes and to provide additional “educational services” to young farmers interested in pursuing a career in the industry. Funding for such programmes is always a challenge. The second future social opportunity in the areas of innovation addresses the opportunity to respond to changing consumer trends. This includes the movement toward more plant-based products (as opposed to animal derived foods) but also the green conscious consumer who is interested in carbon miles and the environmental impact of their food choices. This presents opportunities for structural change at industry level and product innovation. There are also opportunities for food producers to move towards organics and to show the consumer the value of choosing local and eating seasonal produce. Growers needs to be encouraged to explore these markets through looking at land suitability but also through encouraging the development of skills in these areas. The nutritional and environmental attributes of food products need to be “sold” better to consumers.

### ***Urbanisation***

The final future social theme is urbanisation; two areas are addressed here:

- Succession and family farm policy.
- Future population/de-population.

These broadly reflect the quantitative findings around rural populations and connect with the earlier identified labour theme. The first area of generational renewal needs to be considered as a crucial opportunity for rural areas. With many farms in rural Ireland not yet having identified a successor there may be opportunities for “new-entrants” to continue farming the land or to set up a new enterprise. The non-traditional “new-entrant” could bring the new ideas and flexibility that will be needed to innovate and refresh rural areas. Again, this resonates with the earlier discussions on diversity in rural areas. Increased flexibility in succession policy may also be required as access to land presents an economic barrier to entry for many. There are also opportunities in recognising that different land can provide different types of eco-system services and this might present an opportunity for someone who is interested in a way of farming other than primary production. These options are not currently available as payment for eco-systems services are not mainstream. However this approach may provide considerable societal value and presents an opportunity to recognise and reward people for their services; it could form part of education programmes also. Population decline is often associated with increased urbanisation, and the movement of people from rural to urban places. However, urbanisation can be seen as a positive in terms of rural towns. There are opportunities to consolidate existing towns and villages which are key to rural infrastructure and jobs.

## 3.4 Economic

In total twenty-six economic topics were identified as part of the current and future economic opportunities. The current opportunities related to innovation and markets and the future opportunities again relate to innovation and markets, plus education, production capacity, urbanisation and investment.

### 3.4.1 Current or short-term economic opportunities

#### *Innovation*

Seven areas of innovation were highlighted as current economic opportunities:

- Structural change and consolidation.
- Multi approach solutions.
- New product development.
- Production efficiency research.
- Soil research.
- Skills development to counter persistent unprofitability.
- New models of succession.

The need for a discussion on structural change and consolidation in the sector is one which is widely debated and there are cultural and personal obstacles with this type of change. While alternative options exist such as afforestation, a general resistance to forestry exists. However, the second opportunity identified highlights that an over-reliance on a single solution such as Sitka spruce for forestry also needs to be considered. Policy has a positive role to play here in encouraging new ways of looking at positive solutions such as forestry. As mentioned earlier the development of new markets and branding of biodiversity are also areas where there are opportunities to have an approach which presents a range of potential solutions, an approach with multiple options. This allows individuals to make choices for a more sustainable solution tailored to meet localised needs.

The need for the development of new products again emerges here as a more immediate opportunity in response to declining demand for products; this is also mentioned in the future social theme. New product development has a role to play in both current and future innovation. More specifically research into production efficiency and soil are highlighted as key areas of opportunity. Also mentioned are opportunities for farmers to improve efficiency on farms through appropriate technology adoption, improvements in feed efficiency and to advance our understanding of our animals in reaction to changing climate conditions such as heat stress. Similarly, many opportunities exist in relation to soil research to support on-farm decision making, addressing variation in physical parameters but also to explore new cultivars and heritable traits suited to Irish climate conditions.

The final two areas identified under current innovation opportunities are somewhat linked looking at the future of Irish farms from an economic perspective in identifying alternatives to persistently unprofitable enterprises but also from a future viability perspective in terms of addressing new models of succession and inheritance such as partnerships and removing the barriers which surround new types of arrangements. New models should be flexible enough to allow for efficient transfer to the next generation. This approach could also consider future plans for the land being transferred i.e. in terms of a move away from previously unprofitable business and to place increasing emphasis on alternative options and rural enterprise.

### **Markets**

Under the topic of markets five areas were highlighted under current economic opportunities:

- Access
- Commodity prices
- Food prices
- CAP
- Import costs

The issue of Brexit and market access is an immediate challenge for the Irish agri-food sector. If we are locked out of the UK market even in the short term there are severe challenges. The opportunities will be in the communications of our high food standards to new international markets, looking at the opportunities for perishable goods, fresh produce and a way of reducing transportation costs. The first priority must be in the European market to fill or try to get advantage over other competitors and to fill in for a potential short-fall when the UK exits from the market. Many other complications may arise. However, while it is clear diversifying away from the UK market is a challenge it is also a clear opportunity for Irish agriculture. The second opportunity for the agri-food sector is to look at diversification away from animal-based proteins and to seek out opportunities in higher value markets and to counter the prevailing lower commodity market prices. While this aligns with the social opportunity to diversify away from plant derived products it is also important to ensure these new opportunities (in for example plant-based or combined animal and plant derived products) are assessed in terms of profitability. Currently there is a lack of clear information on market development. With changes in product mixes comes risk and further challenges around growing new crops and potential prices. The third opportunity also relates to prices but at the consumer level; there is an opportunity to get consumers on board in understanding food pricing and price differentiation with products. There is an opportunity to develop the “story” behind the product which allows for command of higher prices in the market; the story reflecting the pride in our

landscape and our food production system (scale). The French initiative The Consumer Brand<sup>16</sup>, launched recently in the UK, is an excellent novel example of how food pricing is presented to the consumer. The initiative ensures producers are appropriately remunerated for their product and the consumer is made aware of how costs change as standards change. For example, you set out your preferences for eggs, e.g. free range or organic and the price in your basket reflects this. From a consumer perspective it acts as a tool for educating consumers around pricing of food. Such initiatives should be explored in Ireland; while all consumers are not in positions to pay higher prices for food there are certain cohorts who can afford to pay and are happy to pay more if they are getting a superior product. The third opportunity again reflects the need for increased transparency across the food chain in terms food pricing and the social contract surrounding CAP. This may require a government intervention. In Ireland we are beginning to make strides towards this in terms of the beef task force and the provision for a retail regulator, but more needs to be done. Power in supply chains is evident across all food products with transnational corporations controlling large swathes of the chain and the market. This further drives the disconnect between producers and consumers. Shorter supply chain initiatives such as “Neighbourhood Foods” which saw significant increase in demand since Covid-19 outbreak, when all farmers markets were closed, are initiatives which address some of these issues and should be supported and promoted more strategically to drive participation in shorter supply chains. Finally, the issue of cheaper imported grain and feed was highlighted. Here there is an opportunity to increase awareness of premium Irish grown products and growers should be supported to increase home grown production. While we could never compete with international pricing due to their volume of production there may be some opportunity to achieve savings through increased domestic production or the opportunity to charge higher prices for a product which is 100% based on Irish sourced ingredients. This is also a branding opportunity which may be applicable for a limited number of products.

### **3.4.2 Future or long-term economic opportunities**

Sixteen future economic opportunities are identified under the following six areas:

- Education.
- Innovation.
- Markets.
- Investment.
- Production capacity.
- Urbanisation.

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<sup>16</sup> C'est qui la patron: <https://lamarqueduconsommateur.com/>

### ***Education***

This opportunity is highlighted in response to the employment opportunities issues that have already been addressed under the social theme. Here however rural location for rural education is stressed as positive from a student and a rural area perspective. This refers to the natural comparative advantage that a rural location can give to education institutes and points to the importance of the contextual setting for student learning. As well as the geographical spread of these educational institutes across Ireland engaged in agricultural education local communities and the wider hinterland also benefit through local employment. There is an opportunity to encourage students to return to these rural locations to immerse themselves in their agricultural education.

### ***Innovation***

There is an opportunity to move away from commodity-based production and exports in markets which are subject to volatility. The challenge is to discover what is the consumer-focus. In new markets this is often unknown and a lack of understanding of consumer needs may present a challenge in particular in new markets. This again relates to the previous contributions on commodity product but there the opportunity highlights the need to seek out a strategy which is focused on consumer-focused new product innovation to be successful in new markets. The second future opportunity is based on the development of policy to support ecotourism. Forestry offers potential to provide such, but issues of private ownership and access is a challenge. This idea of forestry ecotourism is one which could be integrated into the design of forestry policy in the future.

### ***Markets***

Two future market opportunities are identified:

- Scale
- Uncertainty

These two opportunities reflect the comment in the earlier section on current opportunities; however they reflect broader issues surrounding land mobility and limits on our physical resources in achieving scale. The opportunity to expand into international markets, in particular in the post-Brexit era presents uncertainties and unpredictabilities in terms of competition and standards. While market opportunities exist the uncertainties in terms of resource mobility to achieve scale but also the uncertainty in terms of standards would have to be given due consideration.

### ***Investment***

Four investment or infrastructure future opportunities were identified:

- Transport
- Strategic funding
- Seek out Enterprise Ireland/IDA support



- Working from home: workspaces

In line with the issue of local rural transport which has been debated for a long number of years, local pooling of car journeys was identified as a possible opportunity. This idea could coincide with an environmental friendly options for carpooling similar to the “Go Car” or the “Dublin Bikes” model but for rural dwellers. This type of investment would have a double dividend in that it would potentially reduce the number of car journeys but also make rural areas more accessible for those without their own car. The knock-on effect would be that further investment into the development of cycle paths and building a safe environment for road users would have to be considered also. A longer-term view is required to make strategic investment into rural areas along with a need to look at national investment focus. This would require much more discussion and an opportunity to look at additional data which might support this argument. A related topic is the attraction of external investment into rural areas such as the IDA and EI investment and relocation, a challenge here which was touched on earlier in the social opportunities under the labour theme which is the match/mismatch of skills or the availability of a local workforce to match investor requirements. There may also be a need for financial incentives to encourage this change. However there are multiple reasons why outsider investors choose locations such as access to an international airport etc. Therefore, there are more complex issues which surround the location choices of firms.

The final investment opportunity ties in with the recent pandemic in the investment of local workspaces. While the new social norm of working from home is sustainable in the short term, we are social creatures and the opportunity to work remotely in a shared office space is something which might appeal to remote works in the longer term. This would require organisational change; however given the recent requirement to move many jobs to remote locations this may be a more achievable opportunity for rural areas. It would also address many of the social objectives identified earlier of attracting and retaining young and educated people back to rural areas and attract new dwellers to rural areas enhancing rural diversity further.

### ***Production capacity***

There are three opportunities identified under production capacity:

- Agricultural intensification
- Practice change & technology adoption
- GM free output

Some experts see there is an opportunity to increase agricultural production through intensification, with productivity and economic gains, while also recognising this must be achieved in an environmentally friendly way. Practice change such as minimum till or limiting use of fertiliser are also identified as opportunities for change; however uptake and risk of yield losses are areas for concern. The final production capacity opportunity reflects previous opportunities which highlight the opportunity to increase the production of domestic grain to substitute cheaper soya-based imports, giving the opportunity for the development

of a GM free meat. The challenge here would back to price, however there is an opportunity to focus on GM free feed inputs or a GM free supply chain.

### ***Urbanisation***

Two themes identified under future opportunities are reiterating the current labour challenges highlighted earlier:

- Support services
- Aging population

In the event of future counter urbanisation or rural re-population there will be opportunities to provide services such as health services. The redeployment of or relocation of business to rural areas present “current opportunities” socially and economically in terms of the labour market but also presents future rural opportunities in the provision of services. The second point raised on future trajectories of rural areas is the aging population as seen in the quantitative analysis. The opportunity identified to counter this is to seek out new business or industry opportunities, but such opportunities cannot be considered without consultation with aging populations and rural dwellers who are becoming more and more marginalised. Technology solutions to keep aging connected also presents opportunities however IT skills and broadband may still be a challenge in capitalising on this.

## **3.5 Environmental opportunities**

The current environmental opportunities are based on eight areas identified by the expert group which relate to four themes: Agri-systems and the public good, production credentials and resources. The future environmental opportunities relate to five areas based on two themes of climate and disease. First the eight current environmental opportunities are discussed.

### **3.5.1 Current environmental opportunities**

The eight current environmental opportunities are as follows:

- New system of agriculture
- Farmland birds
- Green credentials
- Green competitive advance
- Integrated pest management and biopesticides
- Protect environmental credentials
- Locally led water quality (emissions) programmes

- Solutions focused

The first two themes relate to the agri-system and public goods. The nature of the overall agricultural model presents itself as an opportunity for change. In making changes to the current system specific attention should be placed on the provision of ecosystem services and the public good. Currently no market value is placed on these goods and there is an opportunity for Irish policy makers to address this. While the benefits of placing a value on such services would undoubtedly encourage participation and encourage farmers to diversify their activities it would also restore consumer belief in current production systems. A “one size-fits all” approach of maximising production needs to be recognised as an aim that is not achievable for some farmers nor desirable from a societal perspective and instead farmers should be encouraged to work with the resources they have to farm with or alongside the environment they live in. The challenge is remuneration for this type of activity. The second aspect of this area is the rapid decline of ground nesting birds. Policies which aid the conservation of the species outside of designated areas (e.g. Special Areas of Conservation or Special Protection Areas) need to be developed in conjunction with the farmers who are impacted. This co-design approach is an opportunity to work towards developing solutions locally and works towards protecting endangered species.

The next four themes listed relate to production credentials. The opportunities in this space surround the development of strong and credible metrics for supporting all environmental claims made. In particular the quality of product we produce needs to be demonstrated clearly in new markets specifically to by-pass any cultural and language barriers to achieve a potential competitive advantage. The key is to have strong and credible environmental metrics which are easy to communicate. Other areas of opportunity in this theme are the development of more advanced integrated pest management systems and to encourage the use of biopesticides as a means of reducing chemical inputs. Finally the importance of retaining the gains we have made in the areas of positive environmental change with further opportunities to continue along this trajectory through technology adoption and innovation and for these successes to be reflected in prices is emphasised.

The last two areas reflect resources, the first opportunity of which is the continued development of locally led programmes for water quality initiatives such as EIPs linked to ASSAP, giving local ownership to projects which in particular is important to improving water quality. Teagasc programmes such as the Agricultural Catchments programmes also reflect this type of approach and more opportunities to imitate these types of programmes would be an opportunity to continue improve water quality. The targeting of vulnerable or high-risk areas might also be considered. The final point in our current set of solutions rests with the opportunity to be solutions focused, “being part of the solution” is a major opportunity for agriculture, as it is one of the only sectors which recognise they are part of the problem but also want to be part of the solution.

### 3.5.2 Future or long-term environmental opportunities

Four areas of future environmental opportunity are identified under the themes climate and disease:

- Adaptation
- Resilience
- Disease controls
- Bio-control strategies

The first two opportunities relate to climate change. Adaptation to changing climate conditions presents many positive benefits and opportunities but may also require more research in areas such as new warm-temperature crops and heat-stress in animals. Other opportunities include nutrient use efficiency. The long-term vision is lacking and there are difficulties with weather patterns, such as drought and flooding, however future proofing production and being adaptive are key opportunities to ensure the long term survival of food production. The second climate opportunity reflects resilience, acting now in advance of such weather event, happening is an opportunity which is not currently being considered. Future proofing is not in the current mindset. This also relates back to an earlier social theme looking at risk planning.

The final set of opportunities reflect the area of disease. The first opportunity identifies research into new controls, with the increasing number of exotic pests and diseases while controls are decreasing. There is an opportunity in looking at the implications of removing products while diseases are increasing. The second related opportunity is the development of alternative production methodologies which allow for greater use of bio-control strategies.

## 3.6 Delphi Survey: Closing Discussion

This first stage Delphi study based on a single survey of academic experts provides for the basis of discussion on the future policy agenda for rural Ireland. The qualitative survey responses to open ended questions allowed respondents to share their thoughts openly. While the responses provide a basis for discussion more work needs to be complete to rank and evaluate these issues. Many offer generic rather than specific opportunities which is problematic for policy making. This research also needs to be completed using a ranking analysis. It is suggested that this could be completed by NESC council members who would offer an impartial evaluation of the suggestions put forward and would help to focus the development of a future research agenda on rural change.

# Chapter 4: Conclusions

The broad quantitative and qualitative findings reflect the fact that many “rurals” exist.

Initial quantitative data suggests, with preliminary cluster analysis (not yet complete) that fewer than six typologies may be considered. In order to establish this, a full reevaluation of the typology framework would need to be complete. The qualitative data suggest that many “rurals” exist given the range of contributions provided by the expert group, such as more balanced national debate to gender and diversity of the rural workforce.

We need strong evidence bases in decision-making and policy formulation. This would also help to counteract the global trend towards ideological decision-making.

There is a need for bottom-up engagement to understand the complexity of the rural. This acknowledges that there is no one rural nor does its narrative belong to one group or experience. Therefore, it is a necessity to work towards strengthening the rural potential by delving deeper to build on what exists already in our countryside. Only through this will we recognise rural places as places of opportunity.

While urbanisation is an evident theme across the findings further research is necessary to look at what drives the movement towards rural towns evidenced by CSO data (2006-2016), using the percentage of population change in Ireland across typologies. Again, additional data such as commuter potential using transport connectivity may be a way of visualising these population changes.

Appendix 1:  
Research Methodology, Data Sources  
& Additional Data

To address the objectives of this study a mixed methods approach was employed using both quantitative and qualitative data.

## Quantitative Approach

The quantitative approach was adopted to analyse socio-economic and demographic change, using the typology that was developed in Maynooth University by Jim Walsh and Céline McHugh: the Rural Typology/

We examine the period 2006 to 2016, a timescale which experienced major disruption and crises. By examining this period it is possible to ascertain the impacts of the 2008 financial crisis on rural areas, capture elements of the recovery, and learn how rural areas cope with shocks given the reality that we are currently in the middle of another crisis.

The CSO Small Area Population Statistics (SAPS) are the main data sourced utilised. These quantitative data are available at Electoral District (ED) level for 2006 and 2016 and are explored using analytical software<sup>17</sup> to examine changes in demographic structures and are visualised using mapping. There are over 3,400 EDs in Ireland and these are categorised into seven typologies. This categorical separation of areas allows for data to be analysed using analysis of variance (ANOVA<sup>18</sup>) tests to determine whether there are statistically significant differences between the typologies in terms of their average score across a range of change variables developed. ANOVA tests compare the variability both between typologies and within typologies.

The Central Statistics Office (CSO) collect data using the Small Area Population Statistics every five years, the most recent being 2016<sup>19</sup>. This provides demographic data on 14 themes at various administrative boundaries. This paper uses the most detailed level at Electoral District (ED), comprising of 3,409 areas nationally. The data present some challenges due to data matching and changing ED codes and a general lack of a cohesive data bank across the ten-year period under study. This is challenging and time consuming as unique identifiers matched across years are not always available. As well as minor variations in names of ED for example provided in Irish or in English or merged EDs with two numbers. Thus the separate downloading

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<sup>17</sup> STATA 16.1, SPSS and GIS.

<sup>18</sup> Using an Anova with census data is debated in the literature however given iterations over years it is an accepted approach.

<sup>19</sup> <https://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/>



and merging of files thus present data collation challenges. To adequately analyse in any statistical package a single unique ID was developed for each 3409 EDs in 2006 and then applied to the 2016 SAPS database which can be downloaded as one file. These challenges present a barrier to those interested in studying rural change using SAPS.

The Rural Typology framework provides a template for future comparisons with other years is also provides a consistent methodological approach. Where CSO data are not available for 2006 and 2016 amendments are made to reflect the Walsh (2000) indicators. Using this data standard economic metrics are devised based on international literature to explore the data available at ED level.

Electoral Divisions are the smallest legally defined administrative areas in the state. In rural areas each ED consists of an aggregation of entire townlands and EDs are aggregated up to Towns (or Cities where appropriate) and Rural Districts which, in turn, are aggregated up to counties.

EDs were previously known as District Electoral Divisions (DEDs) which began as subdivisions of poor law unions, grouping one or more townlands together to elect members to a Board of Guardians. The DED boundaries were drawn by a Poor Law Boundary Commission, with the intention of producing areas of roughly equal "rateable value" as well as population. EDs are mostly contiguous but may bear little relation to natural community boundaries.

There are 3,440 legally defined EDs in the State. One ED, St. Mary's, straddles the Louth-Meath county border, and is presented in two parts in this publication split along the county border. For the purposes of detailed ED Small Area Population tables (SAPs), 32 EDs with a low population have been amalgamated with neighbouring EDs for disclosure reasons giving the total of 3,409 EDs which will appear in the SAPS tables later in 2017<sup>20</sup>. In some instances in this paper, urban EDs<sup>21</sup> have been excluded which leaves a remaining 2,709 rural EDs (this number includes a number of rural? EDs that were merged for comparative and confidentiality purposes).

Rural typologies have been used by researchers to quantify rural space and rural dynamics for a number of decades (see for example Cloke, 1981; Horner 1986; Cawley, 1994; 1996; Smith, 2007).

In Ireland, the most detailed and comprehensive typology for rural areas was established in 2001 by McHugh (2001; and Walsh 2000). This Rural Typology was subsequently used as the basis for research and analysis for the National Spatial Strategy (DoELG, 2002). A number of academics and rural experts have since used the McHugh's typology as the basis for analysis on a wide range of rural issues (see

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<sup>20</sup> <https://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/>

<sup>21</sup> In this paper we use McHugh's definition of Urban EDs defined as any ED with a population greater than 1,500, and a population density greater 150 per square kilometre. In addition, the authors of this report added to this EDs that had previously been categorised as rural (usually peri-urban) with a density greater than 350 per square kilometre.

for example, O’Keeffe, 2015; Crowley, 2007; Crowley, Walsh and Meredith, 2008; Keaveney, 2009).

Since the establishment of what we will refer to as the ‘Rural Typology’ there have been efforts to develop it further and update it based on new Census of Population data (see for example, in the development of the CEDRA report<sup>22</sup>). However, despite two decades passing, no other Rural Typology has been adopted by national policy makers and used as the basis for spatial and territorial decision-making. For this study, the existing typologies are used and applied to 2006 and 2016 CSO Small Area Population Statistics (SAPS). While the focus is on rural change it is also important to compare with what is happening in urban areas; for this reason, urban areas are incorporated into the overall picture of demographic change.

The Rural Typology established the rural as spatially heterogeneous, and by using Electoral Divisions, adopted the smallest legal geographic unit which have been in place since the 1800s. This allows for long-term analysis of change over time. The in-depth analysis which was carried in the development of the National Spatial Strategy set out to establish the Irish rural typology allows for a strong understanding of rural change and the processes at work in the countryside. Using Census of Population (over the period 1986 to 1996), socio-economic and demographic variables were analysed for rural Electoral Divisions (EDs). In the McHugh (2001) Rural Typology, Urban EDs, which were defined as areas with a population of more than 1,500 people and a population density of 150 per square kilometre, were extracted leaving 2,709 spatial units of enquiry.

The rural typology allows not only for a clear definition of rural space but also for an acknowledgement of heterogeneous spaces where different processes are at work with a multitude of outcomes within many Irish countrysides. Smith (2007: 275) argues that idiographic-based research, which has arisen from the cultural-turn and the social constructivist approach in the disciplining of Geography, and which had taken precedence in rural geography, has led to two key trends in research: an avoidance of broader-scale representations of the rural with an increased focus on local level processes; and an obscuring of the real value of large-scale quantitative data for the analysis of general patterns of rural change. This paper addresses Smith’s demand for a combination of quantitative, broader-scale data which will form the basis for future examination of local level societal change and the co-design of rural policy.

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<sup>22</sup> [https://www.teagasc.ie/media/website/publications/2014/Rural\\_Economic\\_Development\\_in\\_Ireland.pdf](https://www.teagasc.ie/media/website/publications/2014/Rural_Economic_Development_in_Ireland.pdf)

## Qualitative: Delphi Method

The Delphi method is a non-parametric statistical technique used to identify and rank key issues. It was first developed in the 1950s to assess opinions rather than objective evidence (Schmidt, 1997).

The first step is to elicit the responses of expert and aggregated these responses into high-level themes which allows the extraction of underlying topics for consideration. The second step allows researchers to consider the identified topics and discuss with the expert group, there are opportunities to re-evaluate responses and rank identified themes. The second stage of this process was due to take place in a focus group format however this was not possible. It is suggested that this second stage ranking analysis is undertaken by stakeholders in the field to complete this process. The process provides for a solid basis upon which discussion surrounding future rural policy can take place informed by a structured methodological approach and informed by unbiased expert view. Each of the 106 issues identified by expert were considered and these were grouped using thematic analysis.

This first stage Delphi study based on a single survey of academic experts provides for the basis of discussion on the future policy agenda. The qualitative survey responses were open ended questions which allowed respondents to share their thoughts openly. While the responses provide a basis for discussion more work needs to be complete to rank and evaluate these issues. Many offer generic rather than specific opportunities this is problematic for policy making. This research also needs to be completed using a ranking analysis.

The Survey focused on the following questions:

Q1 Identify a **current challenge(s)** facing rural Ireland and the agricultural sector— participants were allowed to name up to three current challenges.

- Identify any opportunities for rural Ireland in meeting such a challenge(s).
- Identify the barriers to achieving the opportunities you have outlined.

Q2 Identify a **future challenge(s)** facing rural Ireland and the agricultural sector— participants were allowed to name up to three future challenges.

- Identify any opportunities for rural Ireland in meeting such a challenge(s).
- Identify the barriers to achieving the opportunities you have outlined.

Q3 Additional comments \_\_\_\_\_

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