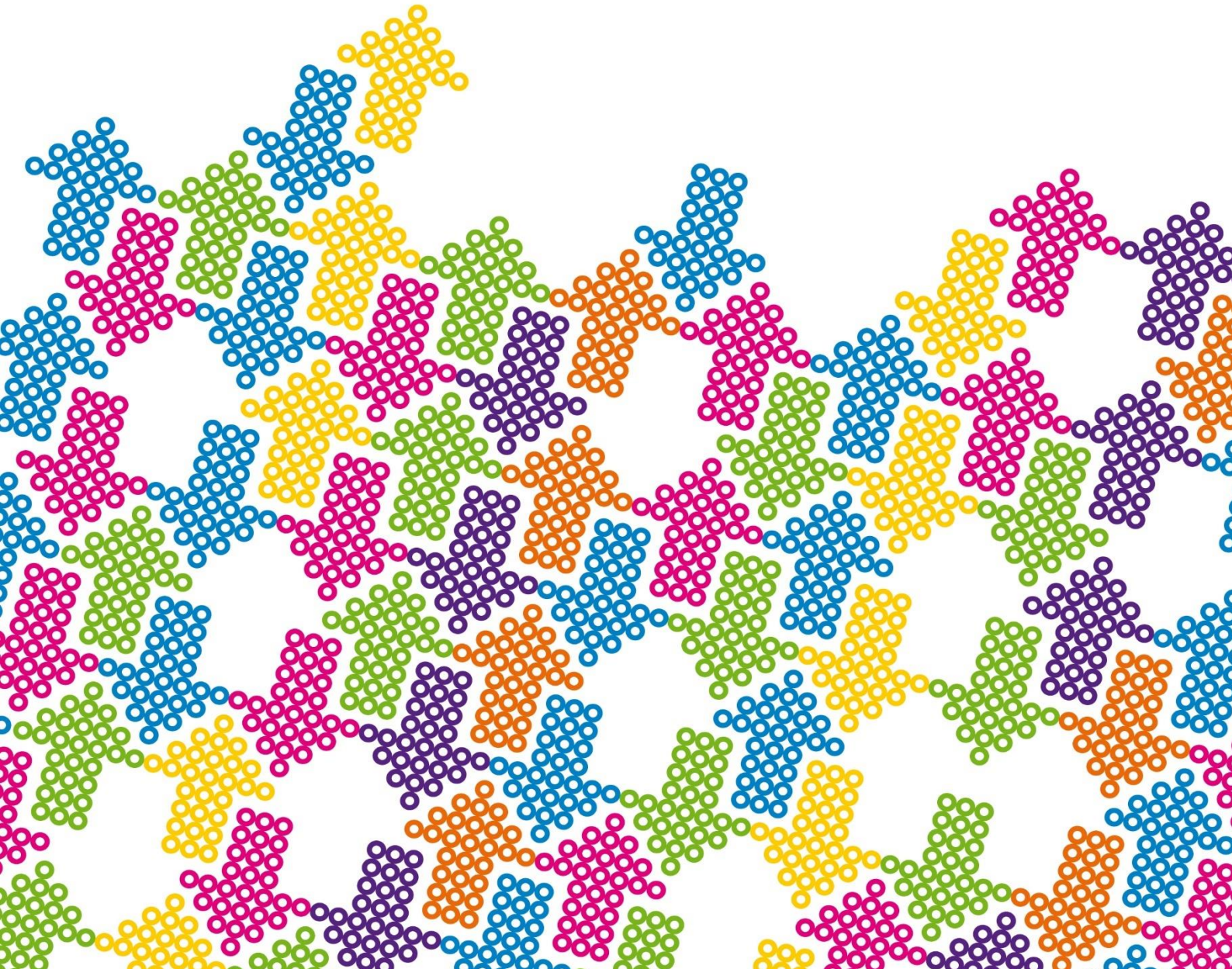
An Chomhairle
Náisiúnta Iomaíochas
National Competitiveness
Council

Ireland's Competitiveness Scorecard 2020

May 2020



Introduction to the National Competitiveness Council

The National Competitiveness Council (NCC) reports to the Taoiseach and the Government, through the Minister for Business, Enterprise and Innovation on key competitiveness issues facing the Irish economy and offers recommendations on policy actions required to enhance Ireland's competitive position.

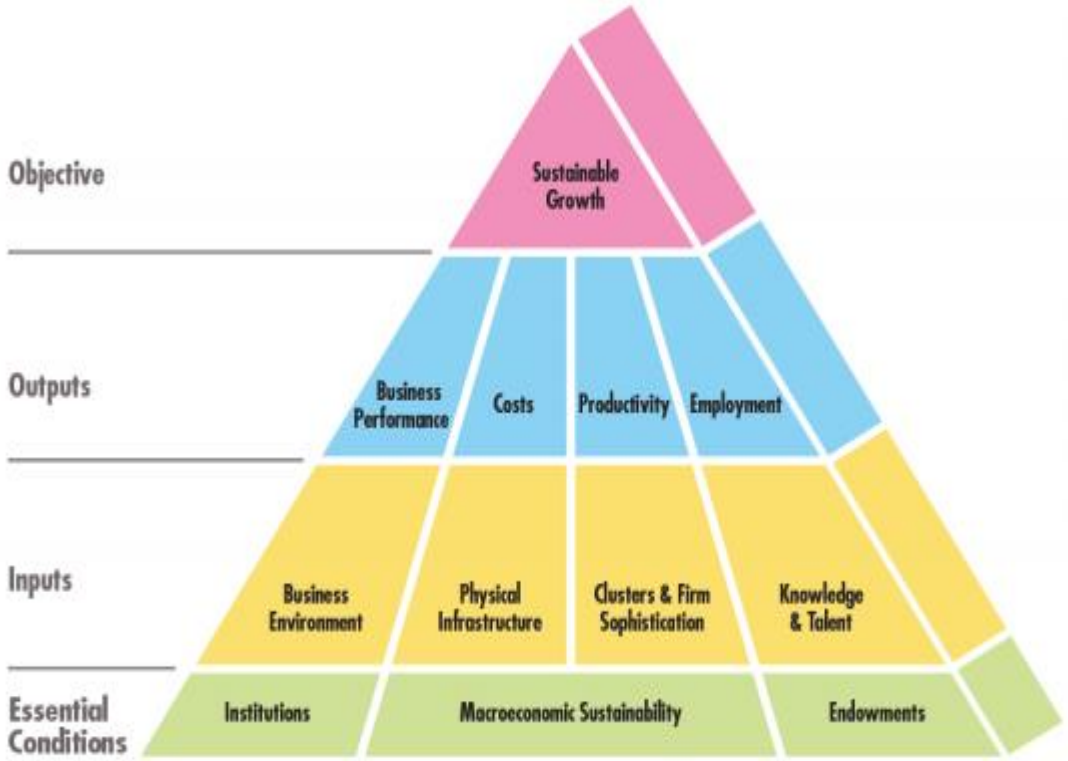
In accordance with the European Council recommendation of September 2016 on the establishment of National Productivity Boards by euro area countries, in March 2018, the Government mandated the National Competitiveness Council as the body responsible for analysing developments and policies in the field of productivity and competitiveness in Ireland.

Each year the NCC publishes two key reports:

- Ireland's Competitiveness Scorecard provides a comprehensive statistical assessment of Ireland's competitiveness performance; and
- Ireland's Competitiveness Challenge uses this information, along with the latest research, to outline the main challenges to Ireland's competitiveness and the policy responses required to meet them.

As part of its work, the NCC also:

- Publishes the Costs of Doing Business, where key business costs in Ireland are benchmarked against costs in competitor countries;
- Publishes a Productivity Statement, tracking the productivity developments in the Irish economy; and
- Issues competitiveness bulletins and other papers on specific competitiveness issues.



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Chair's Preface

Since the outbreak of the COVID-19 pandemic, health systems around the world, and the industries that support them, have battled to save lives and manage serious illness. Governments have been faced with exceptional challenges in dealing with the social and economic consequences of the virus. The decision to shut down non-essential enterprises and promote social distancing was driven by the need to contain the spread of the virus, thereby prioritising the wellbeing of society's most vulnerable members and our health and social care workers. What has happened since January 2020 amounts to the biggest challenge ever experienced by most governments, businesses and members of civil society. It remains to be seen how far reaching the implications of this virus will be for how we live our lives, carry out our work, and do business around the world. But we know for sure that uncertainty will prevail until there is widespread availability of vaccinations and successful medical treatments, which is some distance away.

The immediate challenge lies in deciding how to 'open up', as countries succeed in 'flattening the curve' and addressing effectively the pinch points in the supply of crucial medical supports, such as personal protective equipment, ventilators, detection tests and treatments for those who get the virus. A successful opening up will require considerable skills in planning and organisation on the part of governments, businesses and individuals.

This is the exceptional global context in which the National Competitiveness Council (NCC) is publishing *Ireland's Competitiveness Scorecard 2020*. This annual publication tracks Ireland's competitiveness position relative to its key trading partners. The data show our relative strengths and weaknesses just as the pandemic took hold and points to the areas which may impair the speed of a sustainable economic recovery. While our performance placed us in the top twenty percent, according to the three bodies producing the main international indicators (Institute for Management Development, the World Economic Forum, and the World Bank), in some key areas we do quite poorly – most particularly in relation to the environment, broadband coverage, digital skills, and the productivity of our SME sector. Dealing with these competitiveness weaknesses will be paramount to achieving a sustainable and balanced recovery in a period of heightened global uncertainty.

The outline plan for opening up the country was published by the Government on 1 May. It seeks to provide a roadmap whose timing can be adjusted if required by insights from the COVID-related indicators. The interconnected social and economic dimensions of the opening up process are apparent in that more than 1 million people are currently receiving state supports, through jobseekers-allowance, the COVID-19 Pandemic Unemployment Payment or the Temporary Wage Subsidy Scheme. Behind this number is a dramatic decline in economic activity, with individuals whose jobs no longer exist or whose incomes have fallen significantly and whose consumption patterns have changed markedly.

The negative impact on enterprises exceeds anything they have previously experienced. Liquidity supports introduced by Government are vital to ensure that viable but vulnerable businesses, and particularly small and medium sized enterprises (SMEs), do not become insolvent but rather can survive to reopen and adjust to new market realities. All existing and new

supports must be carefully calibrated to deal with existing debt burdens and ensure that fiscal resources are used effectively. The abrupt shift to remote working by a significant proportion of the labour force has brought into focus how innovative and flexible those in many parts of the economy, including Government, have been. However, our low productivity levels, which features as a weakness in this pre-COVID-19 Scorecard, remain a concern and boosting productivity will be an integral part of addressing the economic challenges facing Ireland.

Government Departments, their agencies and private businesses have shown exceptional agility in the past two months – and this agility needs to be built on as we move into the next phase. Loss of this momentum will delay our improving the quality of life in Ireland, and dealing with longstanding issues, such as housing and healthcare infrastructure. Those in leadership positions have seen where the strengths and weaknesses lie in their organisations. Economic recovery will depend on businesses using more effectively the talent in their workforce to develop and deliver new goods and services, building on what has been learnt from this crisis and from preparing for Brexit. On foot of learning from this crisis, the public sector needs to deal with its complex issues in a more systemic and coherent way, so that scarce resources are used most effectively in the interests of society.

Over many years the NCC has pointed to weakness in the business environment, but the pace of dealing with these weaknesses has been slow, as is evident in our relatively poor performance in certain areas. Now is an opportunity to change this as we grapple to become more sustainable in economic and social terms. Using the NCC's competitiveness framework, the Council has identified five broad challenges that encompass these shortcomings and can, if addressed, support economic recovery. These will be further explored in *Ireland's Competitiveness Challenge 2020*, which will be published later in the year. These five broad challenges are:

- Supporting Ireland's workers and seizing opportunities for upskilling;
- Ensuring the economic recovery is a sustainable green recovery;
- Investing strategically in Ireland's future;
- Addressing long standing issues;
- Supporting an open international economy.

In the *Competitiveness Challenge* report, the Council will make recommendations to Government on the best ways to improve the competitiveness and productivity of the Irish economy as the recovery process gets underway.

Dr. Frances Ruane
Chair, National Competitiveness Council

Overview

Current Context: COVID-19

The outbreak of the global coronavirus COVID-19 pandemic has brought about extensive human suffering and unprecedented economic disruption. Health systems around the world, and the industries that support them, have been under enormous pressure and have worked tirelessly to save many lives. To support their efforts, governments have introduced physical/social distancing in order to slow the spread of the illness and protect those who are most vulnerable to the virus. In some countries, governments have mandated key industries to produce the outputs required to support the health sector in managing the pandemic. In most countries, the shutdown of all non-essential business activities has seen massive numbers unable to work, particularly in customer-facing sectors. The scale of the reduction in economic activity, which amounts to a massive global recession, has been moderated by the move to remote working where possible, and an upsurge in e-commerce. Central banks and governments across the world have introduced emergency support measures to protect families, firms and vulnerable sectors. The full impact on societies and on economies is still unknown, but there will likely be far reaching implications for the way we live our lives, carry out our work, and do business around the world.

The extent of the change in the lives of people in Ireland, and as indeed for many across Europe and globally, remains to be seen and depends critically on how long it takes to bring the pandemic under control. But we know that when this happens, and the major health issues are addressed, each country will face the task of economic recovery and all of the social adjustments that will come with it. As a small, open economy, integrated into many global supply chains, Ireland is particularly vulnerable to a slowdown in the global economy. However, our strong focus on the challenges of Brexit, and our proven resilience and flexibility in the face of the Global Financial Crisis, should serve us well in laying solid foundations today for a speedy and balanced recovery.

This is the exceptional context in which we publish Ireland's *Competitiveness Scorecard 2020*. The annual Scorecard is designed to track Ireland's competitiveness position relative to its key trading partners using the latest available data, and this year it paints the picture of where we stood just before the pandemic took hold. While we are now in a radically different place, these data are still valuable in that they show us where we were, and were not, strong, entering the crisis, and the relevance of these areas to recovery from the crisis. Taking into account policy developments as this year continues, the NCC will use this Scorecard, together with other research, to prepare its flagship annual publication, *Ireland's Competitiveness Challenge*. The *Challenge* will make recommendations to Government on the best ways to improve the competitiveness and sustainability of the economy as the recovery process gets underway.

Relevance of Competitiveness Indicators to Economic Recovery

Ireland's Competitiveness Scorecard 2020 identifies several indicators as being particularly important to Ireland's economic recovery in the face of the unprecedented COVID-19 shock. These indicators point to several critical areas where Ireland currently falls behind our competitor countries, or where the impact of COVID-19 disruptions have been and will continue to be particularly acute, and where the Council believes improvements can be made in order to ensure a sustainable recovery.

Labour Market: The impact of COVID-19 on employment is without precedent, with more than 1 million people receiving state supports in April 2020 through jobseekers-allowance, the COVID-19 Pandemic Unemployment Payment or the Temporary Wage Subsidy Scheme (Figure 3.4.4). Once the recovery begins, it will be important to prevent unemployment becoming entrenched and scarring occurring. Efforts will be needed to reskill workers currently employed in sectors that are not likely to recover quickly, and to improve Ireland's digital skills which lag behind those of some of our key competitors (Figure 4.3.4 and Figure 4.4.11).

Business Environment: Access to affordable liquidity supports will be essential in order to ensure that vulnerable businesses, and particularly small and medium enterprises (SMEs), can survive the COVID-19 related disruption to their operations[1]. Several Government backed loan facilities have been made available to enterprises in order to support their adjustment to the new market realities, and the Central Bank continues to liaise with the commercial banking sector on the best way to support continued access to finance for Irish businesses. Ireland enters this unprecedented period as a country which is highly indebted, in both the public and private sector, despite some improvements in recent years (Figure 5.2.4, Figure 5.2.6 and Figure 5.2.7). Households and businesses are likely to struggle under existing debt burdens and it is crucial that appropriate moratoriums can be arranged for financially sound individuals and firms to survive the acute phase of the economic disruption. It is also important that any licencing issues or other regulatory barriers to starting a business are minimised (Figure 5.1.1) so that enterprises are encouraged to form during the economic recovery in order to meet the demands of new markets and provide employment opportunities for those displaced by the COVID-19 pandemic.

Green Economy: There is mounting support within EU institutions for the idea of linking economic recovery strategies to the goals of the EU Green Deal. Ireland is currently falling very far behind its carbon emissions targets and environmental commitments (Figure 2.3.1 and Figure 2.3.4) and early action on initiatives in Ireland's Climate Action Plan, and linking economic stimulus measures with environmental objectives can be an engine for growth and innovation. There is significant potential for existing enterprise, agricultural and sustainability initiatives to be reframed and expanded in order to provide a stimulus for sustainable growth, and spur a transition in our economy and society toward low carbon activities.

Public Infrastructure: Government expenditure on capital projects has increased steadily over the past number of years (Figure 4.2.3) following sharp cutbacks during the global financial crisis. It is essential that public investment does not suffer similar cutbacks during this economic disruption, as high-quality infrastructure boosts long-term sustainable growth and productivity. Continued roll out of the National Development Plan, with a reviewed prioritisation to frontload projects that can enhance productivity and provide economic stimulus once the recovery begins, would be beneficial (Figure 4.3.2). The rapid shift to remote working by many has highlighted the benefits from and need for quality, high-speed broadband across the country (Figure 4.2.7), and the importance of the continued roll out of the National Broadband Plan.

Global Growth: As a small open economy, Ireland is especially exposed to global economic conditions (Figure 3.1.1), leaving the economy particularly exposed to the COVID-19 related disruptions worldwide. Global trade and travel patterns could potentially be disrupted for some time in the aftermath of COVID-19, which could negatively impact Ireland's ability to attract and recruit agile specialist labour (Figure 5.3.5) and highly mobile investment. The shortage of some medical supplies during the COVID-19 pandemic, including testing kits and personal protective equipment, led to concerns in some countries that these products were not produced domestically, with international pressure building to bring the production of pharmaceutical and medical devices back onshore. As a small open economy, Ireland will benefit if there is international resistance towards protectionist policies that restrict the free movement of people and capital.

In these five areas, there are pressing issues which will be explored further in *Ireland's Competitiveness Challenge 2020*, which will focus on the role that competitiveness and productivity can play in Ireland's economic recovery (see Chapter 6). The NCC will use the lens of its competitiveness pyramid (see Annexe 1) to guide our recommendations to Government. The *Challenge* publication date is being brought forward this year, so that its recommendations can feed into the Government's economic recovery strategy, related domestic policies (including Budget 2021) and the European Semester process[2]. To facilitate this timetable, the *Cost of Doing Business Report* and the *Competitiveness Scorecard* have been merged into this publication in 2020. This report therefore includes a number of cost indicators, that would usually be presented in the *Cost of Doing Business Report*, as well as non-cost indicators that traditionally appear in the *Competitiveness Scorecard*.

[1] McGeever et al (2020) SME liquidity needs during the COVID-19 shock, Central Bank of Ireland.
[2] The European Semester is a cycle of economic and fiscal policy coordination within the EU. It is part of the EU's economic governance framework. It covers three blocks of economic policy coordination: structural reforms; fiscal policies; and, the prevention of excessive macroeconomic imbalances.

Ireland's Overall Competitiveness Position in Early 2020

Aggregate Indicators: The NCC recognises that competitiveness is a complex concept and it is the result of a multitude of different factors and policy decisions, some of which may not appear to have a large bearing on Ireland's economic position. This complexity is also internationally recognised, which is why the three most influential competitiveness indicators, namely, those of the Institute for Management Development (IMD), the World Economic Forum (WEF), and the World Bank (WB), are all composite indicators[3]. Each one of these indicators comprises a large series of sub-indices that measure a range of distinct structural policies that impact competitiveness, assigns a score to these sub-indices, and takes all these values into account when calculating a final score. As these rankings are subject to a whole range of methodological challenges, they are best considered as being informative in a broad sense rather than as the final word in an assessment of a country's competitiveness.

As Ireland started 2020, its performance was ranked in the top quintile (twenty percent) in each of the three key international indicators.[4] While Ireland's overall performance in the rankings is important, of greater potential significance are the developing trends in Ireland's position and what they signal for prospective competitiveness gains or losses[5]. It is vitally important that Ireland retains its competitiveness position at a time of heightened global uncertainty, when all economies will be grappling to find their place in the new economic landscape. These aggregate indicators and the current highly uncertain economic outlook are discussed further in Chapter 1.

Disaggregated Indicators: While the Irish economy continued to perform well in these aggregate indicators up until early 2020, a more granular view of competitiveness across different domains using the NCC's Competitiveness Pyramid Framework (set out on page 2)[6] shows that there are still several areas where Ireland's competitiveness performance could be improved, and as noted above, contribute to economic recovery. Chapters 2-5 provide a wider range of indicators in charts and graphs[7] to benchmark Ireland's performance over time against our EU peers and international best practice where appropriate, together with a summary of Ireland's recent progress across competitiveness domains. The findings can be summarised as follows:

In terms of **Sustainable Growth** (Chapter 2), Ireland performs well under the quality of life and national income elements of sustainable growth, but very poorly on the environment, where it is continuing to fall far behind its environmental commitments, creating real challenges for government action and additional costs for businesses.

In terms of **Competitiveness Outputs** (Chapter 3), prior to COVID-19, while broadly competitive, Ireland faced challenges in relation to low productivity levels in certain domestically-dominated sectors, and increased risks in relation to high product and sectoral concentration, international trade tensions (including Brexit) and a relatively high cost base. The 2020 Scorecard indicates that these challenges persist and will be complicated by the current uncertain situation.

In terms of **Competitiveness Inputs** (Chapter4), the results are also mixed. In some areas, such as education and firm sophistication, Ireland has made great progress building on natural advantages. In other areas, such as infrastructure, digital skills and lifelong learning, Ireland continues to lag behind its competitors. The Government has begun to address some of these potential competitiveness disadvantages, and these actions are being monitored by the NCC.

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[3] WEF competitiveness indicators (grouped in 12 pillars) analyse the set of institutions, policies and factors that determine the productivity of a country. Hard data represent 2/3 and Soft data, compiled from annual Executive Opinion Survey, represents 1/3 of the overall weight in the final ranking. The World Bank's Doing Business benchmarks the regulations that affect SMEs based on the assessments of business regulations of 10 different lifecycle areas (including starting a business, dealing with construction, enforcing contracts, etc.) using hard and soft data. The ranking is based on the 'distance to frontier' score. The IMD's rankings are based on four components; economic performance, infrastructure, government efficiency and business efficiency. Each of these four factors are broken down into five sub-factors, each highlighting different facets of competitiveness. The Hard Data represent a weight of approximately two-thirds in the overall ranking and the annual Executive Opinion Survey represent a weight of approximately one-third.

[4] Ireland performs particularly well in the IMD rankings, where the economy is ranked 7th out of a total of 63 economies, while scoring 24th of 140 in the WEF index and 24th of 190 in the World Bank index. See Fig 1.2 in Chapter 1 for further details.

[5] In the late 2000s, for example, as the economy overheated and costs began to rise, Ireland slid down the international rankings. However, since the early 2010s, Ireland's competitiveness rankings have improved.

[6] See Annex 1 for further details.

[7] All charts and graphs incorporate the most recently available data for Ireland and its key economic competitors.

In terms of **Essential Conditions** (Chapter 5), Ireland is relatively robust, with sound institutions, a broadly supportive business environment and strong demographics. However, vulnerabilities persist, with both private and public sector debt remaining high and likely to increase in light of the COVID-19 pandemic, and with certain business markets (legal and insurance) impacting negatively on the ability of SMEs to establish and to prosper.

In summary, the evidence set out in this report shows that, pre-COVID (until early 2020), the Irish economy remained internationally competitive, although there are still several areas where more needs to be done to strengthen its overall competitiveness position, thereby helping enterprises and employment to grow, and our quality of life to improve. Addressing these weaknesses will assist in helping the economy to recover as we deal with the COVID-19 crisis.

Chapter 1: Ireland's Competitiveness Performance and Outlook

Ireland's Competitiveness Scorecard is one of several reports produced by the National Competitiveness Council annually. The Scorecard is designed to assess how competitive the Irish economy is relative to international peers and diagnose potential areas of concern.

1.1 Economic outlook

The current economic outlook is being shaped by COVID-19, one of the most severe crises that the international policymaking community has ever faced. The pandemic has already caused, and will continue to cause, large-scale loss of life and severe human suffering on a scale that has not been seen in generations. COVID-19, and the containment measures that governments have put in place to slow the spread of the virus, have brought a halt to production in affected countries and resulted in a collapse in consumer confidence, as people stay home to protect the most vulnerable in society and limit discretionary spending until the worst of the crisis has passed.

The IMF[8] is forecasting a global recession that will be the worst economic downturn since the Great Depression. The IMF stated that the "Great Lockdown" (2020) will result in a 3% reduction of global GDP, compared to a 0.1% reduction during the Global Financial Crisis (2009). This will be only the second recorded year where the global economy will have shrunk, and the IMF have noted that the cumulative loss to global GDP over 2020 and 2021 from the pandemic crisis could be greater than the economies of Japan and Germany combined. Countries reliant on tourism, travel, hospitality, and entertainment for their growth are experiencing particularly large disruptions.

Table 1.1: World Economic Outlook Growth Projections (real GDP, annual percentage change)

	2020	2021
World	-3.0	5.8
Advanced Economies	-6.1	4.5
US	-5.9	4.7
Euro area	-7.5	4.7
Japan	-5.2	3.0
UK	-6.5	4.0
Emerging Markets and Developing Economies	-1.0	6.6
China	1.2	9.2
India	1.9	7.4
Russia	-5.5	3.5
Brazil	-5.3	2.9

Source: IMF WEO

A number of organisations have estimated the impact of COVID-19 on the Irish economy using a scenario analysis[9]. While these results are sensitive to the assumptions underpinning them, they all agree that COVID-19 will have a large negative impact on the Irish economy, ranging from a decline of 6.8% to 10.5% of GDP. Based on a key assumption that the shock to the global and Irish economies is a transient one – and that containment measures are effective in reducing the infection rate - the Department of Finance forecast 13.9% unemployment, and that the Government will run a deficit of 7.4% of GDP. In more adverse scenarios,

[8] IMF (2020) 'World Economic Outlook, April 2020 – The Great Lockdown'
[9] ESRI (2020) 'Quarterly Economic Commentary', Spring 2020

a deficit of around 10% of GDP is not unimageable. This also means that at the end of 2020, that government debt will be 125% of GNI*. However, they point out that it is not difficult to imagine a worse outcome.

Table 1.2: Selected forecasts and scenario analyses on the economic impact of COVID-19 pandemic on Ireland

Organisation	Impact on GDP in 2020 (%)
Department of Finance[10]	-10.5
Central Bank of Ireland[11]	-8.3
ESRI[12]	-7.1
IMF[13]	-6.8

Source: Various

Underscoring the challenges of the inevitable lag with macroeconomic data, the Department of Finance have also used high-frequency (monthly) data to shed some light on the impact of COVID on the Irish economy – a process known as 'nowcasting'. Recognising the considerable uncertainty of these figures, the 'nowcasting' estimates suggest an annual decline of approximately 4 percent of modified domestic demand (MDD) for the first quarter.

In the short term, there will continue to be the need to support the health system and to protect our workers and firms from the immediate consequences of this pandemic. As this crisis unfolds, further fiscal and monetary measures will most certainly be required. As noted by the OECD, the global economy has been put into a 'deep freeze' from which it will be difficult to emerge.

Despite these recent extraordinary changes, it is useful to look at Ireland's competitiveness position prior to the onset of COVID-19, for two reasons. First, to set ourselves a pre-COVID-19 benchmark of our competitiveness relative to the key economies with whom we are engaged internationally. Second, and perhaps more importantly, to identify the areas where concerted policy action taken during, or after, COVID-19 could help to kick start the Irish economy so that people can start rebuilding their lives once this devastating change for society has passed.

1.2 International competitiveness performance

The NCC tracks Ireland's overall performance in the three main competitiveness rankings, as a useful – if imperfect – way of measuring competitiveness. These rankings are:

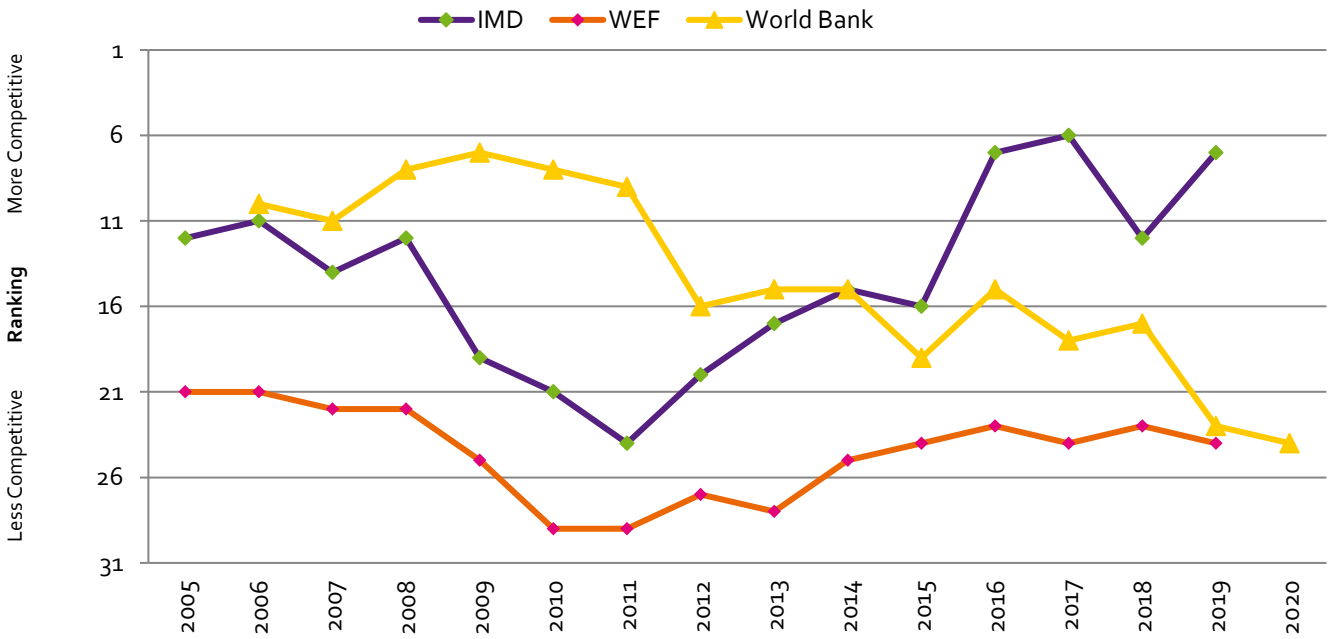
- The World Economic Forum (WEF) Global Competitiveness Report, an annual assessment of the factors driving productivity and prosperity.
- The IMD Competitiveness Yearbook, which assesses and ranks 63 economies around the world based on their ability to create and maintain a competitive business environment.
- The World Bank Doing Business index, which compares the ease of doing business in 190 economies.

10 21 April 2020. Source: https://www.gov.ie/en/publication/43a6dd-stability-programme-update-2020/
11 2 April 2020. Source: https://www.centralbank.ie/publication/quarterly-bulletins/quarterly-bulletin-q2-2020
12 26 March 2020. Source: https://www.esri.ie/system/files/publications/QECSPRING2020.pdf
13 14 April. Source: https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020

As the rankings are relative, in some instances, the change in Ireland's ranking is not necessarily due to an absolute deterioration or improvement in the various categories, but rather a matter of the performance of other countries improving or worsening relative to Ireland.[14]

Figure 1.2.1 examines how Ireland's position in the three major international competitiveness rankings has evolved over the past 15 years. In the run up to the Global Financial Crisis (and in the first years of the crisis), the rankings universally show a loss of competitiveness. Since 2010 a more nuanced picture has emerged. The rankings from the Institute for Management Development (IMD) and the World Economic Forum (WEF) have trended upwards, suggesting that Ireland has recovered some of the competitiveness that the economy lost during the recession. In contrast, the World Bank's ranking paints a somewhat less positive picture, with Ireland's fall in the rankings continuing (though ranking highly overall). The 2019 WEF Global Competitiveness Report ranks Ireland as the 24th most competitive economy globally (down one place on the previous year), while Ireland is placed 7th in the IMD rankings in 2019, an improvement of 5 places from the previous year. The World Bank Doing Business report puts Ireland at 24th out of 190 economies in 2020– a decline of one place from the previous year.[15]

Fig. 1.2.1 Ireland's Global Competitiveness Rankings, 2005 – 2020



Source: WEF, World Bank, IMD

1.3 Harmonised Competitiveness Indicators

Harmonised Competitiveness Indicators (HCIs) are also a useful way of illustrating an economy's competitiveness performance. HCIs deflate relative changes in exchange rates by the relative change in average prices to indicate how cost competitive an economy is at any given moment. When the real HCI trends upwards, it suggests that prices in the domestic economy (when taking exchange rates into account) are increasing faster than prices in other jurisdictions, making an economy less competitive.

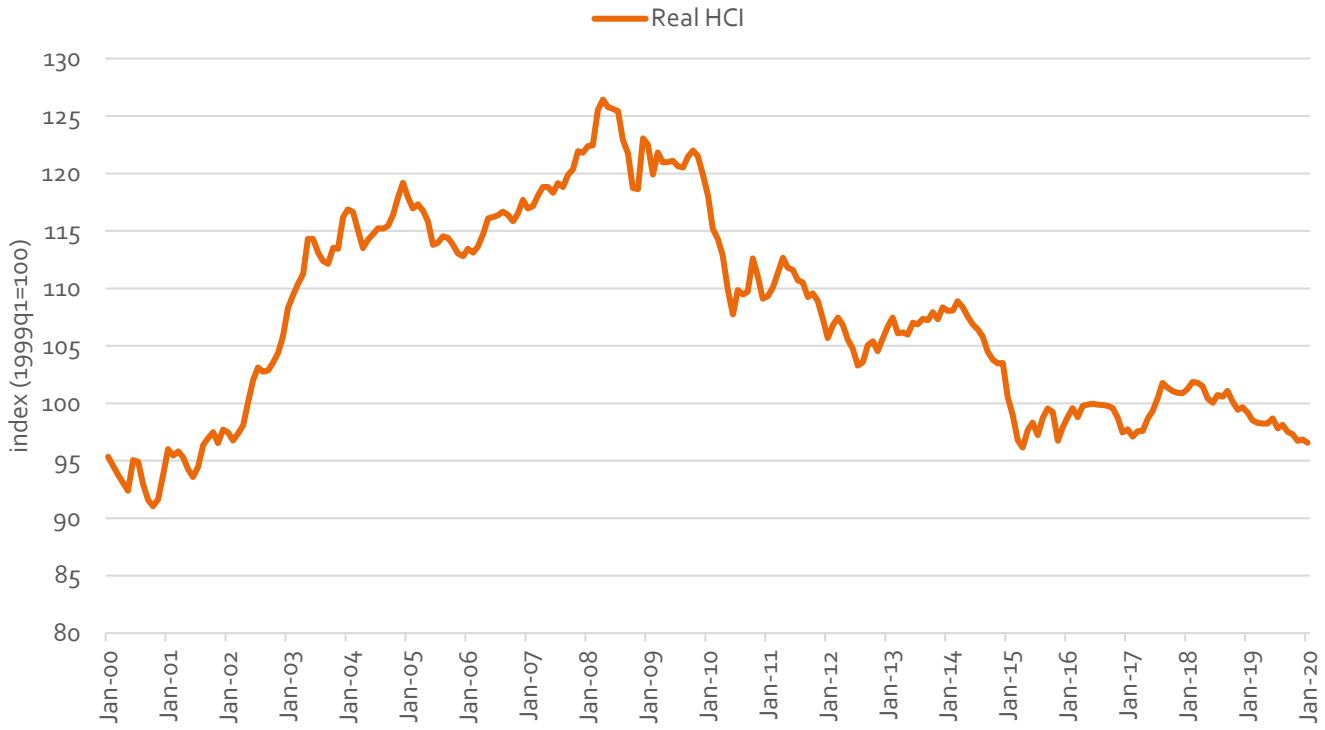
[14] An advanced economy, such as Ireland, at the upper end of the rankings, can find it more difficult to ascertain significant impact from their reforms, due to their already robust performance (i.e. as a country approaches the best performing economies, it becomes more difficult to make improvements). In addition, the methodology, surveys and data used in these benchmarking reports differ significantly. Methodologies are frequently revised, and this can also have an impact on Ireland's ranking.

[15] The IMD World Competitiveness Yearbook uses quantitative and qualitative survey data to assess the ability of countries to create and maintain an environment in which enterprises can compete globally. The WEF Global Competitiveness Index is a mixture of quantitative and qualitative-driven index-based assessment of the factors driving competitiveness. The World Bank's annual Doing Business report tracks changes in regulations, and the costs associated with compliance with these regulations, affecting businesses.

When the real HCI trends downward, the opposite is the case, suggesting an overall competitiveness improvement. Figure 1.3.1 reveals two broad trends. First, between 2000 and 2008, the Irish economy experienced a substantial loss of cost competitiveness, with Irish prices increasing much faster than prices in other jurisdictions. Second, since 2008, the Irish economy has experienced substantial improvements in cost competitiveness.

Factors outside of the control of Irish policy makers and enterprises, such as exchange rates, exert a considerable influence on

Fig 1.3.1 Harmonised Competitiveness Indicator, Ireland, February 2012 – February 2020

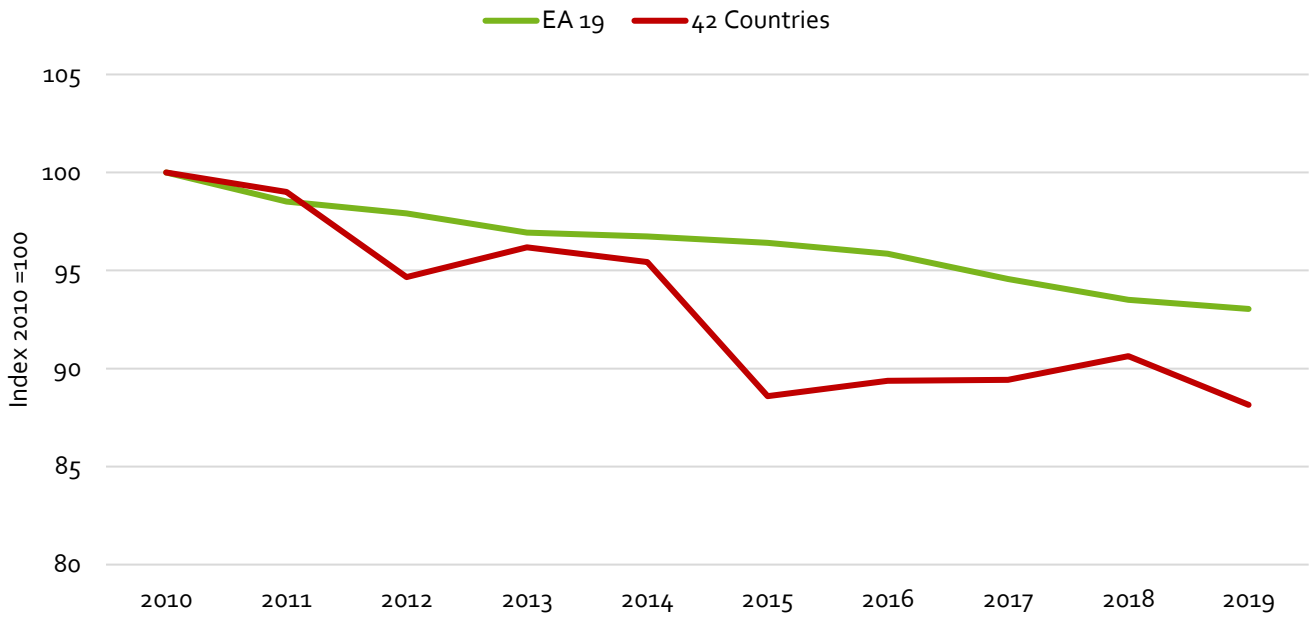


Source: Central Bank of Ireland, HCI

national competitiveness and on the cost base for enterprises located in Ireland. Favourable exchange rates, vis-à-vis Ireland's main trading partners, make firms based in Ireland more cost competitive and make international trade more profitable. As a large proportion of Ireland's exports is sold to countries outside the euro area (specifically to the UK and the US), exchange rates are likely to have a greater impact on Ireland's relative international competitiveness than is the case in many other euro area countries.

The Real Effective Exchange Rate (REER) is an index that tracks the change in a country's exchange rate relative to changes in relative inflation rates. Like the HCI, if the REER is trending downward, it implies an improvement in cost competitiveness. Figure 1.3.2 suggests that Ireland has become more cost competitive relative to both the euro area, and a wider group of economies, since 2011.

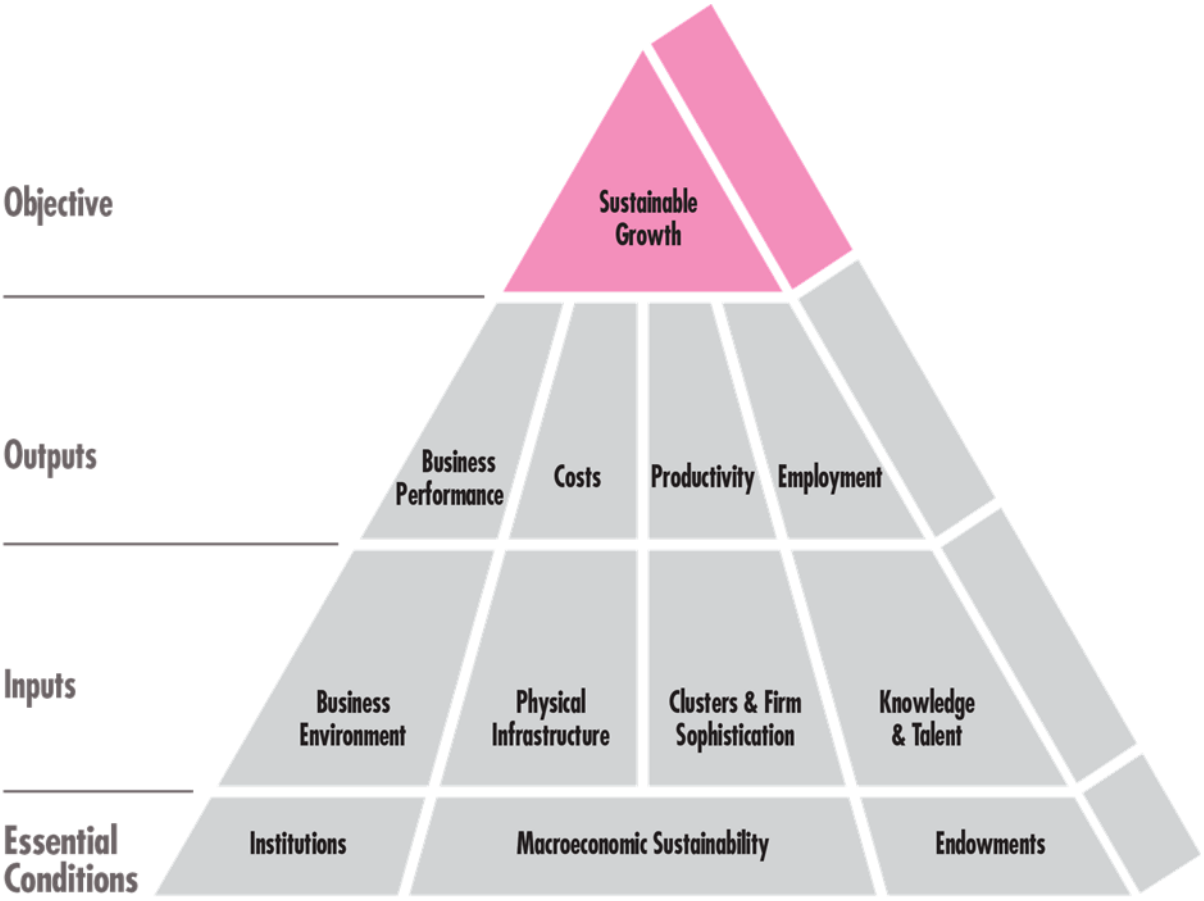
Fig 1.3.2 Real Effective Exchange Rate, Ireland (deflated by CPI), 2010- 2019



Source: Eurostat, Effective Exchange Rate Indices

In summary, aggregate competitiveness indicators suggest that Ireland remains competitive. We continue to perform well in international competitiveness rankings, and indicators of price competitiveness suggest that we are continuing to improve relative to our international trading partners. However, none of this can be taken for granted. The COVID-19 pandemic will have a profound impact on the Irish economy, along with the economies of all of our trading partners. The overall economic impact will not become clear for some time yet.

Chapter 2
Sustainable Growth



Sustainable Growth

The COVID-19 pandemic cuts to the core of Ireland's competitiveness. The whole point of having a competitive economy is to improve people's living standards and quality of life, which have been dramatically impacted by the onset of this crisis. While the NCC tracks a whole range of indicators in this area, because robust data always comes with a time lag, these indicators no longer accurately reflect the situation on the ground. Unfortunately, Ireland's strong performance in quality of life and national income indicators likely represent a high-water mark – a target to aim for when we start to recover from this crisis. Of more concern is Ireland's continued poor performance in addressing environmental issues, which underscores the fact that the economic recovery – whenever it takes place – needs to have environmental sustainability at its heart.

Quality of Life

A key objective of competitiveness is to support a high quality of life, which is broader than material living standards. Several international organisations produce indices that attempt to capture these broader factors, such as life satisfaction and work-life balance, that are not always captured by headline economic indicators. The Council monitors three indices designed to measure well-being, and in all three of these indices, Ireland performs well relative to other countries.

The *OECD's Better Life Index* (Figure 2.1.1) uses a combination of economic indicators (such as employment and income) and 'soft' indicators (such as civic engagement and work-life balance) to provide a fuller picture of the quality of life in different economies. The latest OECD report, released in March 2020, shows that Ireland performs well in several of the OECD measures of well-being – especially health, community and safety, and ranks 16th overall[16]. The *UN's Human Development Index* (Figure 2.1.2) measures average achievement in three basic dimensions of human development: a long and healthy life (measured by life expectancy at birth), knowledge (years of schooling), and, a decent standard of living (GNI/capita). Ireland (with an overall score of 0.94) is one of the best performers in the world on this metric, ranking 3rd behind Norway and Switzerland, and ahead of the UK (0.92) and the OECD average (0.90). Meanwhile, the *UN's Sustainable Development Solutions Network's Ranking of Happiness* (Figure 2.1.3), which uses survey data to estimate whether the population of an economy are living their best possible life, ranks Ireland 16th (out of 153 countries).

National Income

High and rising incomes are a key measure of the success of national competitiveness. While higher incomes are not the only elements for a happy life, they are an important factor. This explains their inclusion in two of the composite quality of life indicators above (OECD, UN HDI). The indicators in this section cover the level and growth of Ireland's national income per capita, and the distribution of income. Ireland performs well under these metrics, with output per capita now slightly higher than the euro area and OECD averages following a number of years of solid growth.

Ireland's exceptionally strong economic growth in recent years resulted in a steady increase in Ireland's income per capita (Figure 2.2.1). As Ireland's GDP figures are impacted strongly by globalisation and the scale and complexity of the activities of its large numbers of multinational enterprises, the NCC examines modified Gross National Income[17] (GNI*) per capita when assessing

[16] The OECD has not assigned rankings to countries in the 2020 Better Life Index, but instead has provided a tool called *Your Better Life Index* which is designed to allow the user to investigate how each of the 11 topics can contribute to well-being in their country and assign relative weights. For simplicity, the NCC have chosen equal weights for all 11 topics, and under this scenario, Ireland would rank 16th out of the countries examined.

[17] GNI* is a supplementary measure of the level of the Irish economy designed to provide greater insight into Ireland's domestic economic activity. GNI* excludes globalisation effects related to highly mobile economic activities that disproportionately impact upon the measurement of the size of the Irish economy. The globalisation effects excluded from GNI to estimate GNI* are: factor income of re-domiciled companies; depreciation charged on capitalised R&D service imports and trade in intellectual property; depreciation of aircraft owned by Irish aircraft leasing companies. For further information, see https://www.cso.ie/en/releasesandpublications/in/nie/in-mgnicp/ .

Ireland's performance relative to other countries. GNI* per capita increased by more than 23% between 2013 and 2018 and Ireland is now slightly above the OECD and euro area GDP per capita averages. These figures will be dramatically impacted by the COVID-19 pandemic. Meanwhile, Ireland's Gini coefficient[18] was 28.9 in 2018, down from 30.7 in 2013, suggesting that incomes are now slightly more equitably distributed (Figure 2.2.2). Ireland's score is now below the euro area average of 30.6, indicating a more equal income distribution in Ireland than in the euro area.

Environmental Sustainability

While grappling with COVID-19 in the short term, ensuring that economic growth is environmentally sustainable remains a pressing issue. Indicators in this section suggest Ireland continues to fall far behind its environmental commitments, and that significant efforts are needed across all sectors of the economy in order to ensure that future growth does not come at the expense of environmental degradation.

The Paris Agreement, in force since November 2016, represents a worldwide effort to limit global temperature increases to less than 2 degrees centigrade above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees centigrade. Within Europe, one of the main instruments to reduce greenhouse gas emissions is the EU Emissions Trading Scheme (ETS), with an objective to reduce emissions in energy intensive industry covered by the Scheme by 21 per cent relative to 2005 levels by 2020, and 43 per cent by 2030. Under the 2009 EU Effort Sharing Decision (ESD), which applies to the non-ETS sector, Ireland has a series of particularly challenging commitments. Between 2013 and 2020, Ireland has a target to reduce GHG emissions to 20 per cent below 2005 levels. Ireland has also committed to increasing the share of renewables in final energy consumption to 20 per cent by 2020 and to moving towards a 20 per cent increase in energy efficiency.

Ireland is falling far behind its environmental commitments. Greenhouse gas emissions per capita in Ireland are the highest in the EU and have actually increased since 2013, while most other countries secured declines (Figure 2.3.4). Compounding this, renewable energy accounts for only 9.9% of inland energy consumption in Ireland, which compares unfavourably with the EU average of 14.6%, and Ireland's own target of 20% (Figure 2.3.1). While Ireland made some gains in terms of CO_2 emissions between 2007 and 2011 (Figure 2.3.3), largely driven by the economic cycle, these gains were reversed when the economy returned to growth. History cannot repeat itself – and the economic recovery in the aftermath of COVID-19 must be green.

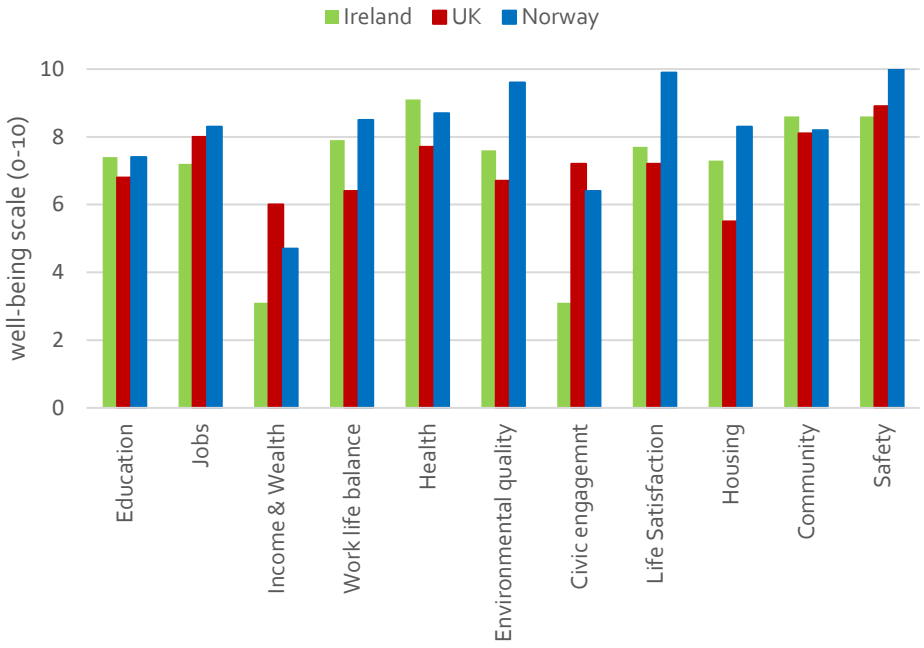
Summary

Sustainable growth sits at the top of the NCC's competitiveness pyramid as the fruits of competitiveness success. While the COVID-19 pandemic has dramatically altered the situation on the ground, prior to the onset of the virus, Ireland was performing well in measures of quality of life and national income. When the economy starts to recover, we should look to Ireland's good performance as a target and rebuild people's quality of life. However, this picture is not all positive. Prior to the COVID pandemic, Ireland continued to fall far behind its environmental commitments and failed to make sufficient progress on either reducing greenhouse gas emissions or moving towards renewable energy sources. One of the immediate consequences of the pandemic may be reduced emissions (as economic growth declines), but without structural changes, these gains will disappear during an economic recovery. The European Green Deal, launched in December 2019, is the European Union's roadmap for making the region's economy sustainable. The Green Deal focuses on turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all. Ireland must ensure that our future growth does not cause irreversible damage to our vital natural resources and that Irish businesses are supported so that they can seize environmentally beneficial opportunities in all sectors.

[18] The Gini coefficient is a measure of equality of income in the population where 0 represents a situation where all households have an equal income and 100 indicates that one household has all national income.

2.1 Quality of Life

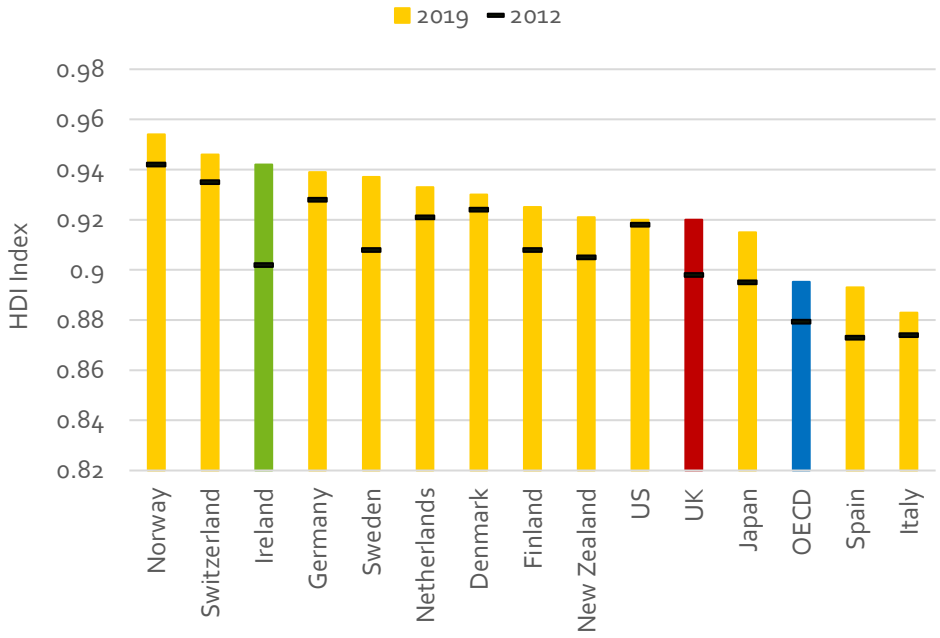
Fig. 2.1.1 OECD Better Life Index, Measuring Well-Being 2020



This figure compares Ireland's score with our closest neighbour the UK, and the leading OECD performer Norway, across a number of OECD Better Life Index well-being indicators. Ireland performs better and scores higher than the UK in seven out of eleven indicators but lags significantly on the Income & Wealth and Civic Engagement indicators. Ireland performs better than Norway on Health and Community.

Source: OECD, Better Life Index 2020

Fig. 2.1.2 Human Development Index[19]

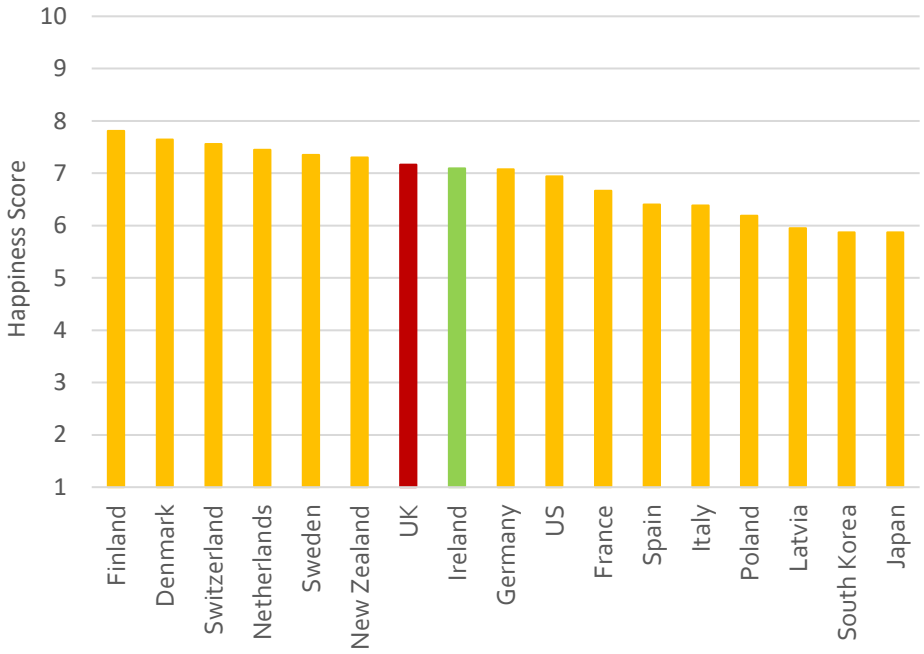


This figure shows the HDI index score of selected high-income OECD countries. In 2019, Ireland was one of the best performers in the world, with an HDI score of 0.94, better than the UK (0.92) and significantly above the OECD average (0.90). Ireland's HDI score increased by over 4% between 2012 and 2019.

Source: United Nations, HDI, 2019

[19] The Human Development Index measures average achievement in three basic dimensions of human development - a long and healthy life, knowledge, and a decent standard of living.

Fig. 2.1.3 Happiness Rankings[20], 2017-2019



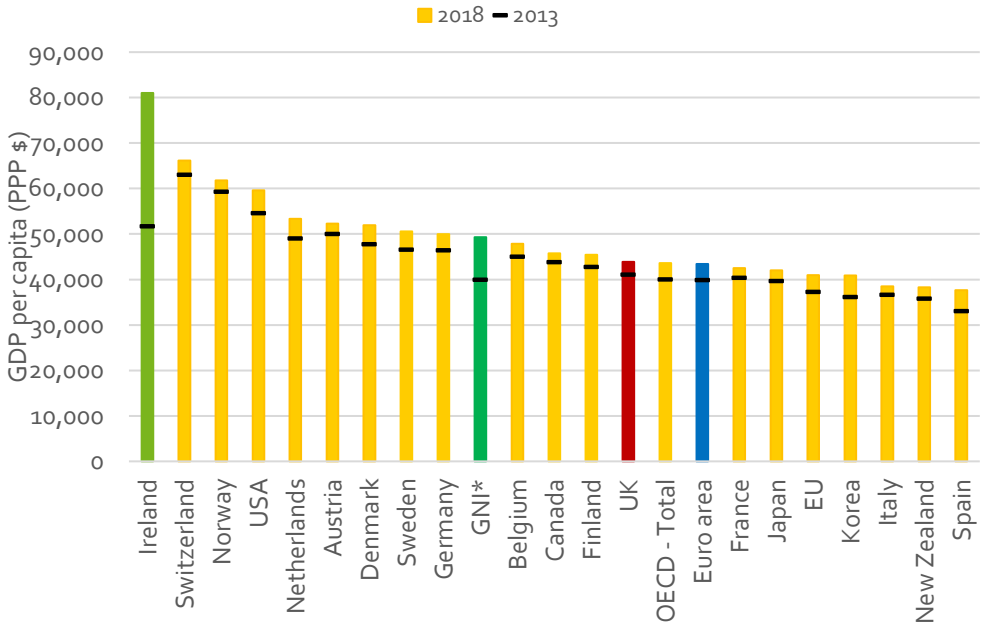
This figure shows the overall happiness level (based on scores devised from Gallup World Poll data) across selected countries. With an overall score of 7.1, Ireland is ranked 16th (out of 153 countries) in the Happiness rankings, just below the UK (13th).

Source: UN Sustainable Development Solutions Network, The World Happiness Report 2020

[20] Happiness scores are based on individuals' assessments of their subjective well-being, as indicated by their survey responses in the Gallup World Poll. Data relates to 2017-2019.

2.2 National Income

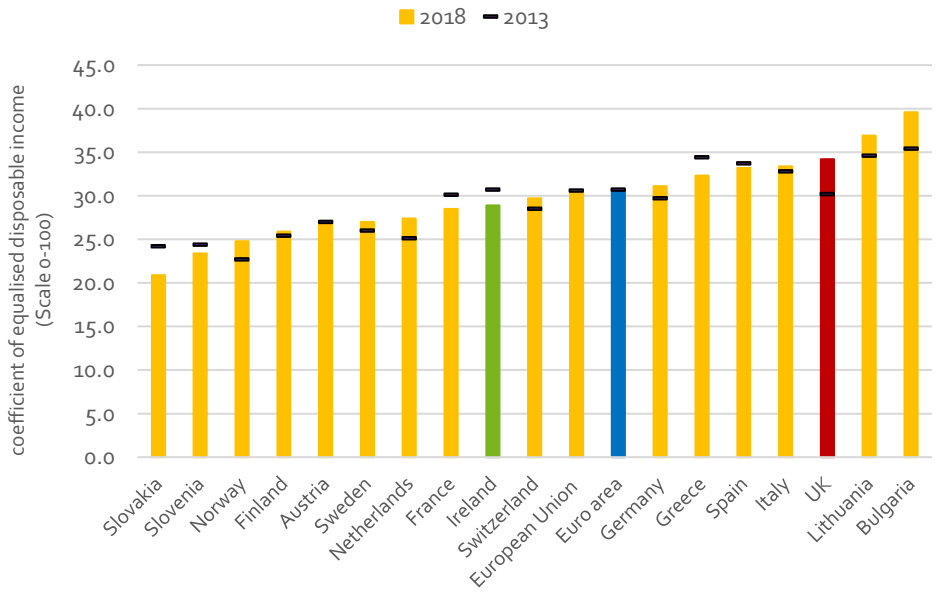
Fig. 2.2.1 GDP per capita, constant prices (2015 PPP, US$), Ireland GNI* per capita[21]



This figure charts the GDP per capita of selected OECD countries, along with GNI* for Ireland, which is regarded as a better measure of the Irish economy. GNI*/per capita recorded a significant increase in the five years to 2018, rising by more than 23% in US dollar terms.

Source: OECD, GDP per capita and Productivity, CSO (GNI*)

Fig. 2.2.2 Gini[22] coefficient of equalised disposable income, 2018



The Gini coefficient is a measure of equality of income in the population. Ireland's Gini coefficient was 28.9 in 2018, down from 30.7 in 2013, suggesting that incomes are now more equitably distributed. Ireland's score is now below the euro area average of 30.6, an indication of a more equal income distribution than in the euro area.

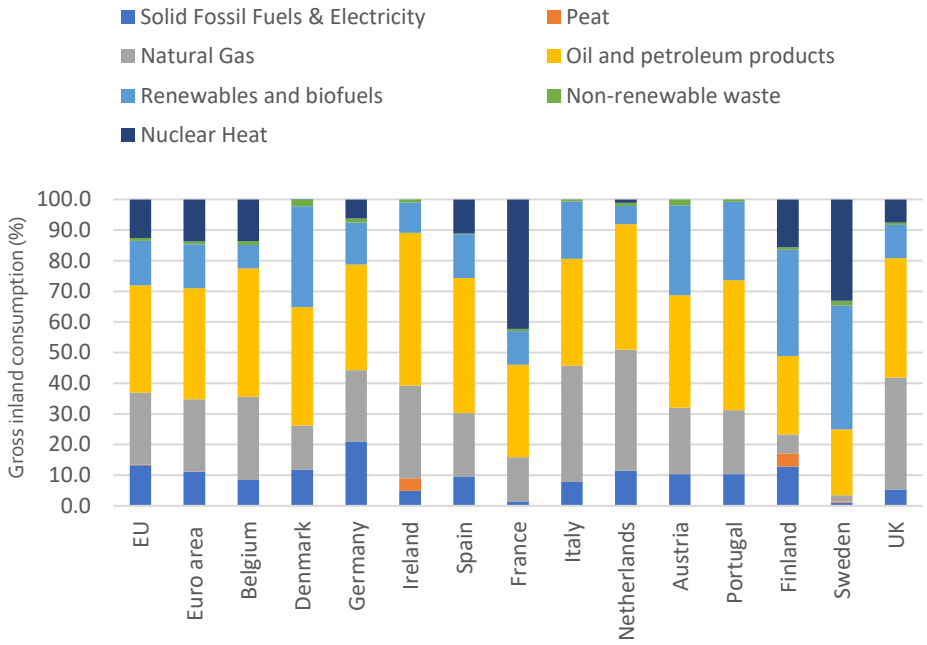
Source: Eurostat, EU-SILC Survey

[21] The ratio of GDP to GNI* in 2013 and 2018 is used to rebase the OECD GDP per capita series. GNI* is a supplementary measure of the level of the Irish economy designed to provide greater insight in to Ireland's domestic economic activity. GNI* excludes globalisation effects related to highly mobile economic activities that disproportionately impact upon the measurement of the size of the Irish economy. The globalisation effects excluded from GNI to estimate GNI* are: factor income of re-domiciled companies; depreciation charged on capitalised R&D service imports and trade in intellectual property; depreciation of aircraft owned by Irish aircraft leasing companies. For further information, see https://www.cso.ie/en/releasesandpublications/in/nie/in-mgnicp/ .

[22] The Gini coefficient is a measure of equality of income in the population where 0 represents a situation where all households have an equal income and 100 indicates that one household has all national income.

2.3 Environmental Sustainability

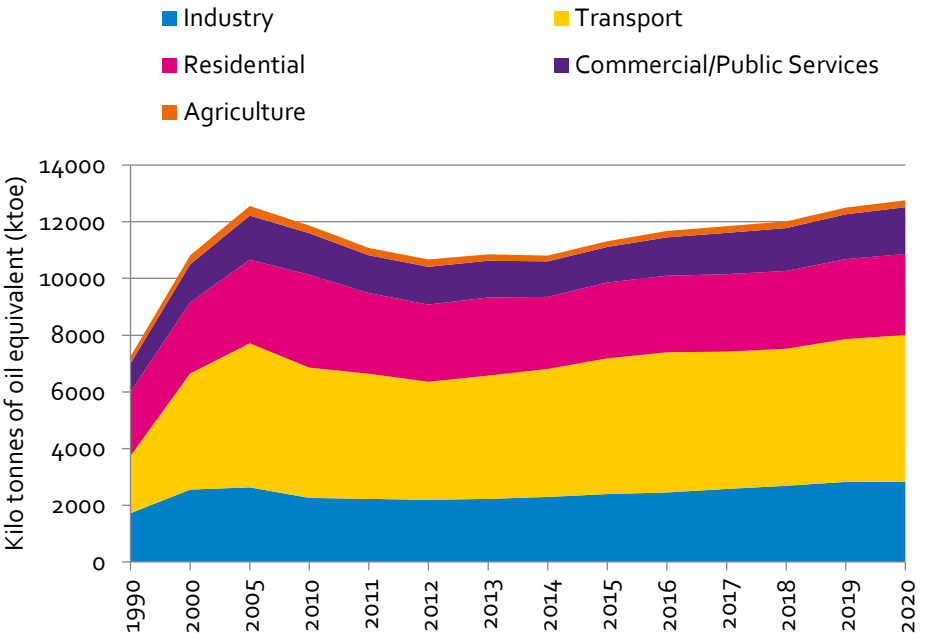
Fig. 2.3.1 Gross inland consumption, percentage by fuel type, 2018



The composition of gross inland energy consumption (the total energy demand of a country) varies significantly across Europe. In 2018, almost 10% of Ireland's energy consumption was derived from renewables, only half way towards meeting the 2020 renewable energy target (20%) and well behind the 2030 target (27%). Renewables accounted for 14.6% of energy consumption in the EU and 10.8% in the UK in 2018.

Source: Eurostat, Simplified Energy Balances

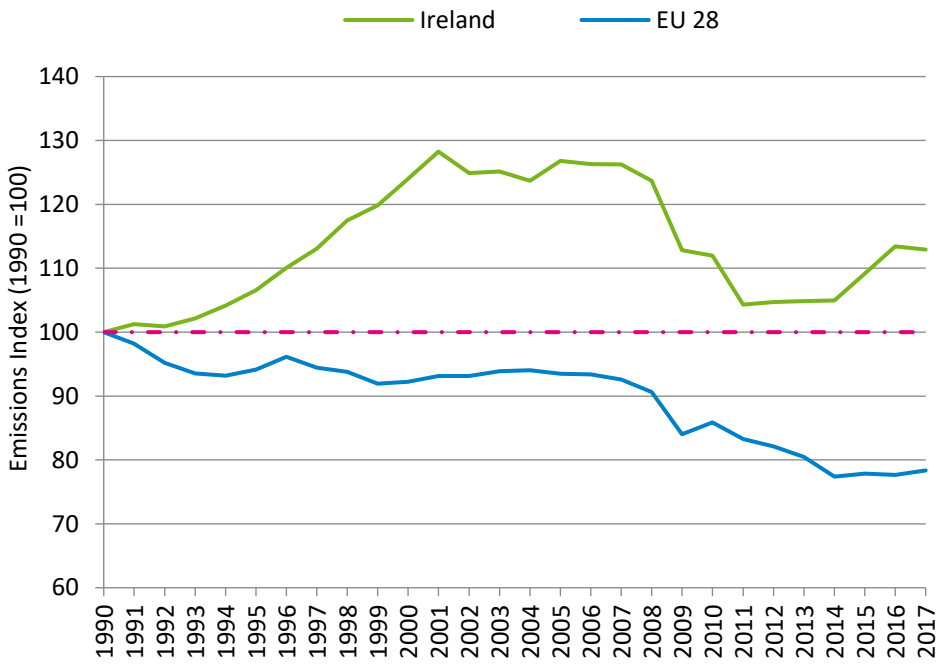
Fig. 2.3.2 Total final energy consumption by sector, Ireland, 1990-2020



Transport and Industry continue to be the two biggest sectors with each accounting for 40% and 22% share of total energy consumption in 2019. In 2020, prior to the COVID-19 pandemic, the y-o-y energy consumption was predicted to record the highest increase in the commercial and public services sector (4%), followed by the Transport (2.61%) and Residential sectors (1.45%).

Source: SEAI Energy Statistics

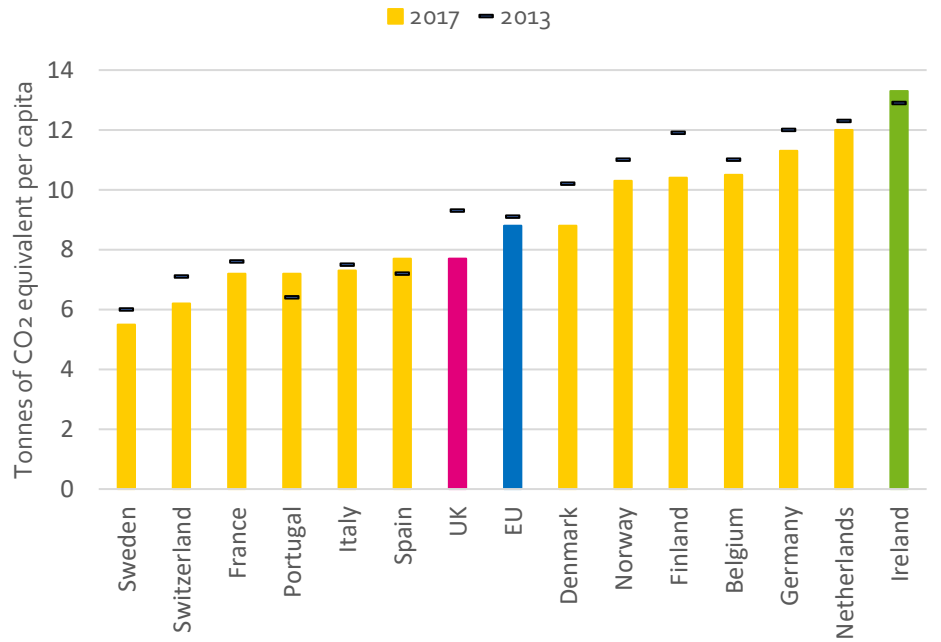
Fig. 2.3.3 Greenhouse Gas emissions (Kt CO_2 equivalent indexed to 1990), Ireland, EU-28, 1990-2017



Ireland's greenhouse gas emissions increased from 1990 to 2001, the highest level ever reported. It fluctuated until 2008 before declining sharply. GHG emissions fell by 0.1% in the year to 2018. Total emissions have gone up by 9.9% since 1990. The EU 2030 targets envisage a domestic EU greenhouse gas reduction target of at least 40% compared to 1990.

Source: Eurostat, Greenhouse Gas Emissions Index

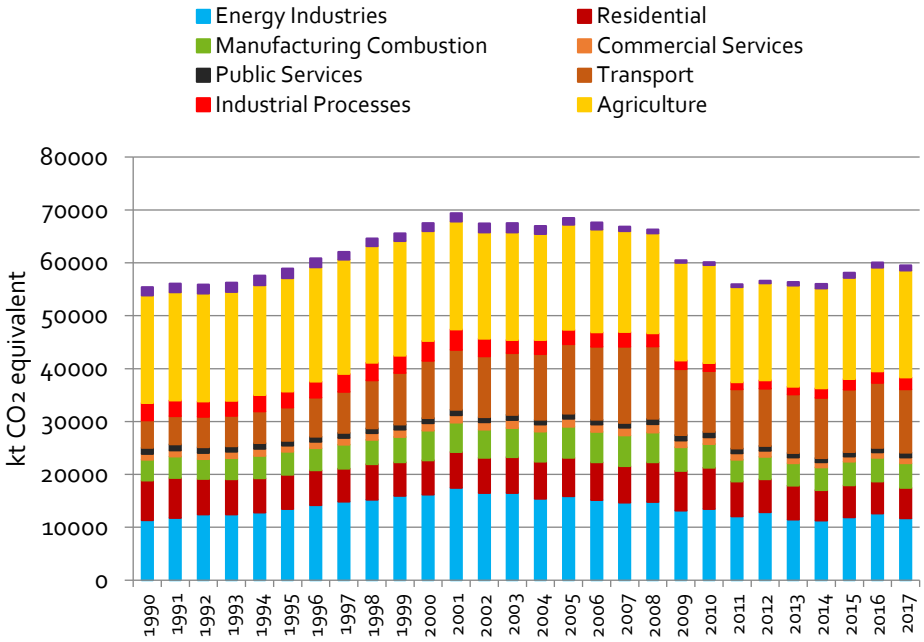
Fig. 2.3.4 Greenhouse Gas emissions per capita,2017



In 2017, with 13.3%, Ireland had the highest greenhouse gas emissions per capita, well above the UK (7.7%) and the EU (8.8%). Ireland was also the only benchmarked country to record an increase (3%) in per capita greenhouse emissions in the period between 2013 to 2017.

Source: European Environment Agency (EEA), Energy Statistics

Fig. 2.3.5 Greenhouse Gas emissions by national climate change sectors (Kt CO2 equivalent), Ireland, 1990-2017

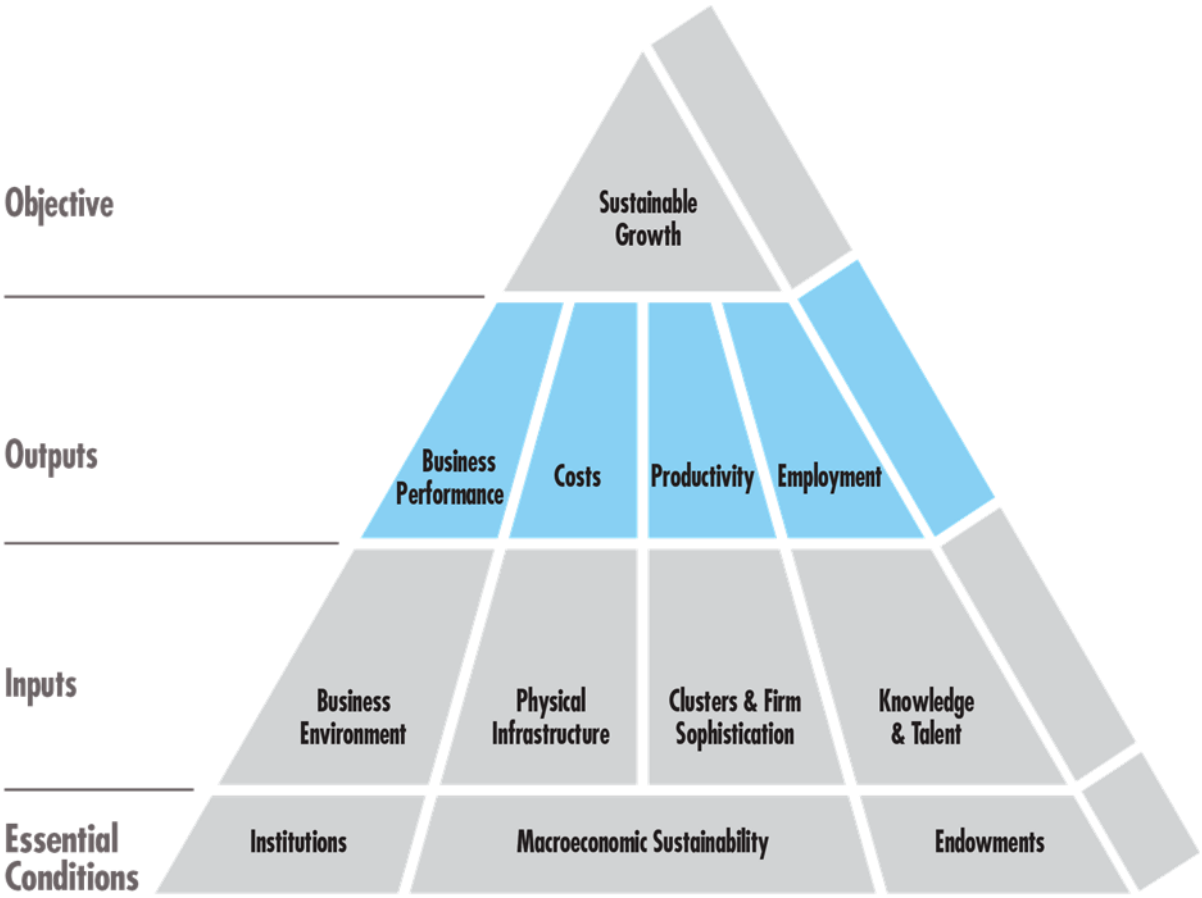


Between 1990 and 2017, the Transport sector recorded the greatest overall increase in Greenhouse Gas emissions, up 133% over the period, followed by Energy Industries, up 3.7%. Meanwhile, emissions fell in the Residential sector, by 23.7%, and in the Agriculture sector, by 0.7%. However, the Agriculture sector remains the largest source of Greenhouse Gas emissions in Ireland, and solutions in this sector will be key to achieving Ireland's targets.

Source: EPA, Ireland's Final Greenhouse Gas Emissions 1990-2017

Chapter 3

Competitiveness Outputs



Competitiveness Outputs

Metrics on competitiveness outputs indicate the effectiveness of a country's economic system to transform natural endowments (through competitiveness inputs, the focus of the next section) into competitive positions. The key set of competitiveness output indicators that the NCC tracks relate to four areas: business performance; costs; productivity; and, employment.

Prior to COVID-19 and the Government's response, it was clear that Ireland was an extremely open international economy. The data continue to show that Ireland had a strong export performance, though this positive business performance is qualified by the concentration of output, with a small number of firms accounting for a large share of Irish exports. This strong business performance is supported by Ireland's high levels of productivity (though the globalisation activities of multinational firms continue to make it difficult to accurately assess Irish productivity). Ireland's productivity advantage is partially offset by its relatively higher average cost base, and it is positive that the data suggest that average costs are increasing relatively slowly in Ireland. However, average costs can obscure cost issues for enterprises at a sectoral and regional level (e.g. commercial property and labour costs), where data limitations do not currently allow more detailed analysis. Employment, the final aspect of the competitiveness outputs that the NCC tracks, is also the indicator that will be most impacted by COVID-19. At the start of the year, prior to COVID-19, unemployment was at the lowest rate since the Global Finance Crisis. However, this situation has been dramatically reversed, with the most recent data[23] indicating a COVID-19 adjusted unemployment rate of 28.2% in April 2020, Ireland's highest rate of unemployment since records began. Ultimately, prior to COVID-19, the data suggested that Ireland was a very competitive economy, a view that is qualified by concerns regarding some aspects of concentration, potential cost disadvantages relative to key competitor jurisdictions, and the need for more detailed productivity data. It remains to be seen whether Ireland's current competitiveness stance will continue to hold once the COVID-19 crisis passes, given the level of uncertainty in the current climate.

Business Performance

As a small open economy, Ireland is very exposed to global economic conditions, leaving the economy particularly exposed to the COVID-19 related disruptions worldwide. Ireland's large trade-to-GDP ratio (232%) is significantly higher than the EU average of 82% demonstrating our open nature (Figure 3.1.1). As the NCC has noted previously, Ireland's exports are concentrated in specific products, primarily medical and pharma exports (Figure 3.1.4), reflecting a longstanding policy to concentrate in products with a high value-to-volume ratio. Exports primarily go to the EU, consistent with the gravity theory of trade, and to the US, with more than 78% of all goods exports destined for these two important markets (Figure 3.1.3). A similar pattern exists for Ireland's services exports, with 56% of all service exports destined for the EU and the US (Figure 3.1.7). The pace and timing of the recovery in the EU and US economies will be crucial to how, and when, Ireland will emerge from the COVID-19 induced recession.

Costs

Given the differing economic endowments and institutional structures underpinning EU economies, it is natural that there will be price divergences[24] in certain areas (e.g. different taxation policies and social security programmes have consequential impacts on labour costs). However, the NCC believes that large cost differences between similar jurisdictions can signal to Irish policymakers that there are issues in the underlying markets (i.e. the competitiveness inputs). Evidence strongly suggests that Ireland remains a high cost economy relative to the rest of the EU with estimates suggesting that Irish prices are approximately

[23] CSO (April 2020) Monthly Unemployment. Given the unprecedented nature of the COVID-19 crisis, the CSO has presented unemployment data in two ways, namely, the traditional unemployment rate, and the COVID-19 adjusted unemployment rate.

[24] Prices and costs are used in this section interchangeably.

13% higher than the EU average (Figure 3.2.4)[25], but that inflation has been rising more slowly than elsewhere in more recent times (in 2019 running at 0.9% compared to the EU average of 1.5%) (Figure 3.2.1). However, this general picture has the potential to mask cost concerns in specific sectors or regions, which are not possible to estimate because of significant data gaps.

Labour costs may present an issue for certain businesses but not others, depending on corresponding labour costs in countries where their competition is based. So, while Irish labour costs are only 4% higher than the euro area, they are 16% higher than in the UK (Figure 3.2.6), making it challenging for those competing in the UK market or competing with UK exporters in other markets (including Ireland). The NCC also looks at important consumer costs like the price of residential property (Figure 3.2.17) and childcare (Figure 3.2.16), which the data shows continue to be an issue, as high prices in these areas can erode real wages. Finally, it is likely that cost pressures are building in areas where there is a lack of comparable data, and the NCC has previously flagged, such as, cost of insurance and legal services.

Productivity

Ultimately, productivity is the primary driver of an economy's competitiveness over time, and data based on GDP indicate that Ireland has high productivity rates (Figure 3.3.1). However, measured productivity in Ireland is complicated because of the scale of high value-added activities of FDI companies located here. This is reflected in the sectoral breakdown that shows strong productivity growth in the ICT and manufacturing sectors, while productivity stagnates or declines in other sectors (Figure 3.3.6). The CSO data show a clear divergence between the productivity growth of sectors dominated by multinationals, where productivity growth of 6.1% was recorded in 2017, compared to just 0.6% in the rest of the economy (Figure 3.3.8).

There is less clarity about the productivity performance of the increasingly diverse domestic economy, where both high and low performing SMEs seem to co-exist. As noted in the *Productivity Statement 2019*, greater access to disaggregated data on productivity by size class and at enterprise level would be useful for informing the Council, and policymakers more generally, on the how to address low productivity in the economy.

Employment

A properly functioning labour market is crucial for competitiveness as it ensures that everyone faces the appropriate incentives to use their time in the most efficient and productive way possible. Before this crisis, the employment figures in Ireland had been positive with the unemployment rate standing at 4.7% in Q4 2019, the lowest rate observed in Ireland since the Global Financial Crisis. OECD employment data shows that unemployment in Ireland was lower than the EU and euro area averages, and on a par with the OECD average (Figure 3.4.3). However, COVID-19 has completely reversed the decline in unemployment in recent years. In April 2020, if those receiving the COVID-19 Pandemic Unemployment Payment are considered unemployed, the Irish unemployment rate stood at 28.2% (Figure 3.4.4).

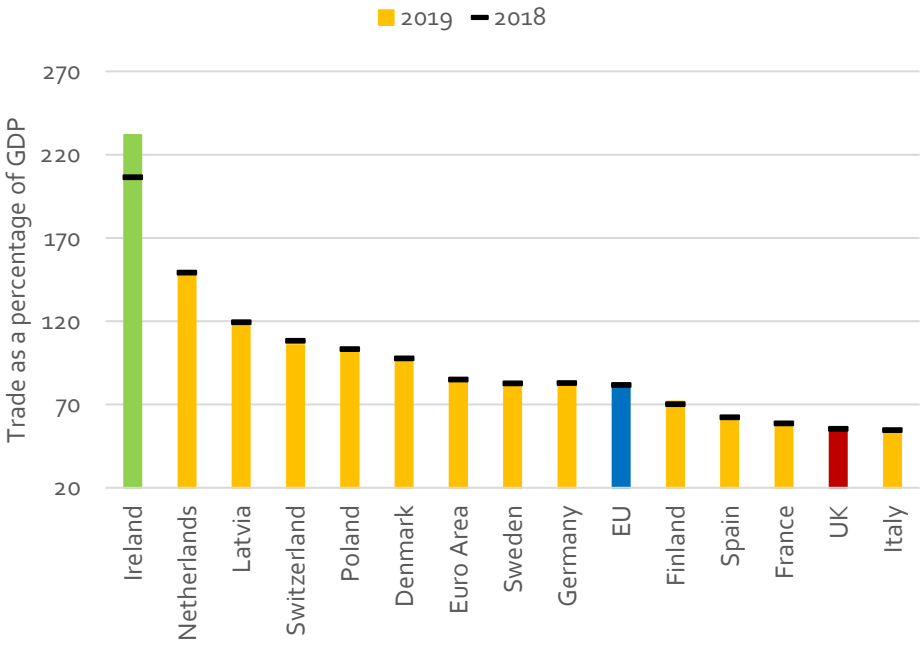
Summary

Prior to the outbreak of COVID-19, it appeared that Ireland was a very competitive economy, but one that faced challenges. These included low productivity in certain domestically-dominated sectors, high product and sectoral concentration, international trade tensions (including Brexit) and a relatively high cost base. The 2020 Scorecard indicates that these challenges persist and will be complicated by the current uncertain situation. The remainder of this section goes through each aspect of the competitiveness outputs and provides more details to support the NCC's view summarised above.

[25] When actual individual consumption is the analytical category used for PPP calculation, Ireland's price level index was 130.6. In this instance, the NCC considers GDP as the appropriate analytical category as the Competitiveness Scorecard is a business-focused document, and GDP is the most appropriate indicator of overall economic activity available. However, actual individual consumption is likely the best measure of material well-being because it comprises only goods and services that households actually consume to satisfy their individual needs.

3.1 Business Performance

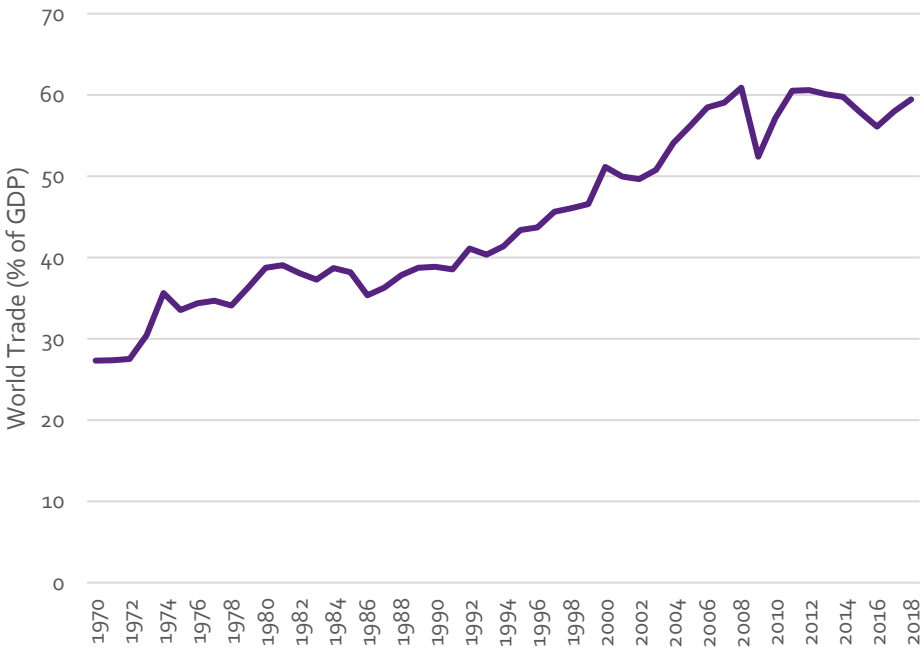
Fig. 3.1.1 Exports and Imports as a percentage of GDP,2019



Exports and imports of goods and services, as a percentage of a country's GDP, reflects both the degree of its openness and of the size of the economy, with a higher ratio expected for smaller countries. In 2019, total trade as a percentage of GDP was 232% in Ireland, with the closest EU country being the Netherlands at 148%. Ireland's total trade as a percentage of GDP continues to rise, increasing by 12.2% between 2018 and 2019.

Source: OECD, Trade Statistics

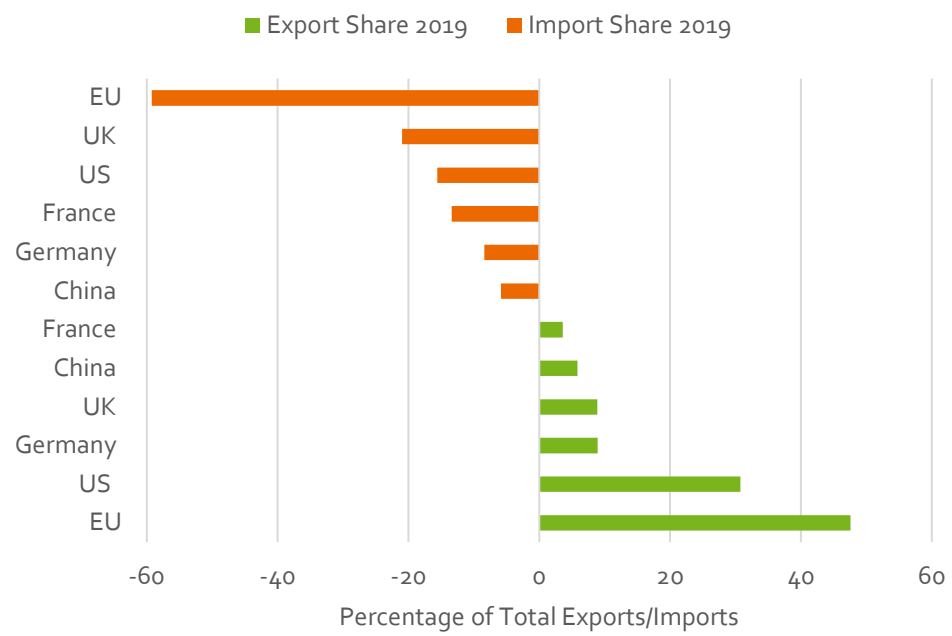
Fig 3.1.2 World Trade as a percentage of World GDP



Over the past decades, global trade as a percentage of GDP has increased considerably. However since the onset of the global financial crisis, growth has stagnated. A downward trend in globalisation has significant implications for Ireland due to the highly open nature of our economy. Ireland's trade as a percentage of GDP far exceeds neighbouring EU countries (see figure 3.1.1) and any increase in protectionism in the aftermath of COVID-19 would have negative consequences for economies like Ireland that are highly integrated into global supply chains.

Source: World Bank

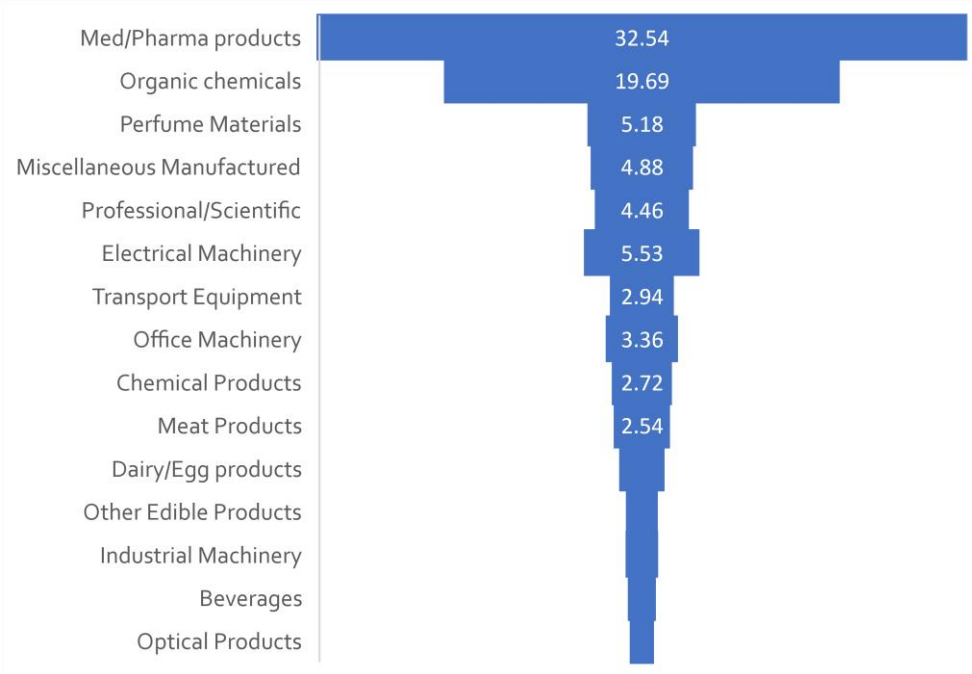
Fig 3.1.3 Irish goods exports and imports, percentage share by trading partners, 2019



As would be expected, intra-EU trade accounts for a substantial proportion of Ireland's global trade. In 2019, 47.6% of Ireland's exports went to the EU, while 59.3% of Ireland's imports came from the EU. The UK is the single largest source of imports, at 21%, followed by the USA at 15.6%, while the largest country export market is the USA (30.7%) followed by Germany and the UK at 8.9%. Our major markets for both imports and exports broadly coincide.

Source: CSO, Trade Statistics

Fig. 3.1.4 Goods Exports Top 15 Commodities 2019



This figure demonstrates a clear concentration in Ireland's export sectors, in line with the focus of policy on growing high-tech sectors over the past five decades. Two sectors, pharmaceutical products and organic chemicals, accounted for over half of Ireland's total goods exports. The essential oils and perfumes, miscellaneous manufactured, professional and scientific, and electrical machinery and appliances sectors each accounted for close to 5% of the total share of goods exports.

Source: CSO, Trade, Exports Value by Country and Commodity Group

Fig. 3.1.5 Goods Exports by Commodity and Trading Partner, 2019

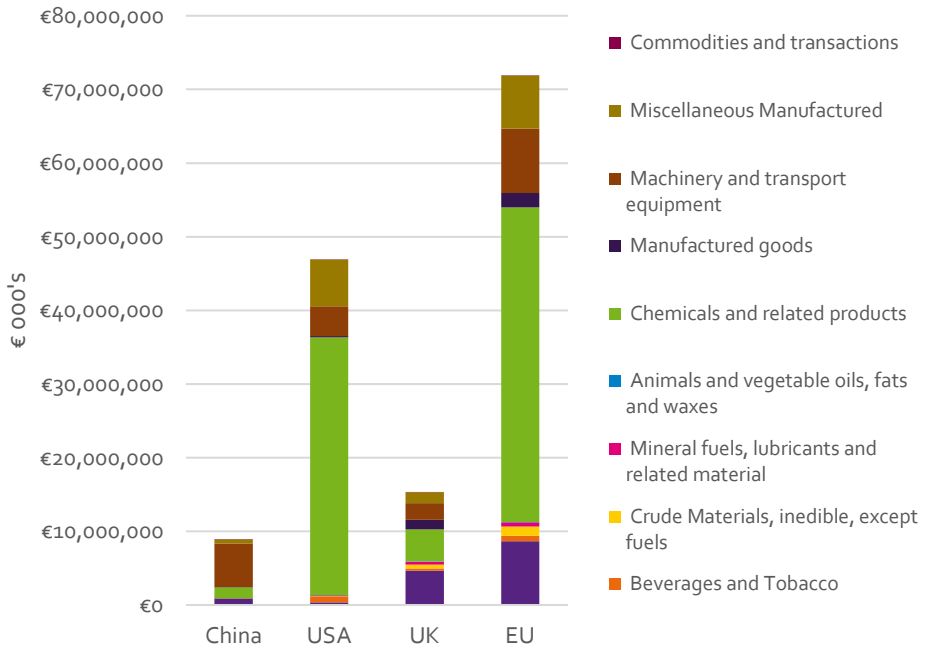
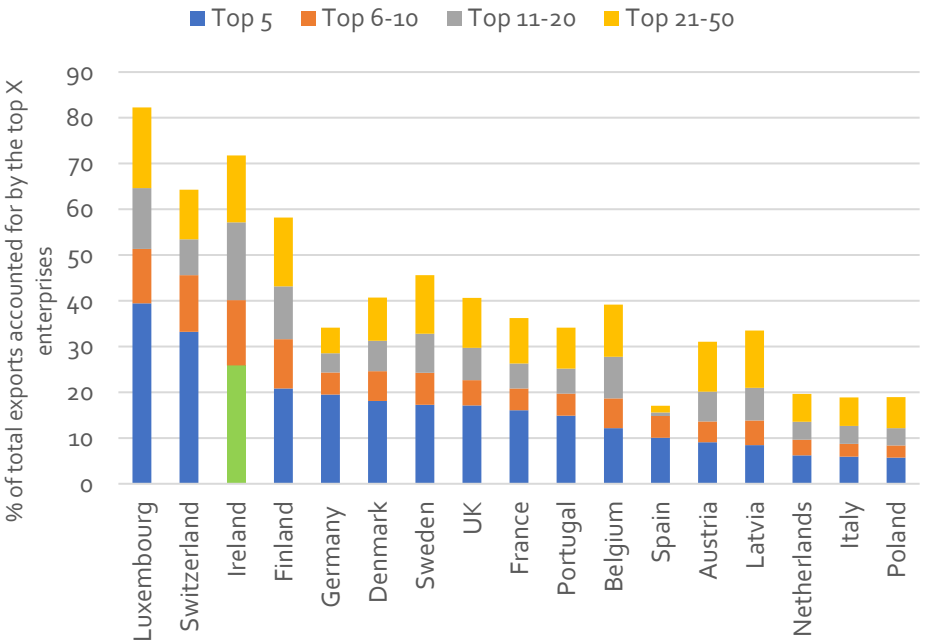


Figure 3.1.5 considers Ireland's exported goods by commodity group and trading partner. In 2019, Ireland's three largest goods export markets were the EU28 (€72 billion), the USA (€46.9 billion) and the UK (€15.3 billion). Chemical and related products accounted for the largest share of exports from Ireland to the EU (€42.7 billion) and the USA (€35 billion). This reflects Ireland's role as an export platform to both the EU and the USA. Food and live animals accounted for the largest share of exports from Ireland to the UK (€4.7 billion).

Source: CSO, Trade, Exports Value by Country and Commodity Group

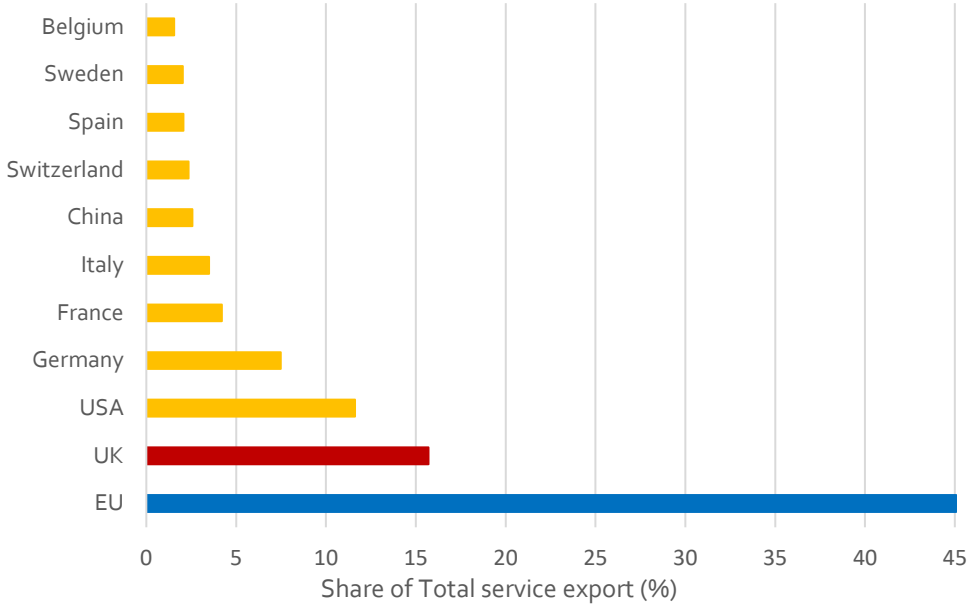
Fig. 3.1.6 Value of goods exports by enterprise concentration, 2017



This figure shows export concentration in selected countries. Ireland's goods exports are dominated by the activities of a small number of firms. In 2017, the top five exporters in Ireland accounted for 25.9% of total goods exports. Interestingly, Ireland depended on 20 firms for 57% of total goods exports while 71.8% of goods exports were accounted for by Ireland's top 50 exporting firms.

Source: Eurostat, Concentration of Trade

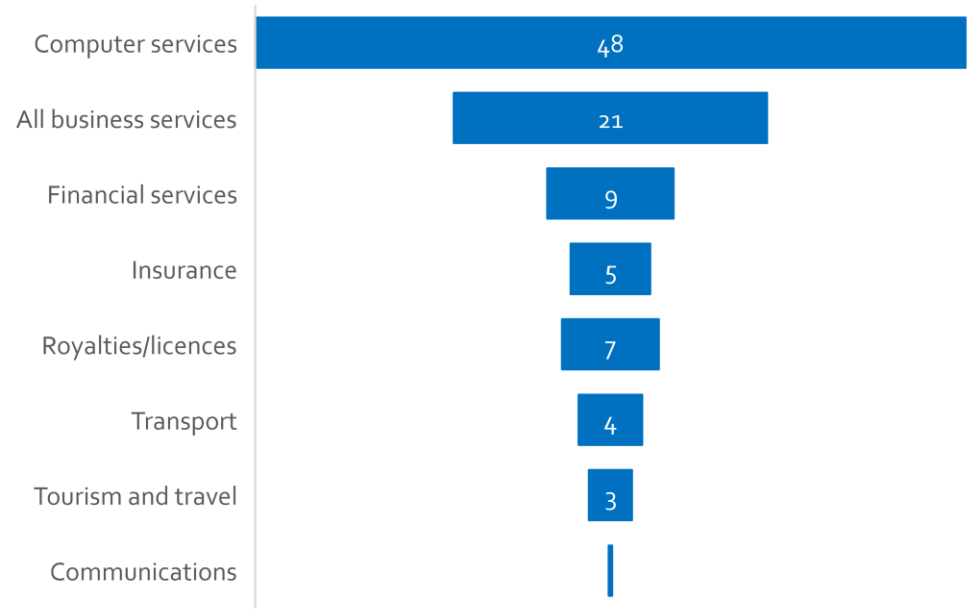
Fig. 3.1.7 Services Exports by Principal Trading Partner, Ireland, 2018



This figure details the main destinations of Irish service exports. In 2018, the majority of Ireland's service exports went to the EU (45%), and almost one third of that (15.7%) went to the UK. The US received 11.6% of Ireland's service exports.

Source: CSO, Trade, Exports of Services by Geographic Location

Fig. 3.1.8 Services Trade by Principal Category, Ireland, 2018[26]



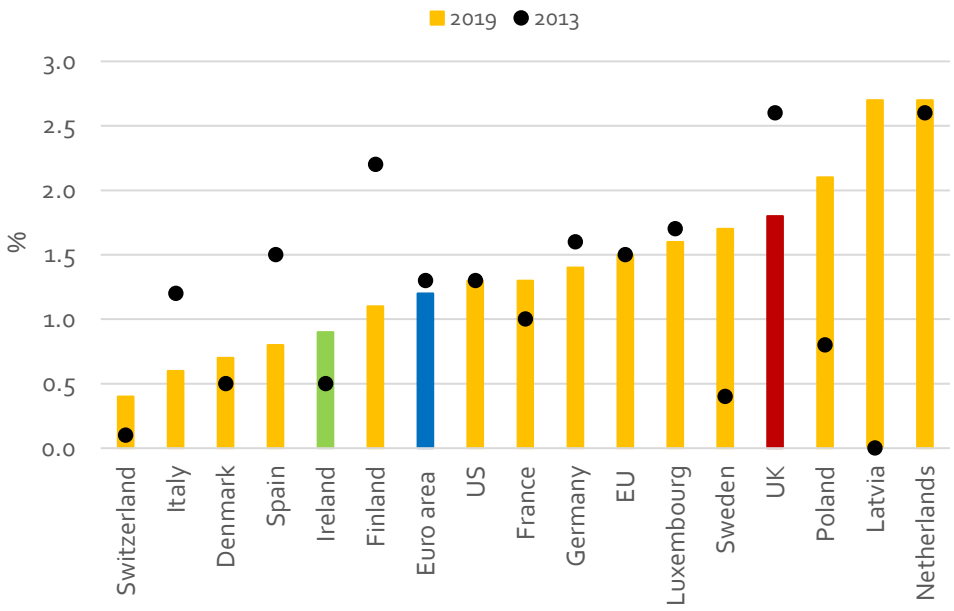
Ireland's service trade is highly concentrated in a small number of sectors. Computer services accounted for 47.9% of total service exports in 2018, with business services in second place, accounting for 21.1% in 2018. Financial services and insurance accounted for 8.5% and 5.4% respectively.

Source: CSO, Trade, Exports of Services by Component

[26] All business services - Merchanting, Other Trade related services, Operational leasing, Legal, Accounting and other professional services, Advertising and market research, Research and development, Architectural engineering and other technical services, Management services between affiliates, Trade related services, Other.

3.2 Costs

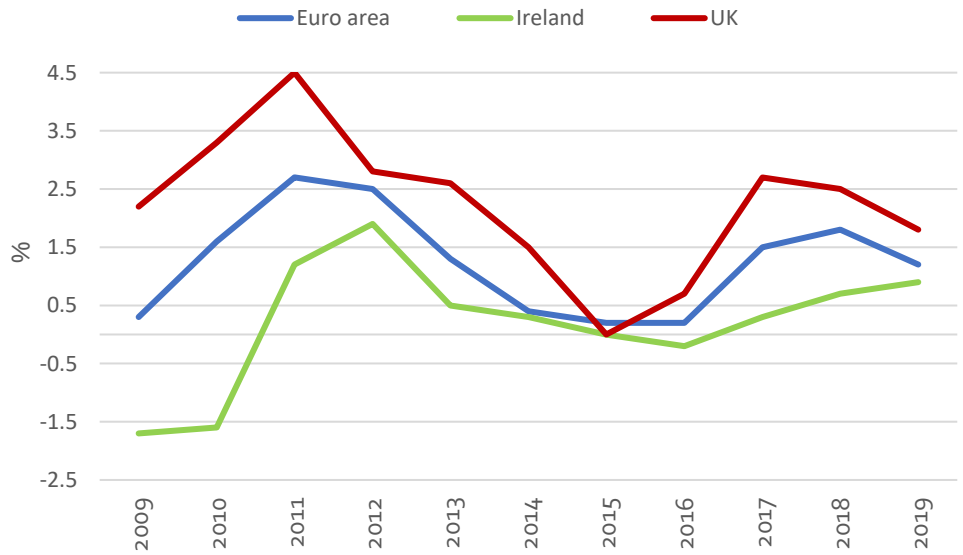
Figure 3.2.1 Harmonised Index of Consumer Prices (HICP), Rate of Change, 2013, 2019



The Harmonised Index of Consumer Prices (HICP) is an economic indicator that measures the change over time of the prices of consumer goods and services. Consumer price inflation in Ireland (as measured by the HICP) was 0.9% in 2019. This figure is below the UK (1.8%) and the EU average (1.5%), and well below that in both the Netherlands and Latvia (2.7%).

Source: Eurostat

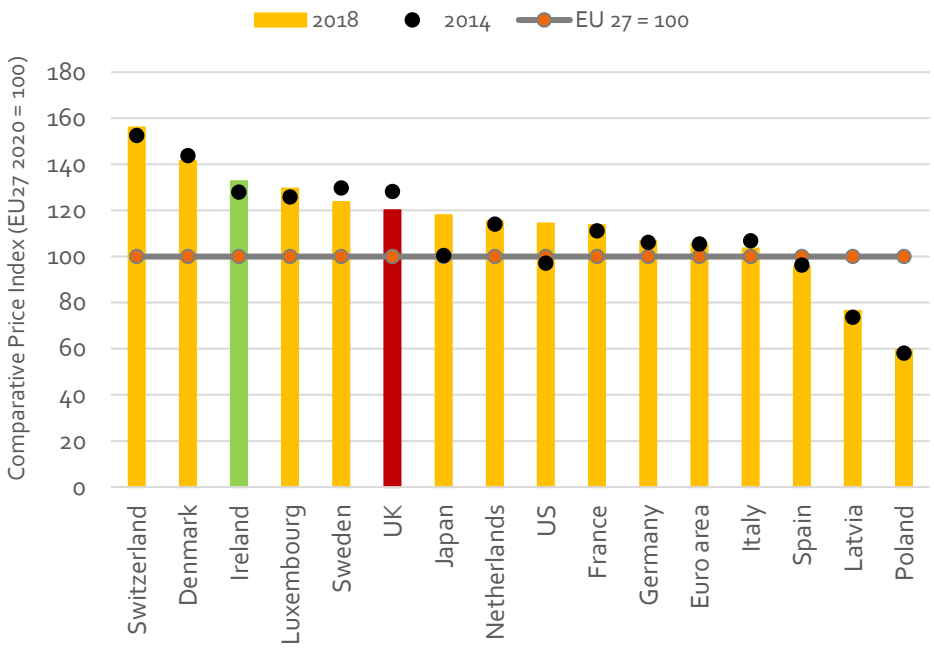
Figure 3.2.2 HICP, average inflation rate, Ireland, UK, euro area, 2009-2019



Ireland's inflation rate has remained below the euro area average since 2008 and below the UK in all years considered except 2015 (both Ireland and the UK experienced 0% inflation in 2015). Since 2016, Irish inflation has been increasing, but still remains lower than the euro area and UK inflation rates, although these three rates have been converging in recent years.

Source: Eurostat

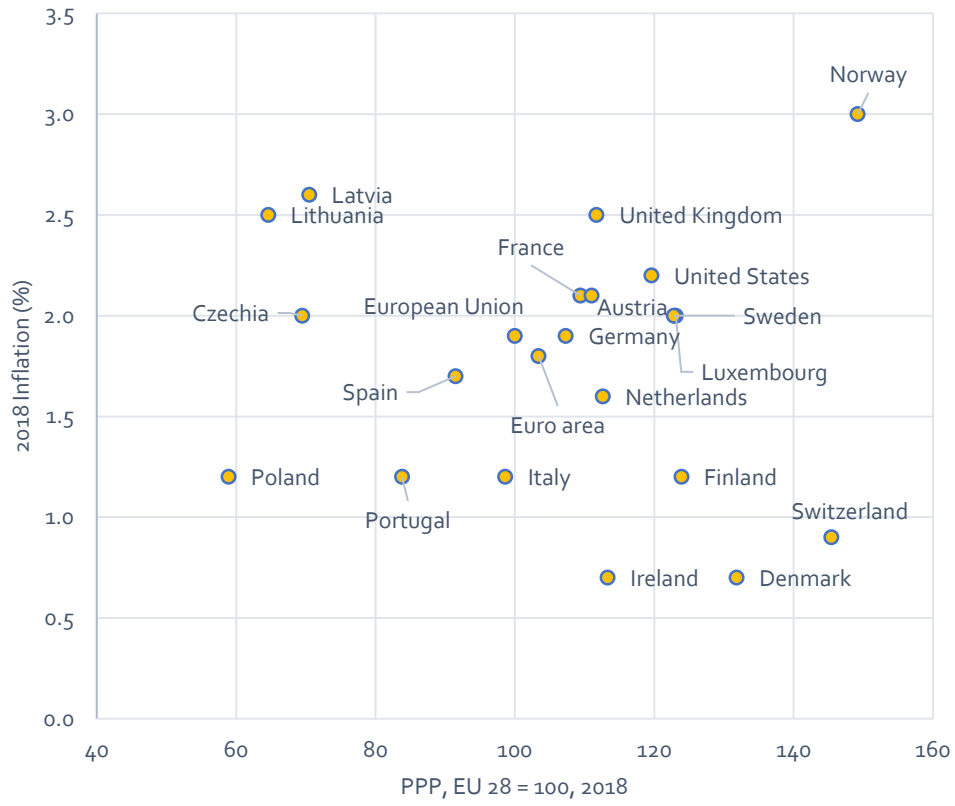
Figure 3.2.3 Comparative price levels of final consumption by private households including indirect taxes, 2018



In 2018, Ireland had the 3rd highest consumer price levels in Europe, after Switzerland and Denmark. Irish price levels were 32.7% above the EU level, with prices in the UK 20.1% higher than the EU. Poland, Bulgaria and Romania had the lowest price levels in the EU. Price levels on average in the euro area (5.8%) were marginally higher than in the EU-27.

Source: Eurostat

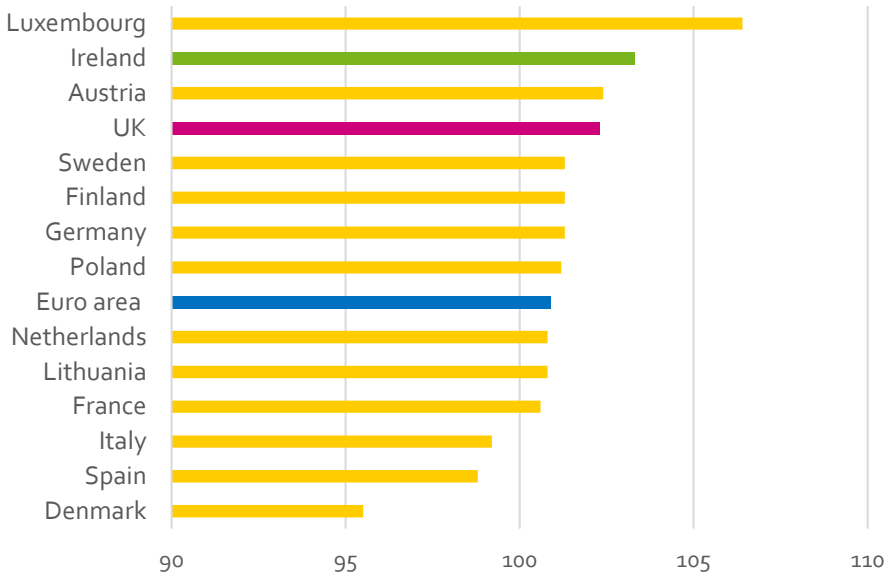
Figure 3.2.4 Consumer price levels, 2018 and inflation rate of change, 2018



This figure brings together both changes in prices (inflation) and the price level, with the potential for a loss of cost competitiveness as you move more towards the top right quadrant in the figure. In 2018, Ireland's inflation rate was among the lowest in the EU (0.7%), alongside Denmark. Ireland's current price profile may be described as "high cost, rising slowly" while the UK and the USA may be described comparatively as "high cost, rising quickly".

Source: Eurostat

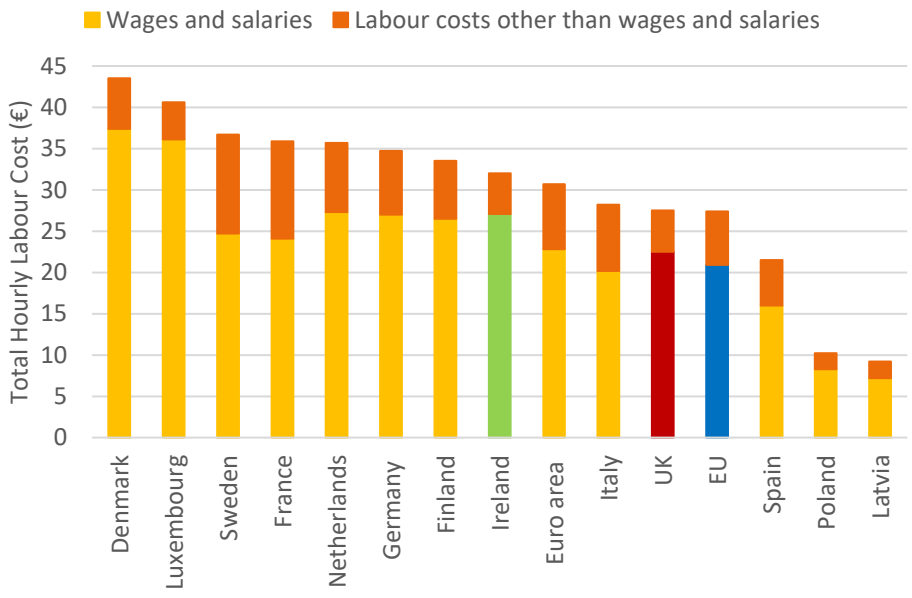
Figure 3.2.5 Comparison of Service producer prices, 2017 (Index 2015 = 100)



This figure compares service producer price levels in Ireland relative to selected European countries and the euro area. Both the UK and the euro area are important markets for Ireland's service exports (as can be seen in Figure 3.1.7) and Ireland's services producer prices have increased at a faster rate than those in the UK and euro area. Service producer price levels in Ireland were 3.3% greater in 2017 than they were in 2015. Prices in the euro area were 0.9% higher on average and prices were 2.3% higher in the UK than their 2015 value.

Source: Eurostat

Figure 3.2.6 Total economy hourly labour costs[27][28], 2018



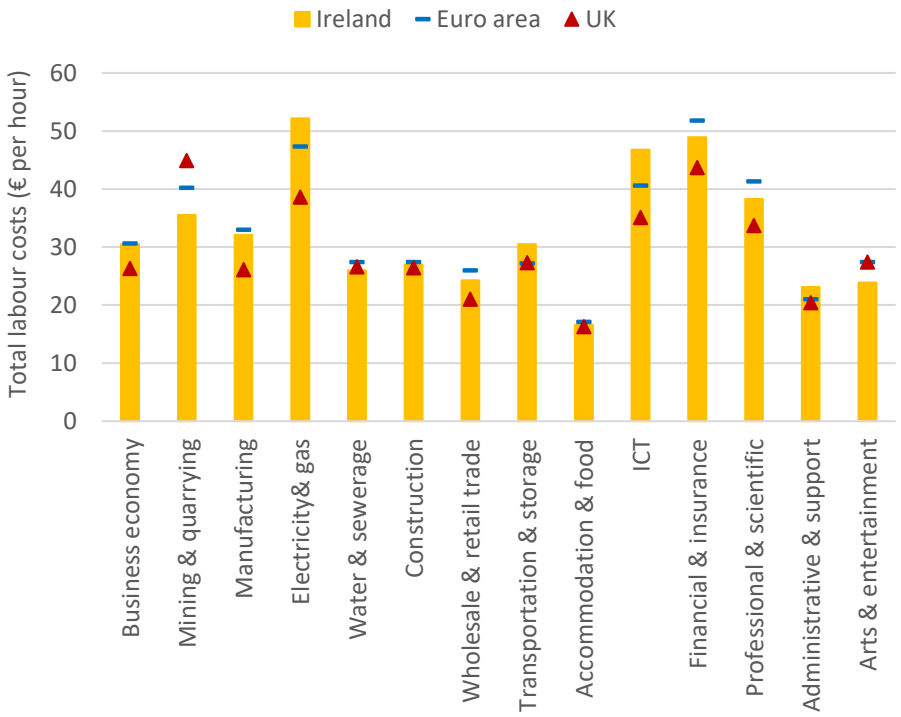
Labour costs refer to the cost of wages and salaries plus non-wage costs such as employers' social contributions. Ireland's non-wage costs (€4.90) are low in comparison to the euro area average (€7.90). Ireland's total labour costs averaged €32 per hour in 2018. Total hourly labour costs in Ireland were 4.2% higher than the euro area (€30.70) and 16.4% higher than the UK (€27.40) in 2018. Total hourly labour costs in the EU ranged from €5.40 in Bulgaria to €43.50 in Denmark.

Source: Eurostat

[27] Eurostat total economy data refers to enterprises with 10 or more employees in the industry, construction and services sectors, excluding public administration, defence and compulsory social security.

[28] Wages and salary costs include direct remuneration, bonuses, and allowances paid by an employer in cash or in kind to an employee in return for work done, payments to employees saving schemes, payments for days not worked and remuneration in kind such as food and drink. Labour costs other than wages and salaries include the employers' social contributions plus employment taxes regarded as labour costs less subsidies. They do not include vocational training costs or other expenditures such as recruitment costs or spending on work clothes.

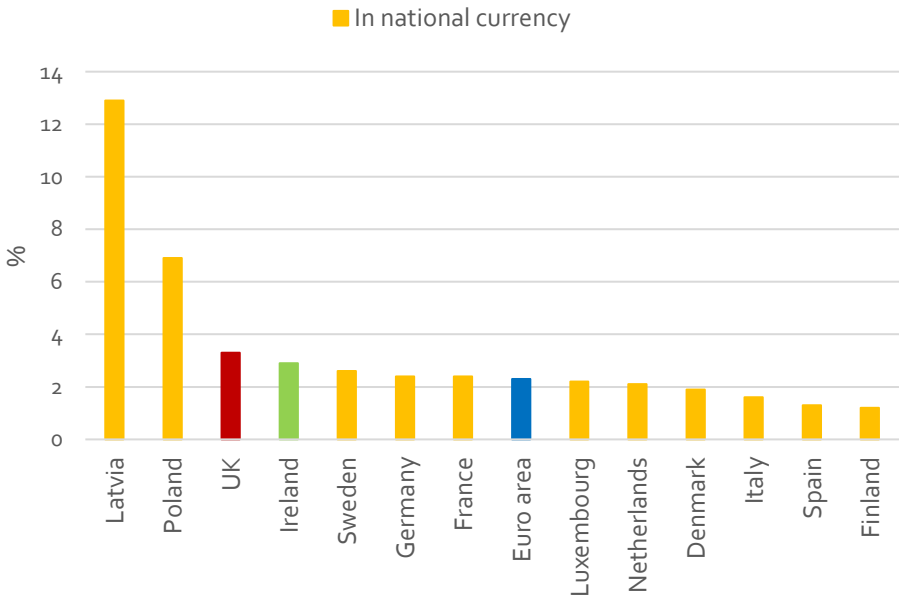
Figure 3.2.7 Hourly Labour Costs, Business Economy, Detailed NACE sectors, 2018



This figure details labour costs at a sectoral level. In 2018, hourly labour costs in Ireland were highest for utilities (electricity, gas, steam and air conditioning) at €52.20 per hour. Ireland's lowest labour costs were in the accommodation and food services sector where labour was priced at €16.60 per hour. Ireland's hourly labour costs exceeded the euro area average in the utilities, transportation and storage, information and communication, and administrative and support services sectors. Ireland's hourly labour costs were greater than those in the UK for all sectors except mining and quarrying, water and sewerage, and arts and entertainment.

Source: Eurostat

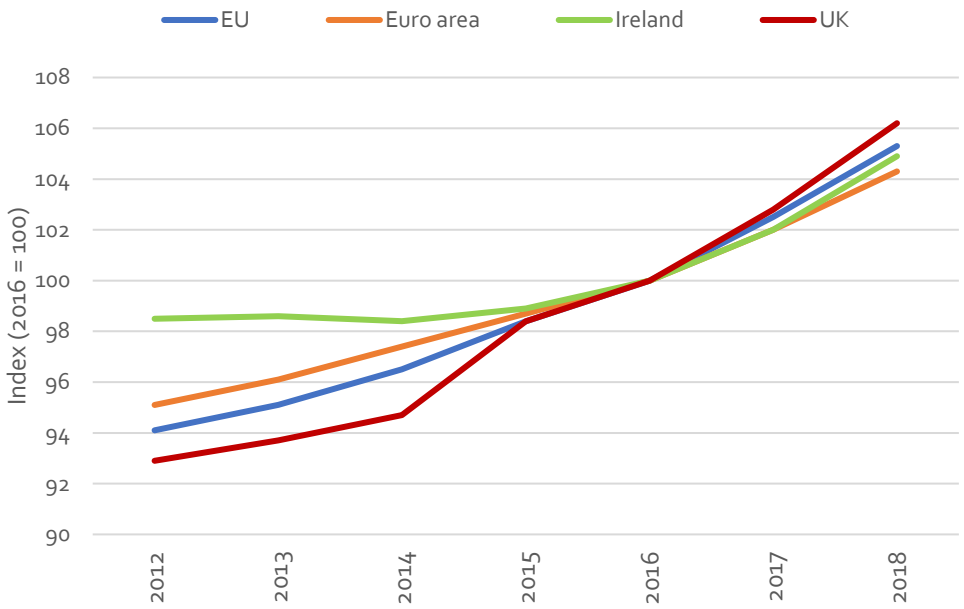
Figure 3.2.8 Growth in Hourly Labour Costs 2018



This figure shows the growth rate in hourly labour costs in a selection of EU countries. Between 2017 and 2018, Ireland's hourly labour costs increased by more (2.9%) than euro area hourly labour costs (2.3%). Latvia experienced the largest rise in hourly labour costs with a 12.9% increase between 2017 and 2018, but it was from a very low base, as per Figure 3.2.6.

Source: Eurostat

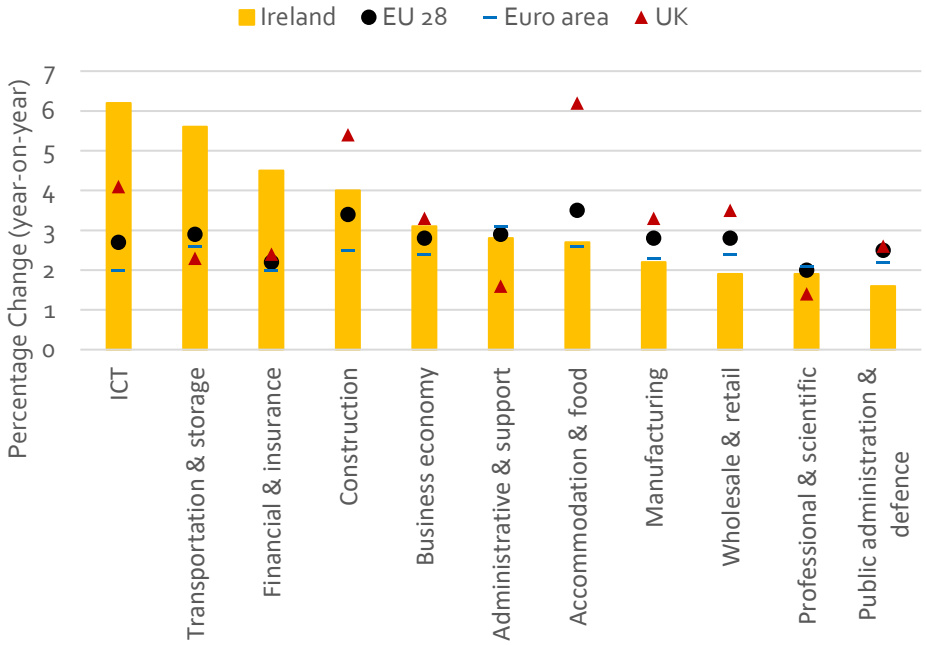
Figure 3.2.9 Labour costs index, 2012-2018



This figure shows labour costs in index form over time, where 2016 labour costs are 100. Irish nominal labour costs have been increasing since 2014, following a similar trend to labour costs in the EU, euro area and UK, but at a lower cumulative rate since 2014.

Source: Eurostat

Figure 3.2.10 Growth in labour costs[29], by economic sector, annual percentage change, 2018

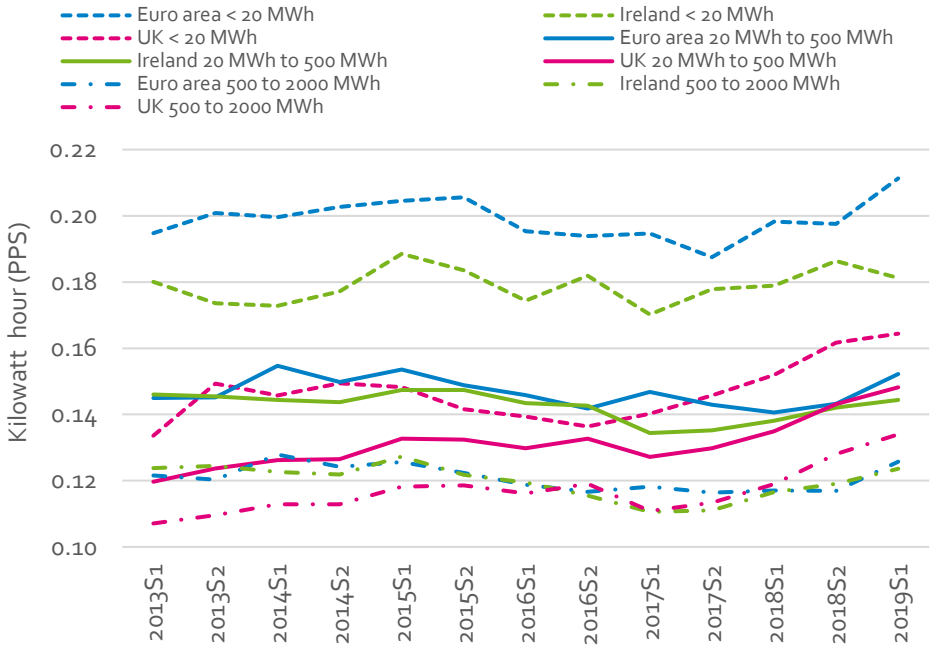


Growth rates of labour costs vary by sector, reflecting different supply, demand and productivity conditions across sectors. Between 2017 and 2018, Ireland's information and communication sector experienced the highest growth (6.2%), followed by the transportation and storage sector (5.6%). Growth in labour costs was lowest in Ireland's public administration sector (1.6%), below those elsewhere. Labour costs rose by more in the UK construction and accommodation and food sectors (5.4% and 6.2%) than in the EU28 (3.4% and 3.5%).

Source: Eurostat

[29] Labour cost for LCI (compensation of employees plus taxes minus subsidies).

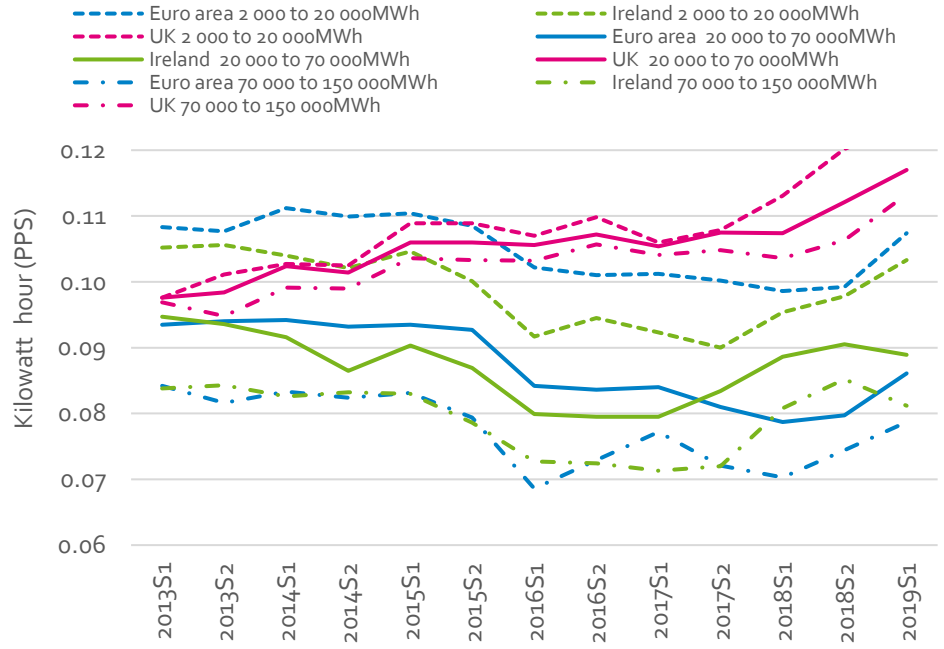
Figure 3.2.11 Non-household electricity prices, low consumption bands (excluding VAT and other recoverable taxes and levies)[30], 2013 - 2019



The prices of electricity for non-household consumers in the three lowest consumption bands are detailed in this figure. Irish prices have remained below euro area prices for the < 20 MWh band, but above the UK. Irish prices for the bands 20 – 500 MWh and 500 – 2000 MWh have followed a similar trend to average euro area prices since 2013 and were below UK prices in both categories in 2019.

Source: Eurostat

Figure 3.2.12 Non-household electricity prices high consumption bands (excluding VAT and other recoverable taxes and levies), 2013-2019

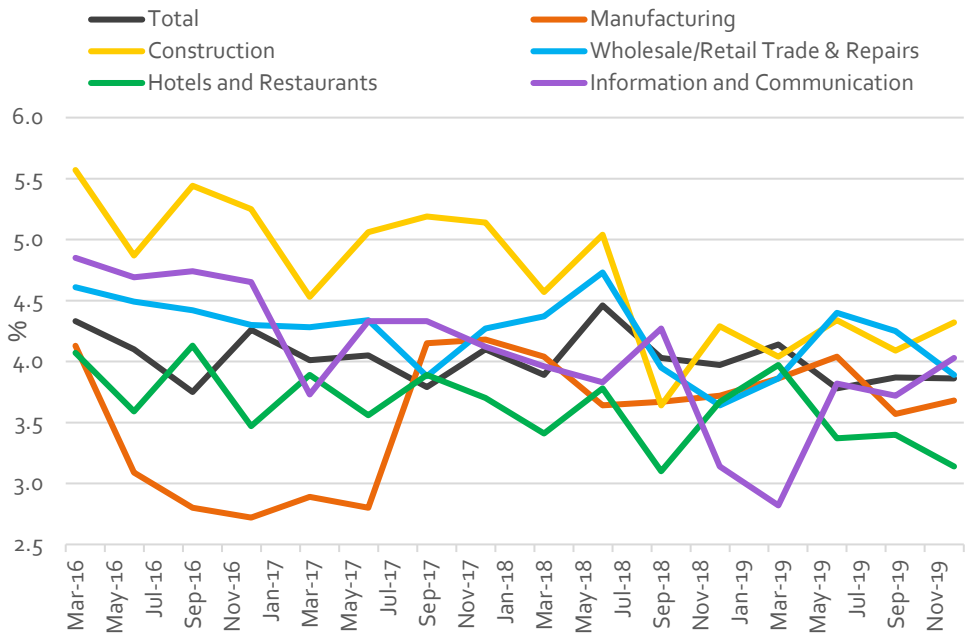


This figure shows the prices of electricity for non-household consumers in high consumption bands. UK prices for all high bands have exceeded Irish prices since 2015. Irish prices in the 20,000 to 70,000 consumption band surpassed euro area average prices in the second half of 2017 and have remained higher than euro area prices since 2017 but this gap narrowed in 2019.

Source: Eurostat

[30] Until 2016, the domain of non-household consumers was defined as industrial consumers, consequently reporting authorities could include other non-household consumers.

Figure 3.2.13 Interest Rates on Gross New Lending for Irish SMEs, selected sectors



The interest rate on gross new lending for SMEs has remained close to 4% however significant sectoral variation exists. In December 2019, the interest rates faced by SMEs in the construction sector (4.3%) and information and communication sector (4%) far exceeded the interest rate on new lending faced by SMEs in the hotel and restaurant sector (3.1%).

Source: SME and Large Enterprise Credit and Deposits, CBI

Figure 3.2.14 Quarterly change in capital values (property) in Ireland, Q1 2016-Q4 2019

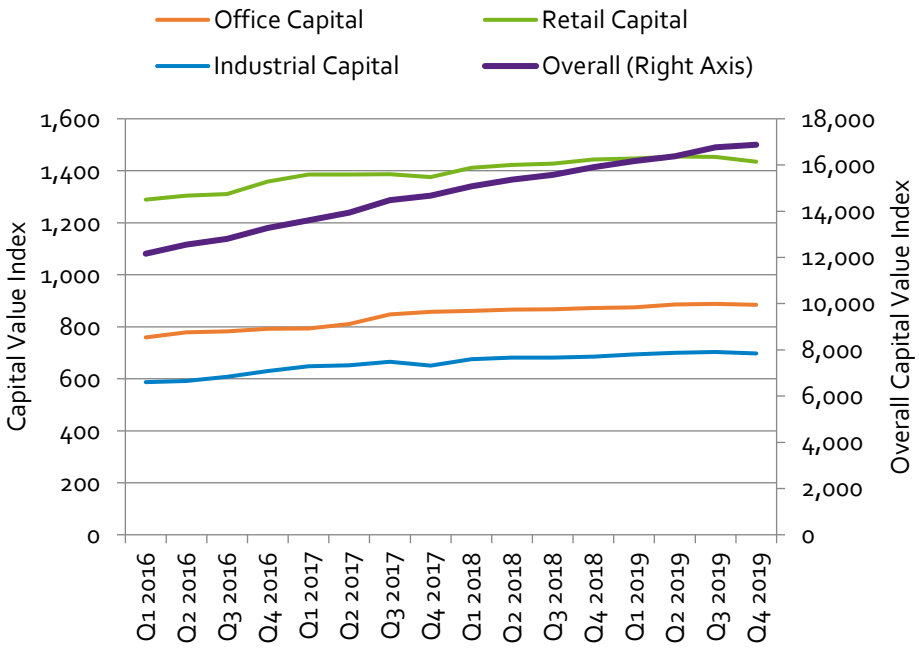
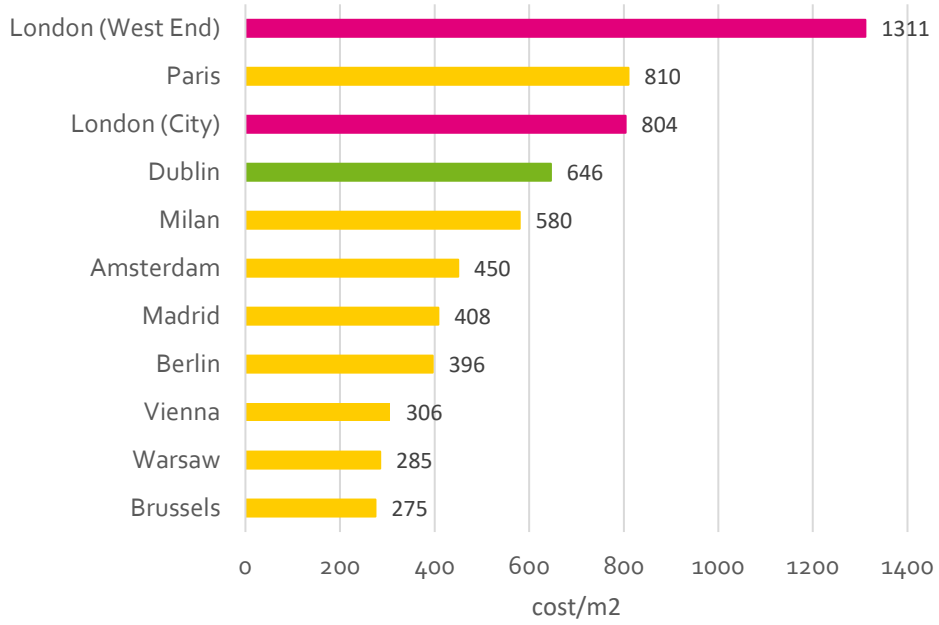


Figure 3.2.14 shows changes in capital values for office, retail and industrial properties. The value of capital across all categories has steadily increased since 2016. Overall capital value growth between January and December 2019 was recorded at 6.1%. Growth in the value of retail capital has slowed in recent years with retail capital growth recorded at -0.6% in 2019. Office capital grew by 1.5% and industrial capital grew by 1.9% in 2019.

Source: Jones Lang LaSalle, Irish Property Index

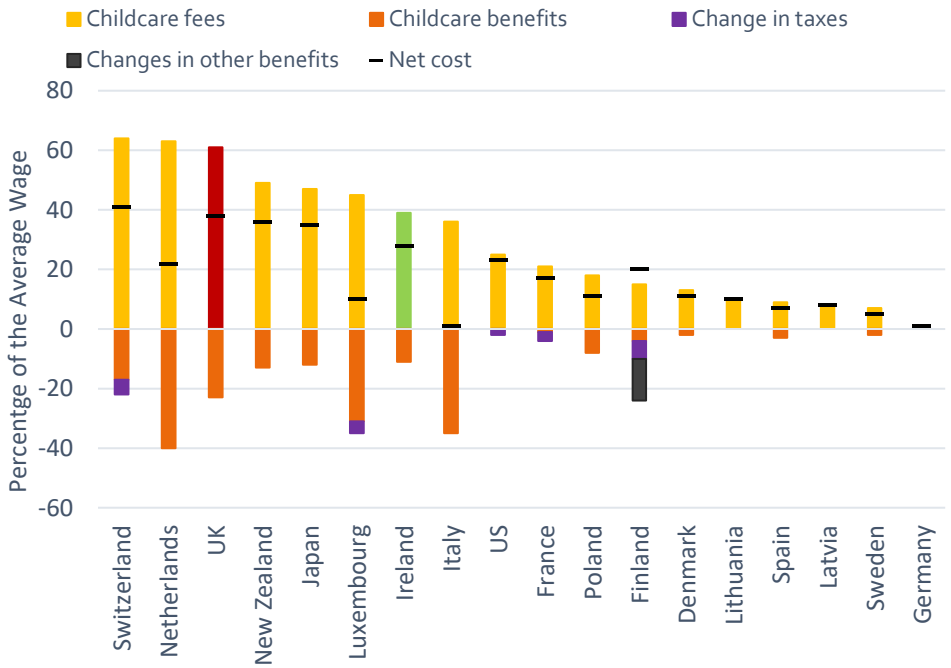
Figure 3.2.15 Cost of renting a prime office unit, € per square metre per year, Q4 2018



In Q4 2018, London was the most expensive city in which to rent a prime office property, with London's West End costing €1,311 per square metre. Dublin was the third most expensive city among the countries bench-marked with the rental price of prime office properties costing €646 per square metre in 2018. In contrast, Brussels had considerably lower rental prices in 2018 with prime office properties costing €275 per square metre.

Source: Cushman and Wakefield, Office Snapshot Reports

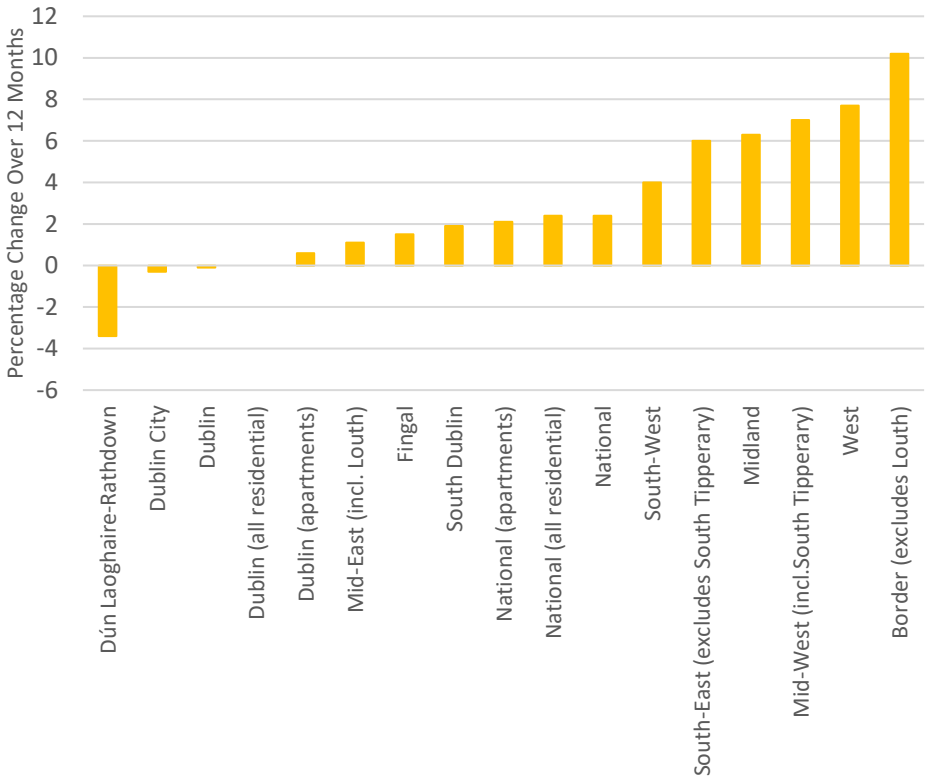
Figure 3.2.16 Childcare Costs: Out-of-pocket childcare costs for a two-earner couple family,2019



Net Irish childcare costs for parents with two children, where both parents earn the average wage, are amongst the highest in the OECD. In 2019, Irish childcare fees were 39% of the average wage. Childcare benefits in Ireland were 11% of the average wage in 2019 which is notably lower than countries with comparable childcare fees such as Italy (childcare benefits were 35% of the average wage) and Luxembourg (childcare benefits were 31% of the average wage).

Source: OECD

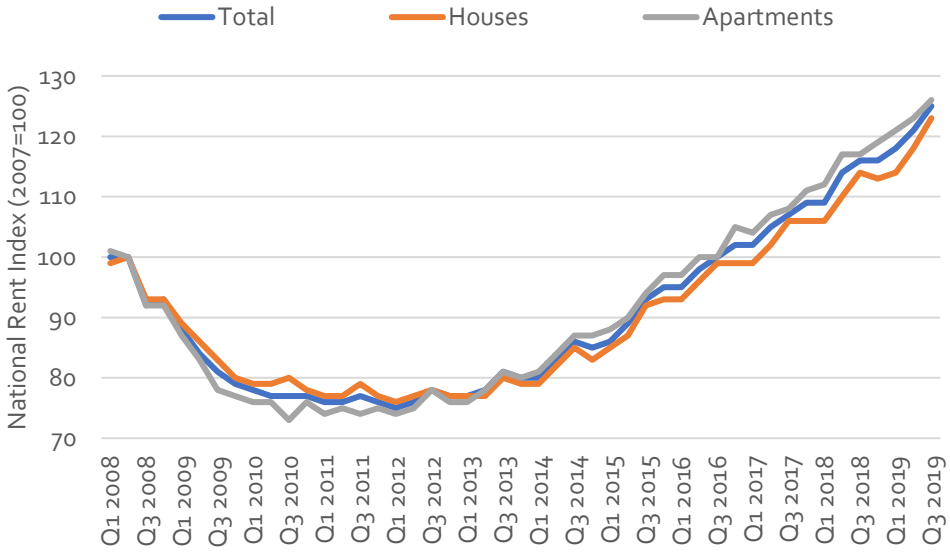
Figure 3.2.17 Housing Costs: Residential Property Index (houses unless stated otherwise), Average Annual Percentage Change, 2019



On average in 2019, the rate of increase in house prices was highest in the Border region excluding Louth (10.2%) and lowest in Dún Laoghaire-Rathdown (-3.4%). National house prices increased by 2.4% in 2019 while national apartment prices increased by 2.1%. Dublin apartment prices increased by 0.6% but total Dublin residential property prices stabilised in 2019.

Source: CSO

Figure 3.2.18 Housing Costs: Residential Tenancies Board National Rental Index, Ireland 2008- 2019

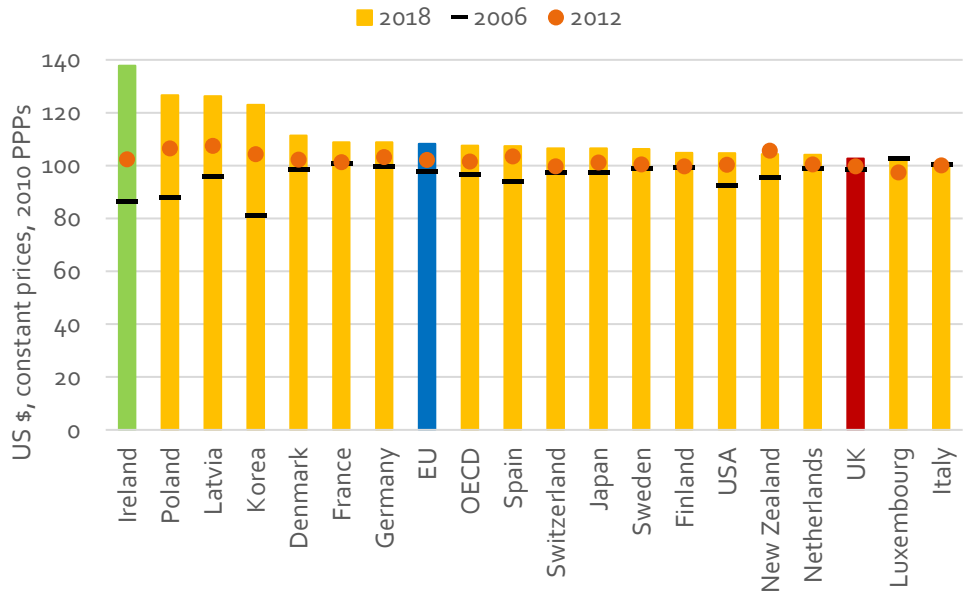


The Residential Tenancies Board national rent index is detailed in figure 3.2.18. Irish apartment and house rental prices have followed similar trends since 2008. Ireland's RTB apartment rental index has exceeded the house rental index since 2013.

Source: Residential Tenancies Board

3.3 Productivity

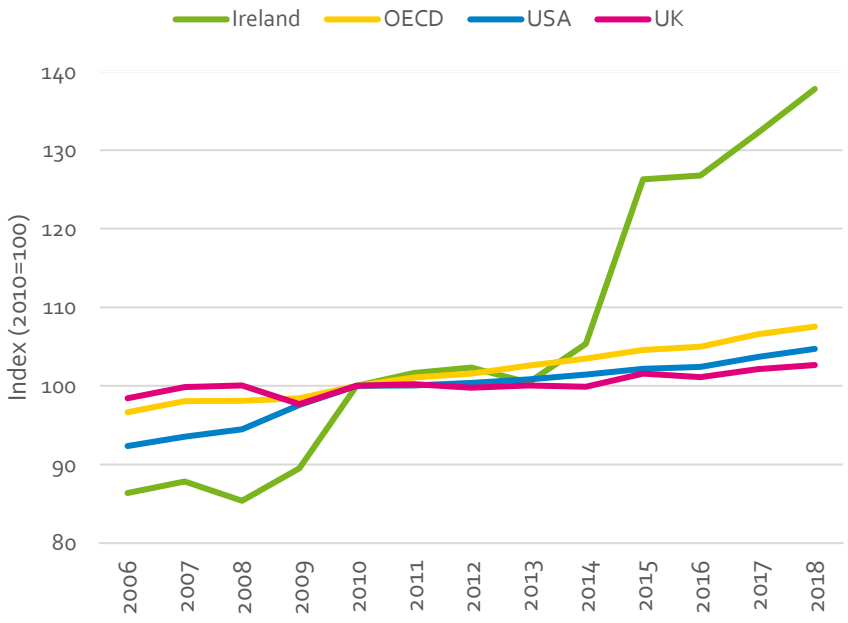
Fig 3.3.1 GDP per hour worked, USD, constant prices, 2010 PPPs, 2018



Ireland's GDP per hour worked was $138 in 2018, the highest among OECD member states[31]. This figure is notably higher than Ireland's GDP per hour worked in 2012 ($102) and 2006 ($86). Output per hour worked in 2018 was $103 in the UK and $108 in the OECD.

Source: OECD

Fig 3.3.2 GDP per hour worked, USD, constant prices, Index, 2006-2018[32]



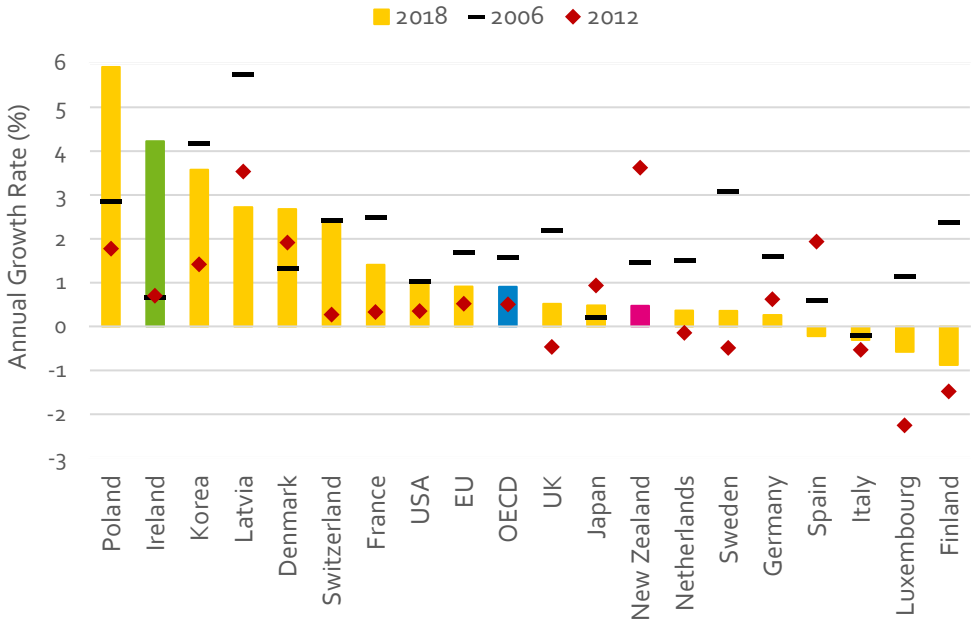
This figure shows the trend in GDP per hour worked in index form. Ireland's GDP per hour worked increased significantly above competitor countries since 2014. Ireland's unprecedented increase in GDP per hour worked in 2015 was due to the globalisation activities of a very small number of firms.

Source: OECD

[31] Measured productivity in Ireland is complicated because of the scale of high value-added activities of FDI companies located here.

[32] Attracted by low corporation tax rates, a number of large multinational corporations relocated their economic activities, and more specifically their underlying intellectual property, to Ireland in 2015. As a result, sales (production) generated from the use of intellectual property now contribute to Irish GDP rather than to other countries' GDP (OECD, 2016). More information at: http://www.oecd.org/sdd/na/Irish-GDP-up-in-2015-OECD.pdf

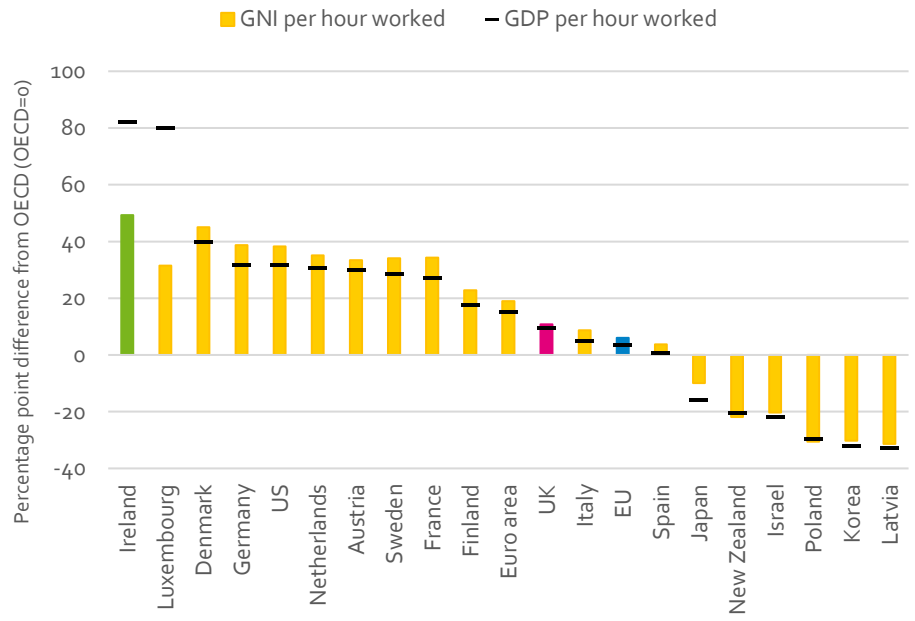
Fig 3.3.3 Labour Productivity growth (GDP per hour worked), 2018



Ireland's labour productivity grew by 4.2% in 2018. Large disparities exist among OECD member countries for labour productivity growth. In 2018, Poland's labour productivity grew by 5.9% while the UK experienced a 0.5% growth rate for labour productivity.

Source: OECD

Fig 3.3.4 GNI and GDP per hour worked (current prices)[33], 2017

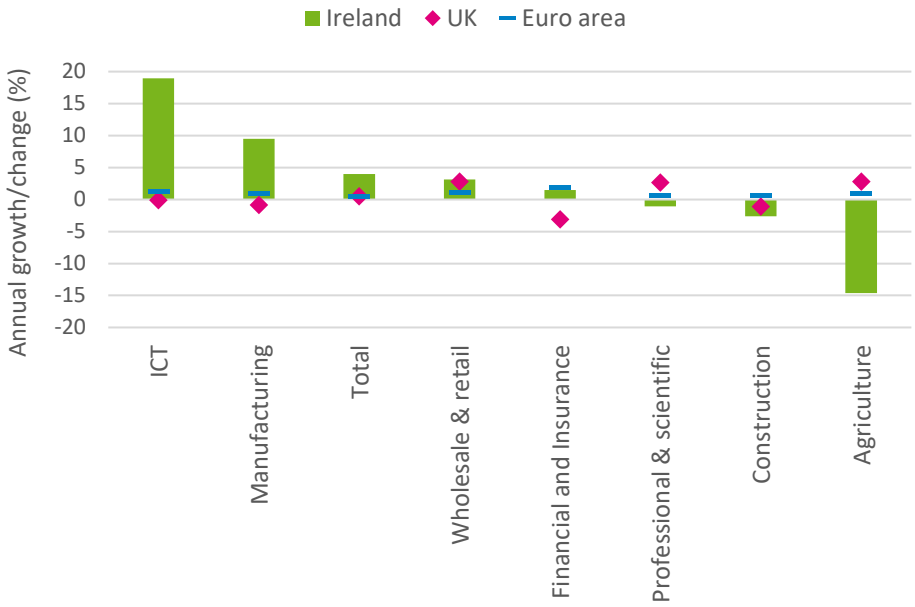


In most countries, labour productivity measures based on GDP and GNI are similar. However, in Ireland there is a notable difference, reflecting the significant impacts of multinational companies on Ireland's GDP. In 2017, Ireland's GNI per hour worked was 49 percentage points greater than the OECD.

Source: OECD

[33] GNI is equal to GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units (OECD).

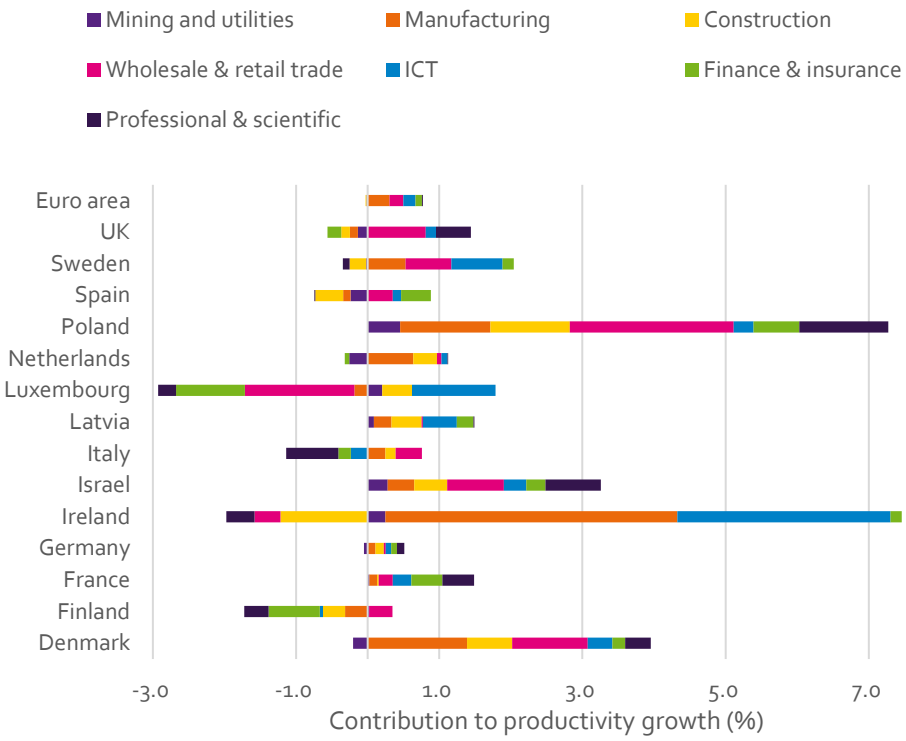
Fig 3.3.5 Average annual growth in gross value added per hour worked, constant prices, 2018



Compared with the UK and the euro area, Ireland's information and communication sector experienced exceptional growth in 2018 (19%), with significant growth (9.5%) also achieved in Manufacturing (which includes the pharma sector). In the wholesale retail, accommodation food services, transportation and storage sector, Irish growth is comparable to UK and euro area growth. Measured growth in agriculture has been exceptionally volatile in recent years.

Source: OECD

Fig 3.3.6 Contributions to labour productivity growth of business services, 2018



In Ireland, the relative contribution of manufacturing (4.1%) and information and communication (3%) to business service's productivity growth was particularly strong in 2018; no other countries in figure 3.3.6 had as high a percentage contribution from these two sectors as Ireland. Positive contributions also came from the financial and insurance activities and mining and utilities sectors. Ireland's remaining sectors in figure 3.3.6 had a negative impact on Ireland's business sector productivity.

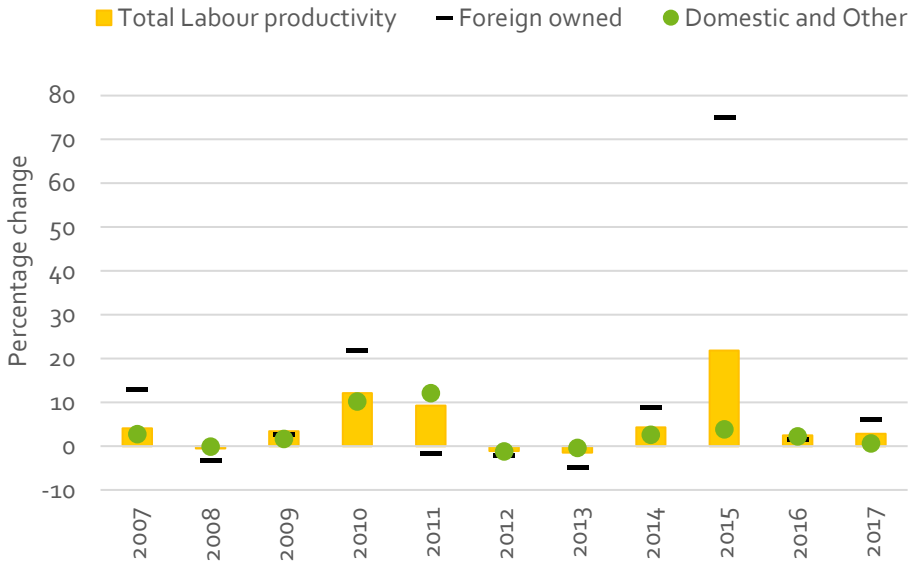
Source: OECD

Fig 3.3.7 Labour Productivity growth, Ireland, 2007-2017

Source: CSO

Labour hours declined notably between 2007 and 2009 and growth remained negative until 2012. From 2013, there has been positive growth in labour hours with the percentage increase stabilising at approximately 4% in recent years. In 2017, labour productivity grew by 2.8%. Prior to this, labour productivity peaked in 2015. This unusual increase was driven by increased capital deepening and the globalisation activities of a small number of large firms.

Fig 3.3.8 Labour productivity, Domestic and Other, and Foreign sectors[34], 2007-2017

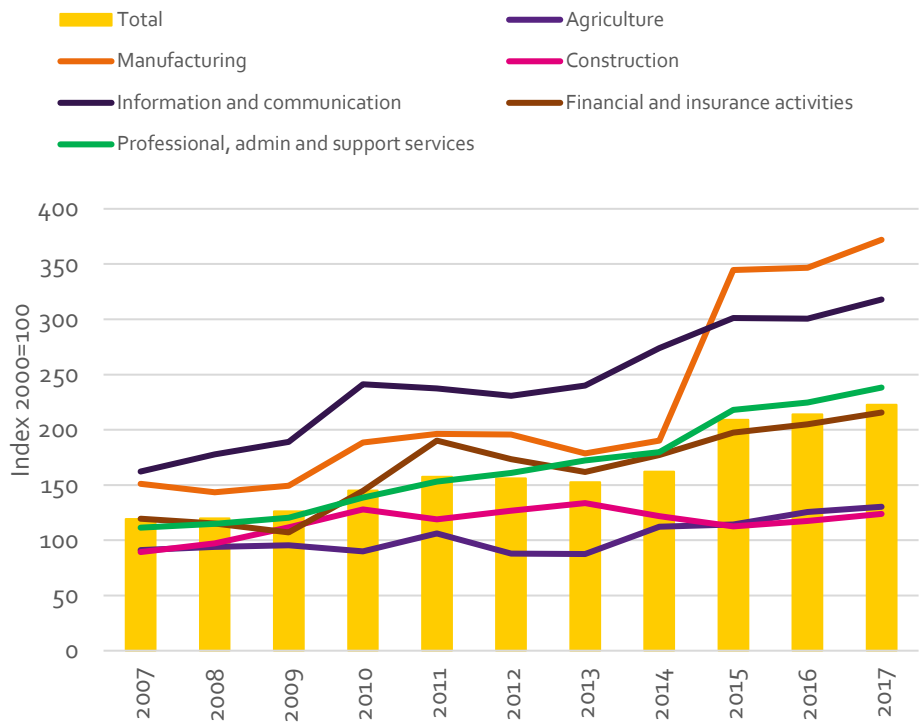


Source: CSO

In 2017, labour productivity growth was 6.1% for the foreign-owned sector and 0.6% for the domestic and other sector. Foreign-owned labour productivity growth increased significantly from its 2016 value (1.5%). Domestic and other labour productivity growth has been less volatile in recent years.

[34] The Foreign Sector is defined by the CSO as sectors dominated by foreign MNEs include the following: Chemicals and Chemical Products (NACE 20), Software and Communications (NACE 58-63), Reproduction of recorded media, Pharmaceutical products, Electrical equipment and Medical supplies (NACE 18.2, 21, 26, 27, and 32.5). The Domestic and Other Sector refers to all sectors not categorised as Foreign sector.

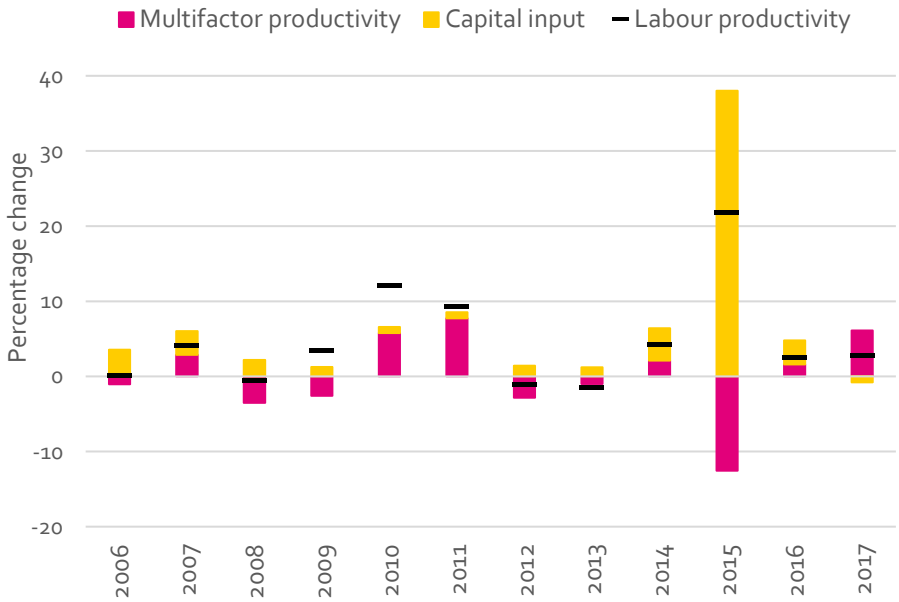
Fig 3.3.9 Irish Labour productivity Index, (Base 2000=100) by Economic Sector, 2007-2017



Ireland's total labour productivity has increased over time. Manufacturing and Information and Communication have experienced significant rises in labour productivity over the past decade. Manufacturing labour productivity grew sharply between 2014 and 2015. The Construction and Agriculture sectors have seen less growth in the past decade.

Source: CSO

Fig 3.3.10 Labour Productivity: Contribution of Multifactor Productivity[35] and Capital Deepening[36], 2006-2017



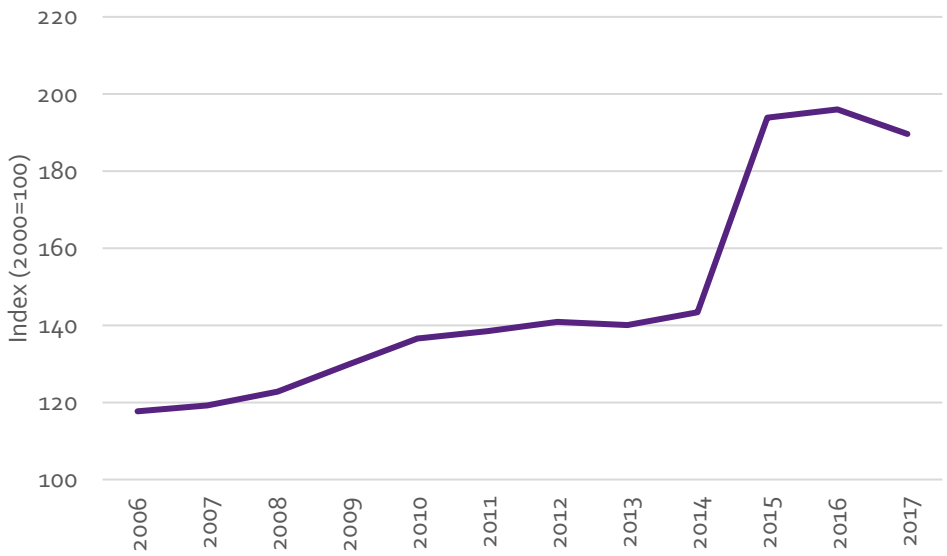
Labour productivity growth peaked in 2015. This large increase was due to a shift in the activities of multinational firms. Since 2015, labour productivity growth has stabilised. In 2016, labour productivity increased by 2.47% and in 2017, labour productivity increased by 2.79%. Multifactor productivity growth increased from 1.58% in 2016 to 6.12% in 2017. Capital input growth fell from 3.22% in 2016 to -0.8% in 2017.

Source: CSO

[35] MFP reflects the overall efficiency with which labour and capital inputs are used together in the production process. Changes in MFP reflect the effects of changes in management practices, brand names, organisational change, general knowledge, network effects, spill overs from production factors, adjustment costs, economies of scale, the effects of imperfect competition and measurement errors.

[36] Capital deepening is growth in the capital intensity of labour (the amount of capital available per hour worked).

Fig 3.3.11 Capital available per hour worked, 2006-2017

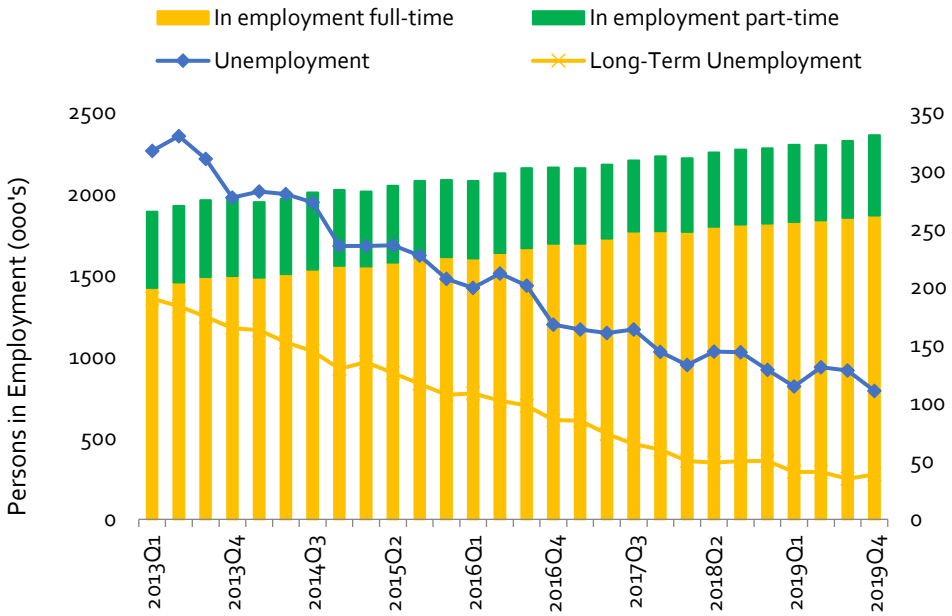


Capital stock refers to the amount of capital in the economy. Over the period 2006-2014, Ireland's capital stock per hour worked increased incrementally; this was followed by a sharp rise in 2015. Between 2016 and 2017, Ireland's capital stock per hour worked declined marginally but continues to far exceed its pre-2015 value.

Source: CSO

3.4 Employment

Figure 3.4.1 Employment, unemployment & long-term unemployment (000's), Q1 2013 – Q4 2019



The number of people in full-time employment has steadily increased in recent years. In the final quarter of 2019, Irish full-time employment was 31.4% greater than it was in the first quarter of 2013. In 2019, there were 2.36 million people in employment (full-time and part-time), 110,600 people unemployed and 38,700 people in long-term unemployment in Ireland. The decline in long-term unemployment strongly tracked the decline in overall unemployment as the economy recovered.

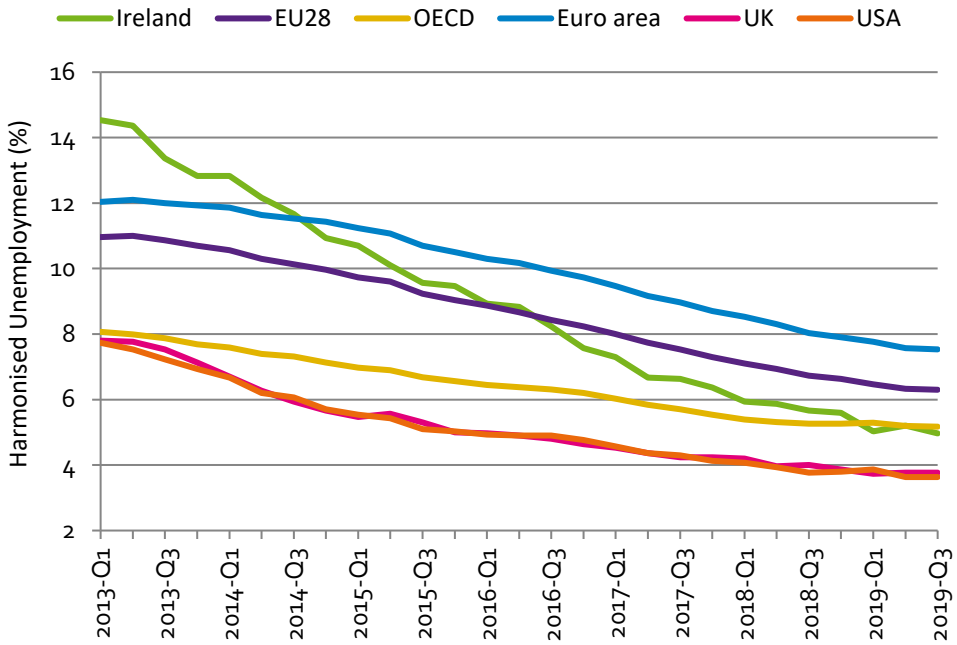
Source: CSO, Labour Force Survey

Figure 3.4.2 Self-employed persons, with and without employees, 2018

The self-employed are among those likely to suffer significantly from the immidiate impact of COVID-19. In 2018, there were 252,000 self-employed people in Ireland. The share of self-employed persons with no employees in Ireland at 67.6%, was just slightly above the that in the euro area (66.54%) and well below that in the UK (85.4%).

Source: Eurostat, Labour Force Survey

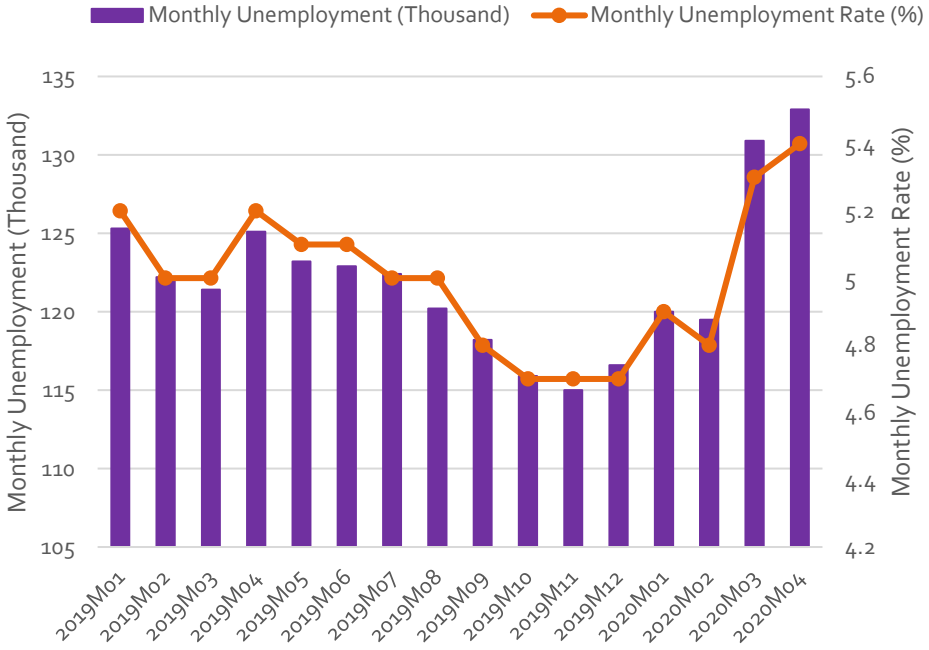
Figure 3.4.3 Unemployment rate (seasonally adjusted, standardised rate)[37], Q1 2013 – Q3 2019



The OECD harmonised unemployment rate defines the unemployed as people of working age who are without work, are available for work, and have taken specific steps to find work. Figure 3.4.3 shows that the seasonally adjusted unemployment rate has trended downwards for all these groups of countries. In Ireland, unemployment declined very steadily from 14.5% in Q1 2013 to 5% in Q3 2019, reaching a rate that was lower than that in the euro area (7.5%) but above that recorded in the UK (3.8%).

Source: OECD, Harmonised Unemployment Rates

Figure 3.4.4 Monthly Unemployment Statistics, January 2019 – April 2020



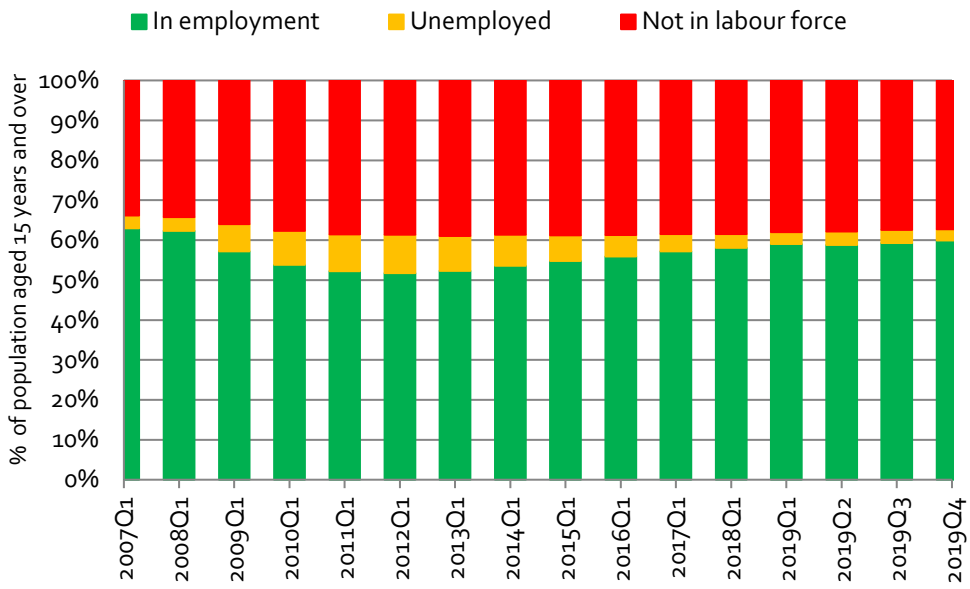
Prior to the COVID-19 pandemic, Ireland's labour market was in a strong position. In February 2020, Ireland's monthly unemployment rate was 4.8%. This changed dramatically with the onset of the pandemic, with the official monthly unemployment rate jumping to 5.4% in April 2020. A new COVID-19 Adjusted Monthly Unemployment measure[38], which includes those in receipt of the Pandemic Unemployment Payments, showed a significantly higher unemployment rate of 28.2% in April 2020.

Source: CSO, Labour Market Statistics

[37] Harmonised unemployment rates define the unemployed as people of working age who are without work, are available for work, and have taken specific steps to find work.

[38] Those in receipt of the COVID-19 Pandemic Unemployment Payment at the end of April 2020 do not meet the internationally agreed criteria to be considered as unemployed for the purposes of the compilation of the standard Monthly Unemployment Estimates. Therefore, the CSO decided to produce a supplementary measure of unemployment in parallel with the routine Monthly Unemployment Estimates.

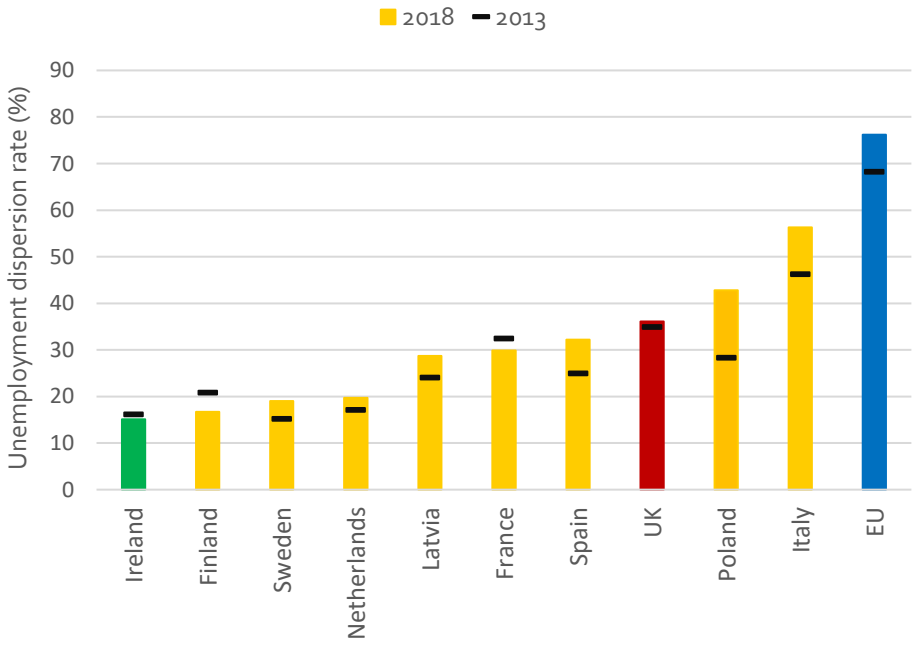
Figure 3.4.5 Labour force participation, persons aged 15 and over, Q1 2007 – Q1 2019



This figure shows the proportion of Ireland's population who are in employment, unemployed and not in the labour force. From 2007 to 2019, the Irish participation rate (the proportion of people in the labour force) remained relatively constant with an average of 63% over the 13 year period. In the final quarter of 2019, Ireland's unemployment rate (the proportion of people in the labour force who are unemployed) was 4.5% according to the CSO Labour Force Survey.

Source: CSO, Labour Force Survey

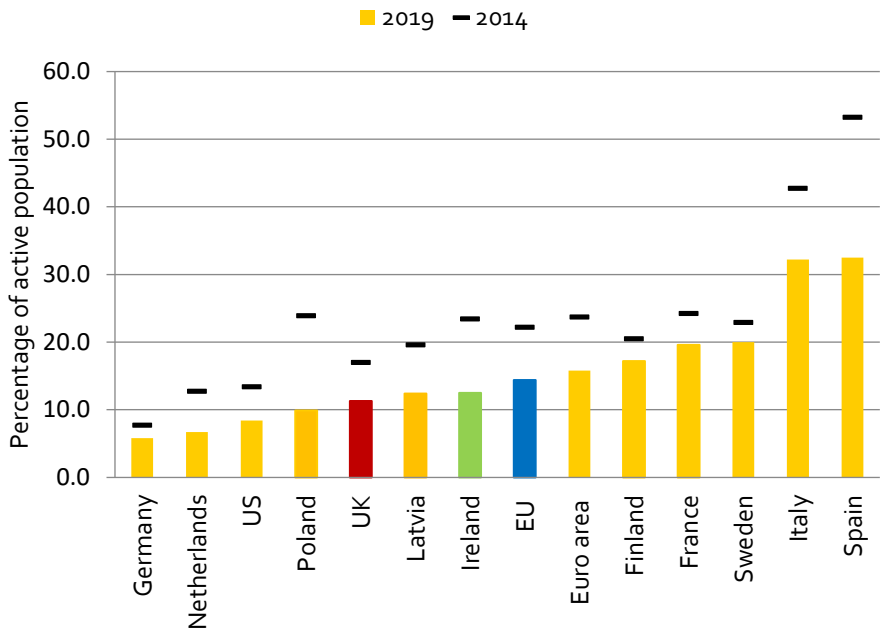
Figure 3.4.6 Dispersion of regional unemployment (selected economies), 2018



Dispersion of regional unemployment rates refers to the coefficient of variation of regional unemployment rates in a country, weighted by the absolute population (active population) of each region. Lower dispersion rates indicate higher levels of cohesion across regions in relation to the level of unemployment. Ireland had the lowest dispersion rate among the bench-marked countries.

Source: Eurostat, Dispersion of regional unemployment rates by NUTS 3 region

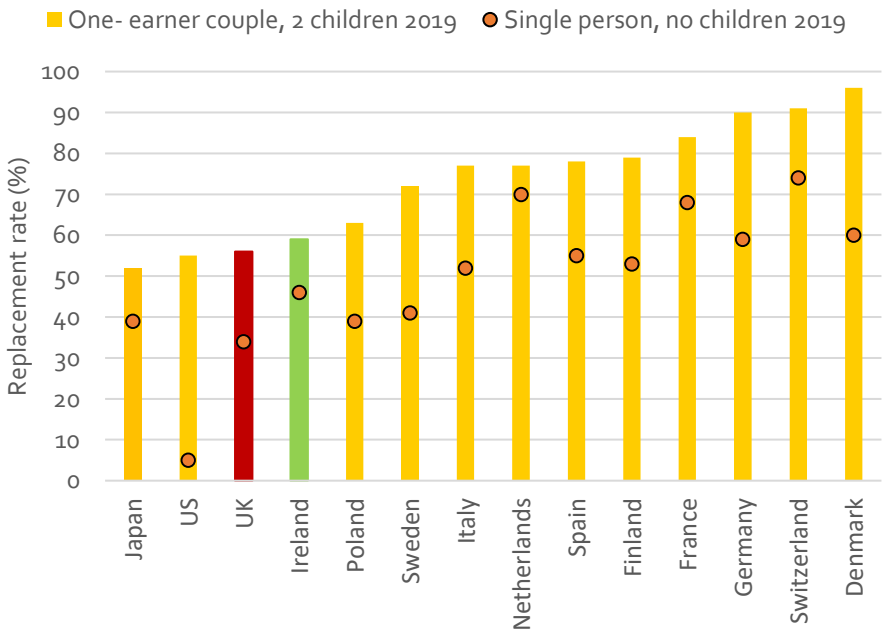
Figure 3.4.7 Youth[39] unemployment rate, 2019[40]



Between 2014 and 2019, Ireland's youth unemployment rate (the percentage of the active population aged less than 25 years who are unemployed) fell from 23.4% to 12.5%. This follows a trend across the EU as recovery from the Global Financial Crisis has taken hold. The youth unemployment rate in Ireland was lower than the EU average (14.4%) in 2019.

Source: Eurostat, Labour Force Survey

Figure 3.4.8 Net replacement rates for long-term unemployed[41], 2019

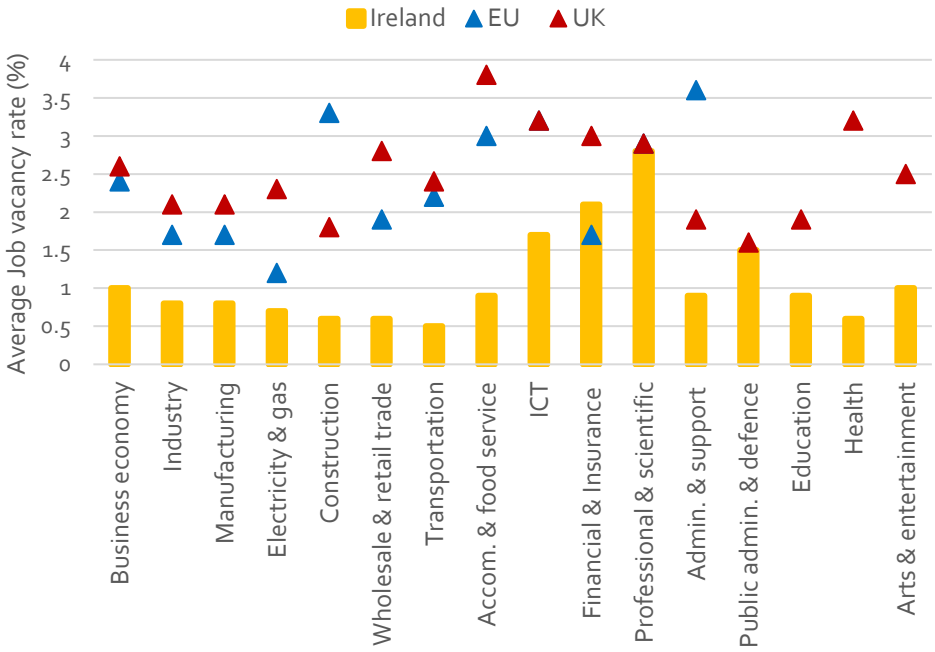


The net replacement rate in unemployment measures the proportion of previous in-work income that is maintained after a job loss. This figure shows that the net replacement rate in Ireland for a one-earner couple with two children was 59%, and 46% for a single person with no children. Ireland's net replacement rate for a one-earner couple with two children was above the UK (56%) but considerably lower than the EU countries bench-marked. Ireland's net replacement rate for a single person with no children was less than all EU countries considered except Poland and Sweden.

Source: OECD, Net Replacement Rates in Unemployment

[39] 15-24 years of age.
[40] Data for the United Kingdom and Italy refer to 2018.
[41] Long term unemployed refers to someone who is out of employment for the duration of 12 months or more.

Figure 3.4.9 Job vacancy rate by sector, 2019[42]



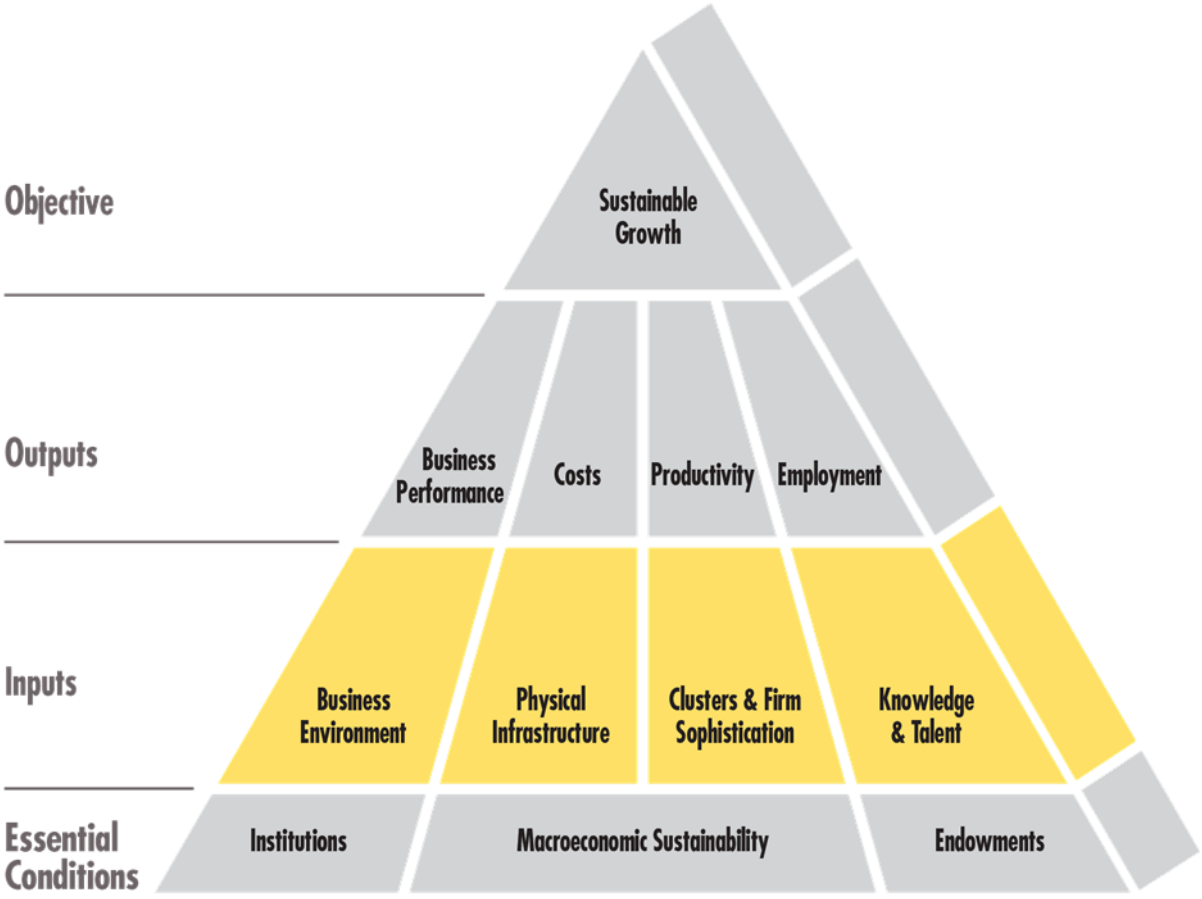
In 2019, Ireland's job vacancy rate was below the UK for all sectors and below the EU average for all sectors (where data is available) except finance and insurance. In 2019, Ireland's job vacancy rate was highest in the professional and scientific sector (2.8%) and lowest in the transportation sector (0.5%). In the EU, the sector with the lowest job vacancy rate was electricity and gas (1.2%) and the sector with the highest job vacancy rate was administration and support (3.6%).

Source: Eurostat, Labour Market, Job Vacancy Statistics

[42] 2019 data for Ireland is provisional.

Chapter 4

Competitiveness Inputs



Competitiveness Inputs

Competitiveness inputs can enhance the essential conditions for economic competitiveness. At this level, delays and inefficiencies might result in businesses and individuals finding it difficult to translate natural advantages into individual and sectoral competitiveness. The NCC's competitiveness framework defines four categories of competitiveness inputs: business environment; physical infrastructure; clusters and firm sophistication; and, knowledge and talent. In the vast majority of these indicators, Ireland outperforms the EU average. While this is certainly positive, the NCC believes that Ireland should aim to be a frontrunner. There are areas where we are lagging behind global leaders and there is space for further improvement.

In certain areas, we are meeting this ambition to be global leaders. Ireland has one of the most educated workforces in the world with almost half of the workforce having a tertiary education and, while the Irish workforce is a little less inclined to engage in continued education, this may be related to the fact that so many continue in formal education for longer. Government funded programmes have been introduced to address the lower lifelong learning performance in Ireland and the NCC will continue to monitor developments in this area. Irish firms are leading the way when it comes to embracing new ideas and moving to online sales, which will be especially important for enterprises facing COVID-19 related disruptions.

In other areas, Ireland is lagging well behind leaders and even the EU average. While Ireland's physical infrastructure is well regarded, it is seen as slightly below the EU average, and clearly lags behind the top EU performers, following a period of under-investment in Ireland in the years following the Global Financial Crisis. *Project Ireland 2040* and specific initiatives like the *National Broadband Plan* have been designed to address these shortcomings. The NCC strongly supports these initiatives, with the *Competitiveness Challenge 2019* calling for Ireland to become one of the EU leaders in public investment by increasing its investment in capital projects. While Government finances are likely to come under increasing pressure following the roll out of COVID-19 related supports (see Chapter 5 for further discussion), efforts should be made to ring fence capital spending to ensure that history does not repeat itself and that productive investments continue to be made.

Business Environment

The World Bank's *Doing Business* indicator provides a valuable high-level summary of the business environment in Ireland, which is ranked 24th in the world (Figure 4.1.1). Another indicator of the business environment is the age of firms and their survival rate, and on this metric some interesting differences emerge between Ireland and other economies. In 2017, the enterprise birth rate (i.e. the share of new companies as a proportion of all companies) was lower in Ireland (8.2%) than the EU average (9.7%) and far behind the UK (13.6%) (Figure 4.1.4). However, in Ireland, these new companies were more likely to survive the first year of operations (87% of new businesses in Ireland survived the first year) than a new company in the EU, but less likely to survive the first year of operations than a new company in the UK (Figure 4.1.6). Encouraging entrepreneurship and innovation, and minimising barriers to enterprise formation, will be key to Ireland's economic recovery.

Physical Infrastructure

High quality infrastructure boosts long-term economic growth[43] and productivity[44]. It can reduce financial, administrative and time costs, and ultimately, can support an economy's competitiveness. While surveys of business leaders in Ireland perceive our infrastructure to be at a standard that is almost as good as the perceptions of business leaders in their countries on average across the EU, there is a clear gap between Ireland and the EU's top performing economies (Figure 4.2.5 and Figure 4.2.6).

[43] De Jong et al (2017) 'The effect of public investment in Europe; a model-based assessment' ECB Working Paper 2021, Feb 2017.
[44] Romp & de Hann (2007) 'Public Capital and Economic Growth: A Critical Survey'.

A similar finding emerges in relation to access to high-speed broadband. In 2019, in Ireland, 22% of enterprises with fixed internet access had access to high speed internet, and 90% had speeds of at least 2 megabytes per second. These figures are in line with the EU average but are significantly below the top performers (Figure 4.2.7). Ireland also has one of the lowest proportions of fibre broadband connections in the OECD (Figure 4.2.8). *Project Ireland 2040* and specific initiatives like the *National Broadband Plan* have been designed to address these shortcomings and, in 2019, public investment increased to €7.3bn, almost double the 2015 figure of €3.7bn.

Clusters and firm sophistication

The quality and sophistication of external factors (e.g. overall business network and presence of a critical mass of competitive businesses in a particular field, a cluster) and internal factors (e.g. the quality of individual firms' operations and strategies) can have an important impact on a country's competitiveness.

International quantitative data on clusters are relatively limited. However, based on the perceptions of Irish business leaders, and business leaders across a wider number of countries, Ireland is outperforming the EU, with the Ireland's Southern region[45] improving most quickly, but behind global leaders, such as the UK's South-East (Figure 4.3.1). However, Ireland appears to be a top performer in relation to firm sophistication, with Irish companies embracing disruptive ideas (Figure 4.3.3) and the move to online sales and e-commerce at a faster rate than their euro area peers (Figure 4.3.6). For example, Ireland's e-sales account for a third (34%) of total turnover for all businesses, which is substantially higher than the corresponding figure for the UK (21%) and the EU (18%) (Figure 4.3.5). This ranking holds for Irish SMEs as well.

Knowledge and Talent

From a competitiveness perspective, there are two important aspects to knowledge and talent. First, there is the expansion of the store of knowledge through R&D investment, which improves processes and creates new product markets. Here Ireland performs quite poorly relative to other EU countries. In Ireland, the majority of R&D spend comes from businesses (€2.8bn), with the direct public R&D amounting to only €159mn (Figure 4.4.2), though this does not include Government support in the shape of Ireland's R&D tax credit[46]. Irish public R&D direct spend (as a proportion of total Government budgetary spend) is one of the lowest in the EU[47] (Figure 4.4.3).

The second aspect of knowledge and talent is ensuring that the labour force has people with the right levels of education, experience and talent to maximise productivity. The evidence suggests that Ireland performs much better here, with one of the highest proportions of third level graduates in the EU (47%) (Figure 4.4.7). However, levels of lifelong learning, such as continuous professional development, are lower in Ireland than other EU countries (Figure 4.4.10). Digital skills are another area where Ireland underperforms, with under half of Irish people qualifying as having 'basic digital skills' (Figure 4.4.11). Supporting workers displaced by the COVID-19 pandemic to upskill and retrain will be a crucial element of the economic recovery.

Summary

In short, the state of Ireland's competitiveness inputs is mixed. In some areas, such as education and firm sophistication, Ireland has made great progress building on natural advantages. In other areas, such as infrastructure, lifelong learning and digital skills, it is important that targeted investment by Government play an essential role in the economic recovery so that high value employment opportunities can be created.

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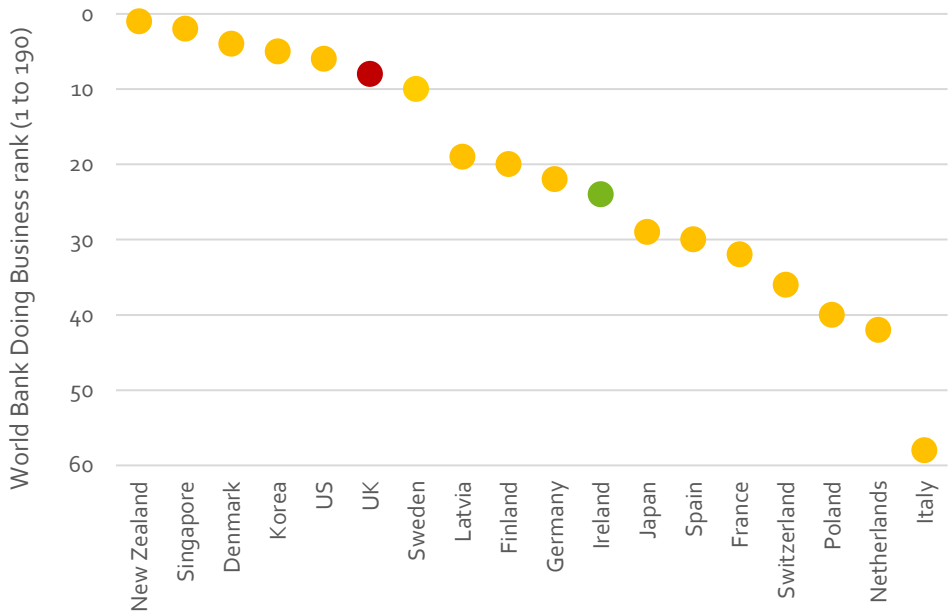
[45] NUTS 2 region made up of the Mid-West, South-East and South-West Regions of Ireland (i.e. Clare, Tipperary, Limerick, Carlow, Kilkenny, Wexford, Waterford, Kerry and Cork.

[46] In 2017 (the latest available data), the exchequer cost of the R&D credit in Ireland was €448 million. More details available here.

47 Again, this does not include the tax expenditures associated with the R&D tax credit.

4.1 Business Environment

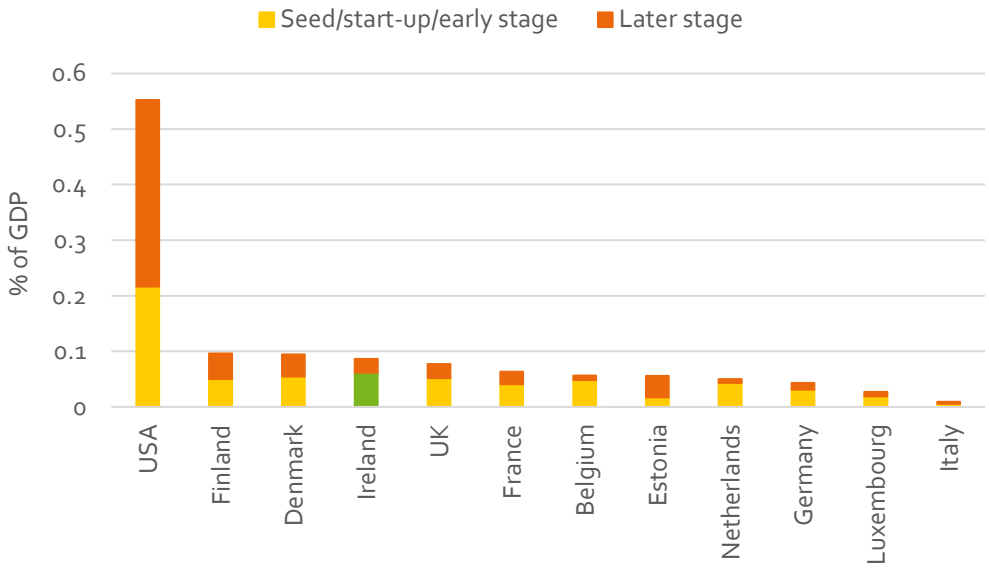
Fig. 4.1.1 Doing Business Ranking[48], 2020



The graph illustrates the World Bank's Doing Business rankings of selected economies. The ranking measures aspects of business regulation that impact small domestic firms. In 2020, Ireland was ranked 24th out of 190 economies, a fall of one place from 2019. New Zealand was ranked 1st overall with Denmark (4th) the highest ranked EU country. The UK was ranked 8th.

Source: World Bank, Ease of Doing Business 2020

Fig. 4.1.2 Venture Capital Investment[49] (as a percentage of GDP), 2018



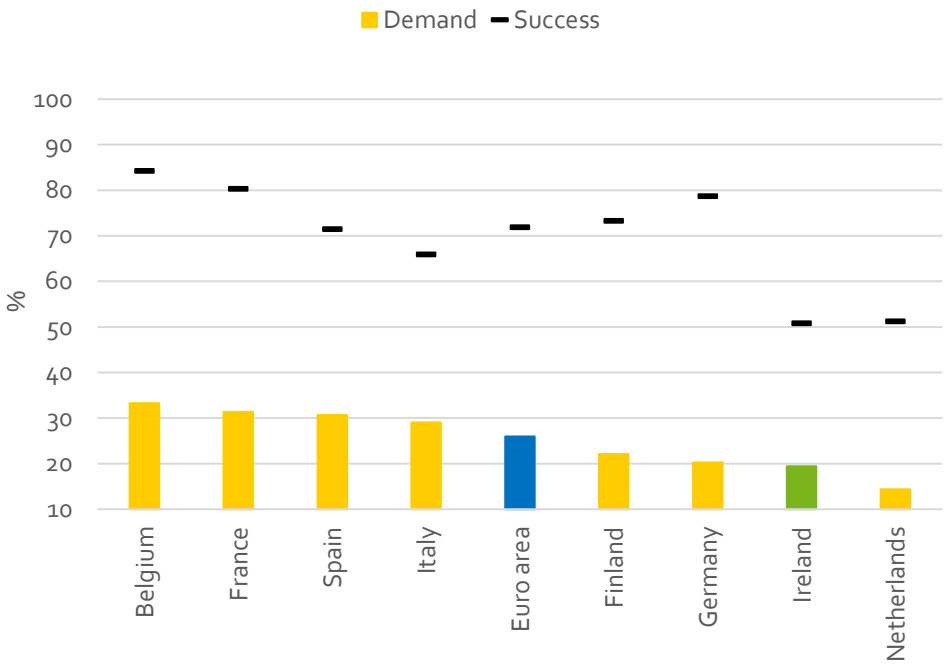
Total Venture Capital (VC) investment in Ireland accounted for 0.086% of GDP in 2018 with the seed and early stage investment (0.061%) being significantly higher compared to later stage investment (0.024%). This compares well relative to most EU countries, but places Ireland behind USA (0.552%), an outlier.

Source: OECD, Entrepreneurship Financing Database (EFD)

[48] The World Bank's Ease of Doing Business report assesses the impact of regulations through SME's life cycle and ranks economies out of 190 economies.

49OECD defines venture capital investment as a form of equity financing particularly relevant for young companies with innovation and growth potential but untested business models and no track record; it replaces or complements traditional bank finance.

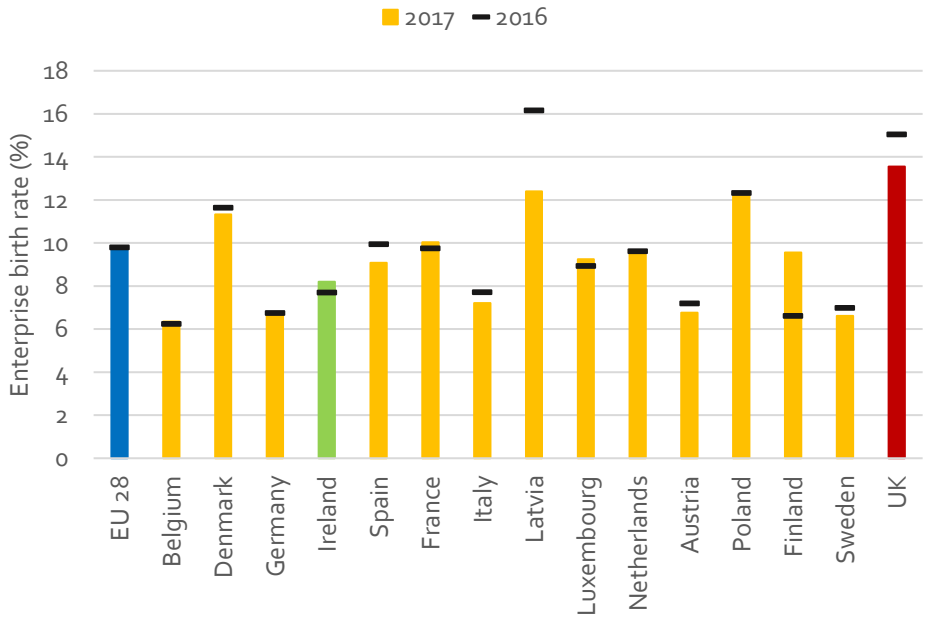
Fig. 4.1.3 Demand and Success in accessing credit, SMEs, April 2019 to September 2019



Between April and Septemeber 2019, just over 19% of SMEs applied for bank finance in Ireland, significantly below the euro area average (25.9%). With only 50% of the applicants receiving the full requested amount, the success rate in Ireland was also well below the EU average (71.8%). Belgium had both the highest propotion of applicants (33%) and success rate (84%).

Source: ECB, SAFE

Fig. 4.1.4 Enterprise births as a percentage of active enterprise[50], 2017

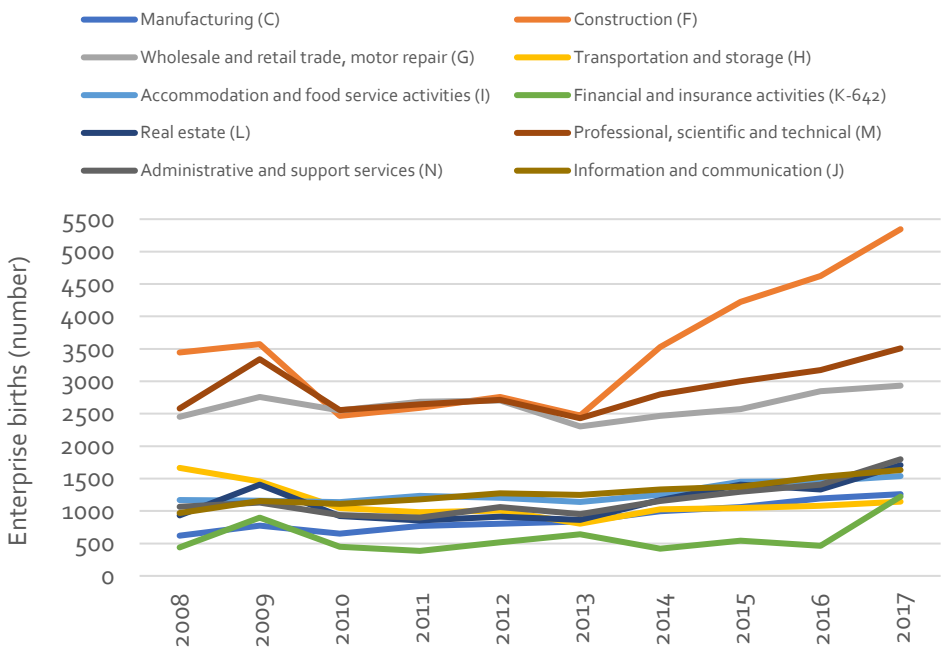


This figure shows the number of enterprise births divided by the number of active enterprises for a selection of countries. In Ireland, the enterprise birth rate was 8.2% in 2017, marginally higher than its value in 2016 (7.7%). Ireland's 2017 enterprise birth rate was low in comparison to the UK (13.6%) and the EU average (9.7%).

Source: Eurostat, Business Demography

[50] New business births measure the number of new businesses registered in calendar year. Restructuring, mergers or break-ups are not included.

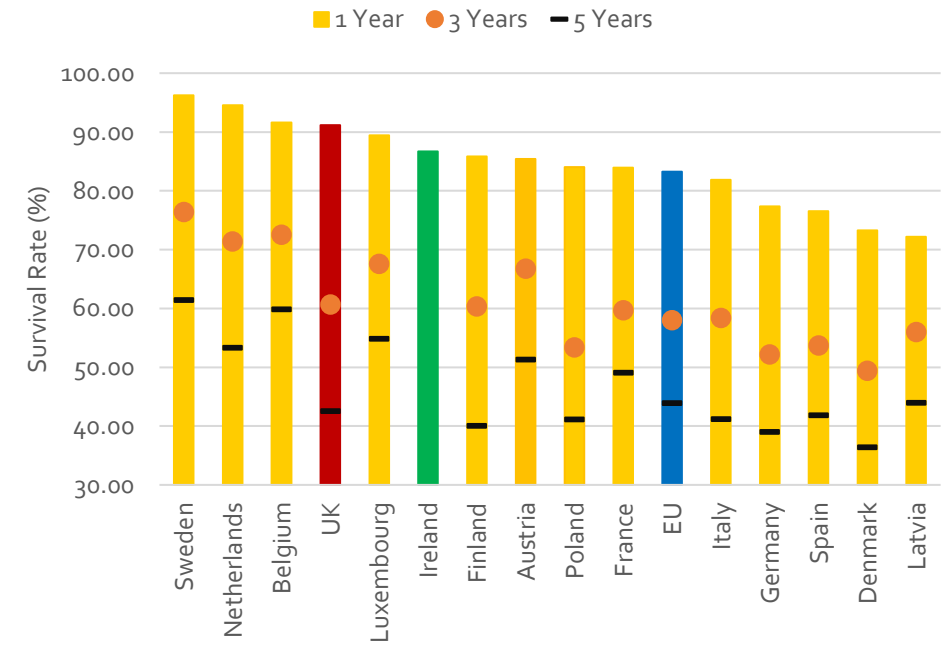
Fig. 4.1.5 Enterprise births by sector, Ireland 2008 – 2017



This figure details the number of enterprise births over the past decade, differentiated by sector. Three sectors have had relatively higher number of births in recent years, reflecting their recovery after the Global Financial Crisis and the small scale of many enterprise. For example, construction sector births at 5,345 accounted for the largest number of enterprise births in 2017. The professional, scientific and technical sector and the wholesale and retail trade sector have followed similar trends, with both increasing incrementally since 2013.

Source: CSO, Business Demography

Fig. 4.1.6 Enterprise Survival rate, 2017[51]

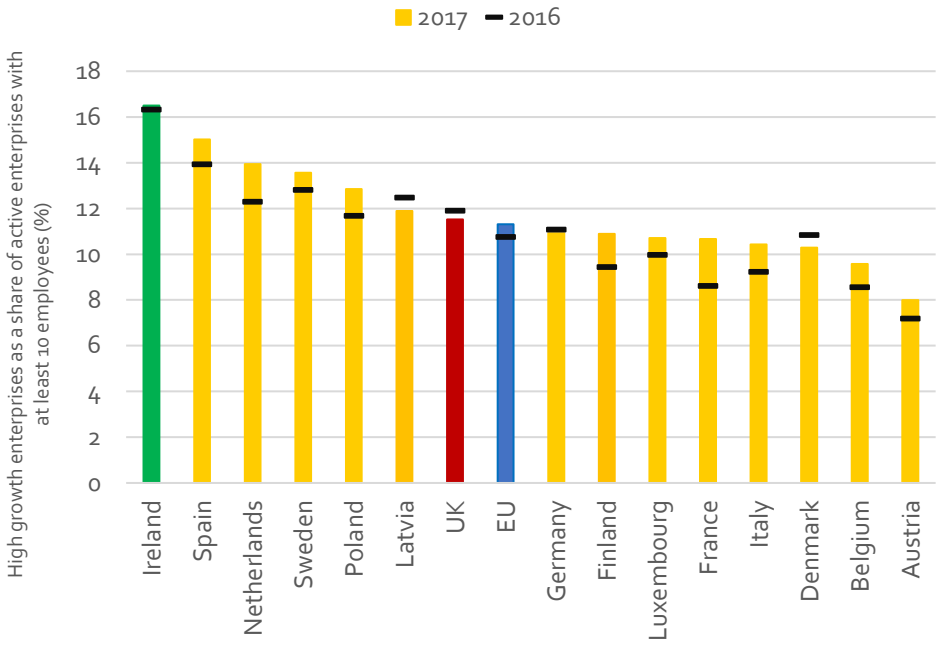


This figure shows the enterprise survival rates across selected economies. With almost 87% of new enterprises surviving the first year, the one-year survival rate in Ireland exceeded the EU average (83%) but was lower than the UK (91%).

Source: Eurostat, Business Demography

[51] Data on the 3-year and 5-year enterprise survival rates for 2017 are not yet available for Ireland.

Fig. 4.1.7 High growth enterprises (as a proportion of total enterprise), 2017

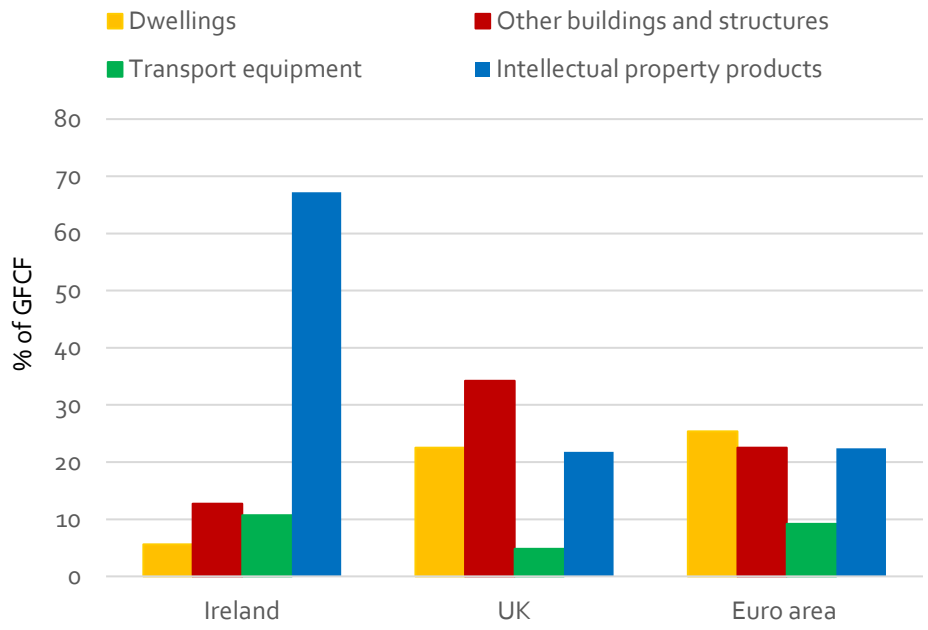


Source: Eurostat, Business Demography

High growth enterprises are enterprises with at least 10 employees that experienced growth of 10% or more. Considerable variation exists across the EU in the proportion they account for of total active enterprises. Ireland (16.5%) had the highest proportion of high growth enterprises out of all EU countries in 2017, notably higher than the share in the UK (11.5%) and EU (11.3%).

4.2 Physical Infrastructure

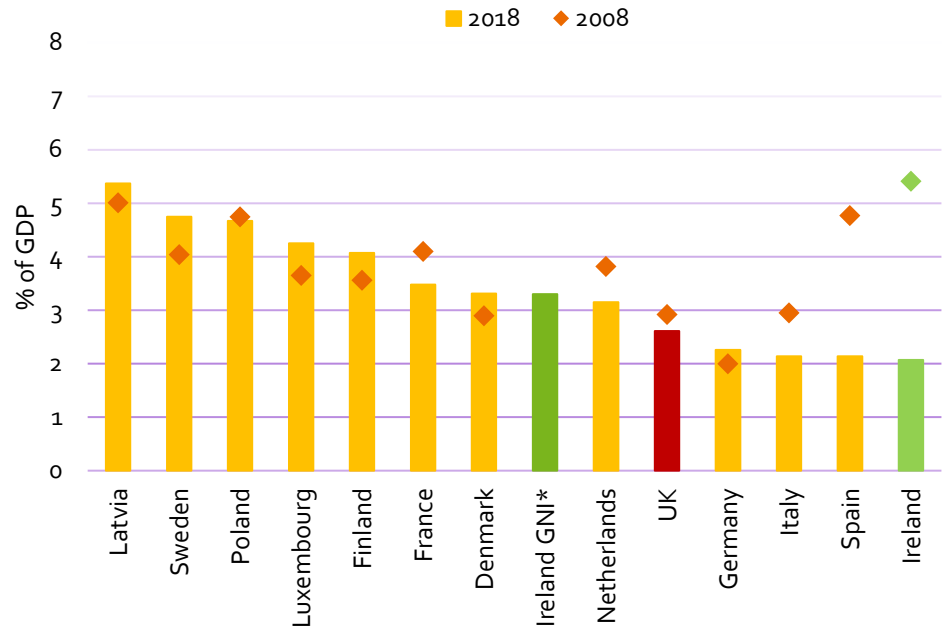
Fig. 4.2.1 Gross Fixed Capital Formation[52], by category, 2019



In Ireland, gross fixed capital formation (i.e. investment) was equal to 43.4% of GDP in 2019, significantly higher than the UK (17%) and the euro area (21.9%). The composition of Ireland's GFCF was quite different to the UK and the euro area, with intellectual property (67.2%) accounting for a much higher share of total GFCF in Ireland compared to the UK (21.8%) and the euro area (22.4%), reflecting the presence of a higher number of multinational enterprises in Ireland.

Source: OECD, Investment by asset

Fig. 4.2.2 Government investment as percentage of GDP, 2018

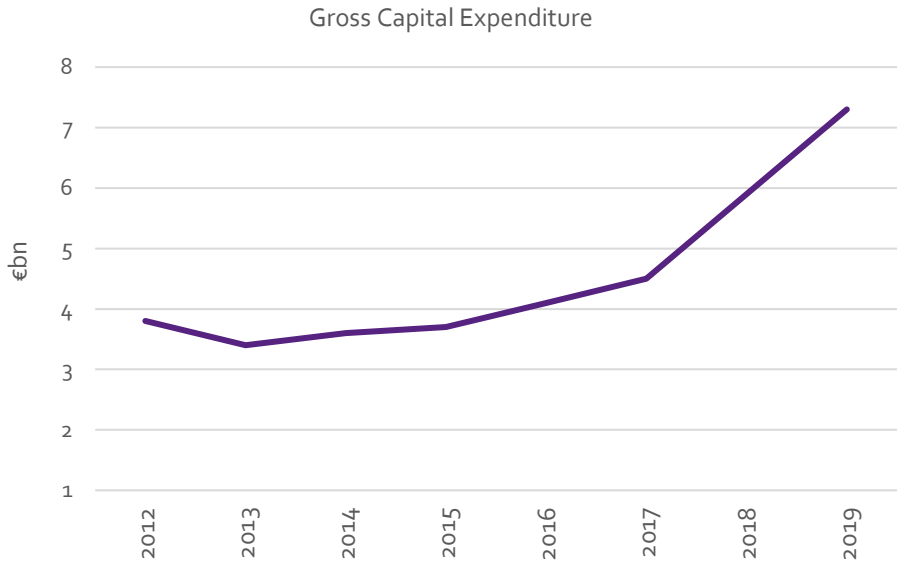


Government investment in 2018 amounted to 3.3% of GNI*, a more appropriate benchmark for the size of the Irish economy, and this places Ireland in the middle of EU countries, where the measures are based on GDP. Measurement in terms of GDP understates the relative importance of this investment in the economy.

Source: OECD, Government at a Glance, 2019

[52] Asset types in this indicator include: dwellings (excluding land); other buildings and structures (roads, bridges, airfields, dams, etc.); transport equipment (ships, trains, aircraft, etc.); and intellectual property products (such as R&D, mineral exploration, software and databases, and literary and artistic originals, etc.).

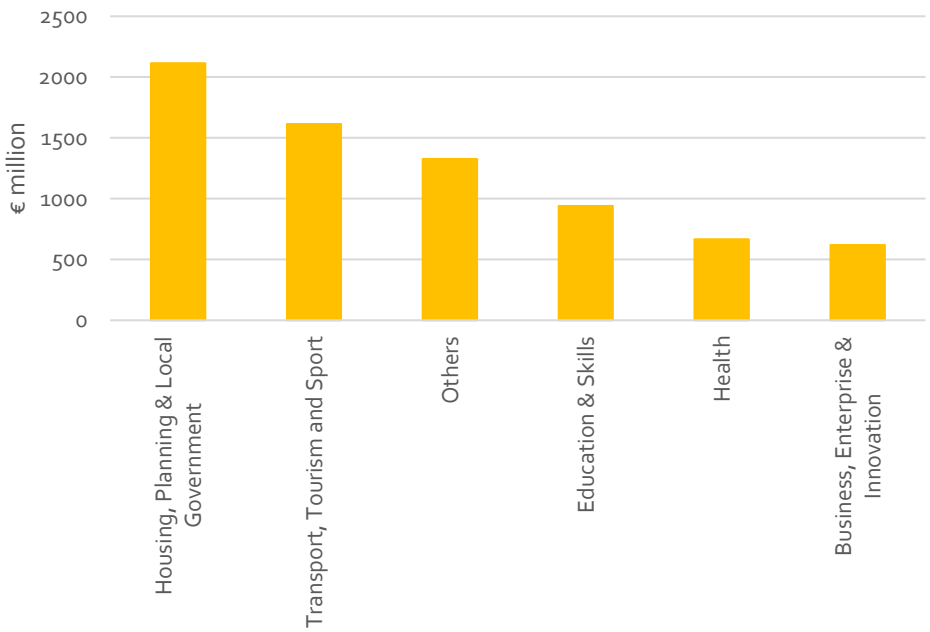
Fig. 4.2.3 Trend in Public Capital Expenditure[53], Ireland, 2012-2019, at current prices



Gross public capital expenditure in Ireland has jumped significantly since 2017 after recording a moderate increase during the early half of the decade. In 2019, it stood at €7.3 billion, an increase of 62% from 2017.

Source: Department of Public Expenditure and Reform, Expenditure report 2019

4.2.4 Gross Capital Expenditure, by Departments, 2019[54]



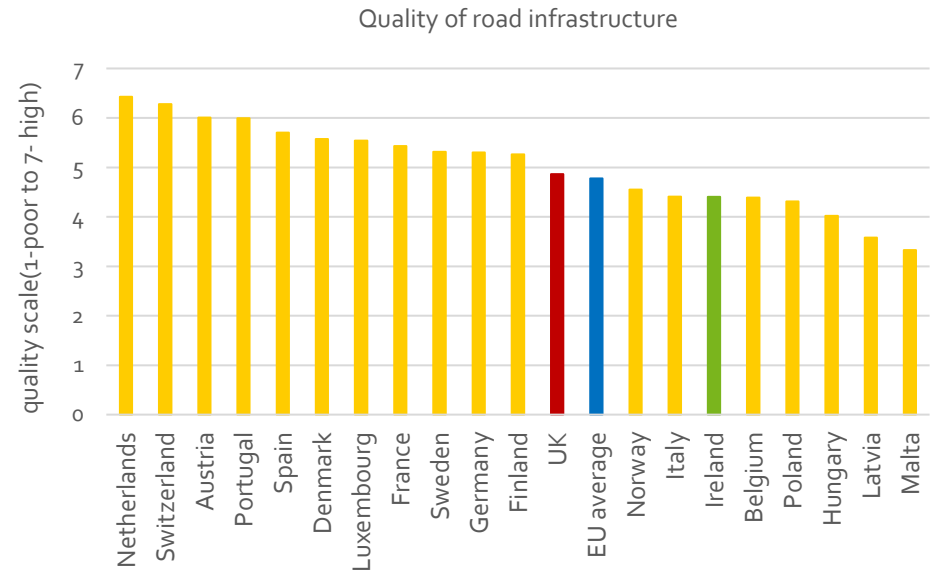
This figure illustrates the capital expenditure allocations across Government Departments in 2019, and provides a context to the chart 4.2.3. In 2019, the Department of Housing (allocation of up to €2,113 million) and the Transport (€1,613 million) received the biggest allocations, more than the combined total of 10 other departments, reflecting the continued focus on investments in housing and major public infrastructure projects such as MetroLink, BusConnects, Greenways, Luas and DART expansion schemes.

Source: Department of Public Expenditure and Reform, Expenditure report 2019

[53] Expenditure across Government departments such as: Agriculture, Food and the Marine Group, Business, Enterprise & Innovation Group, Children and Youth Affairs Group, Communications, Climate Action & Environment Group. For example, Investment in public transport projects such as MetroLink, BusConnects, Greenways, Luas, DART expansion schemes, local and regional roads projects, new social homes, ICT advancement in schools, social housing. More details available at: Budget 2019 Expenditure Report

[54] Others (Departments) - Communications, Climate Action & Environment, Agriculture, Food and the Marine, Justice, DPER, Rural & Community development, Defence, Culture, Heritage & the Gaeltacht, Children and Youth Affairs, Foreign affairs, Finance

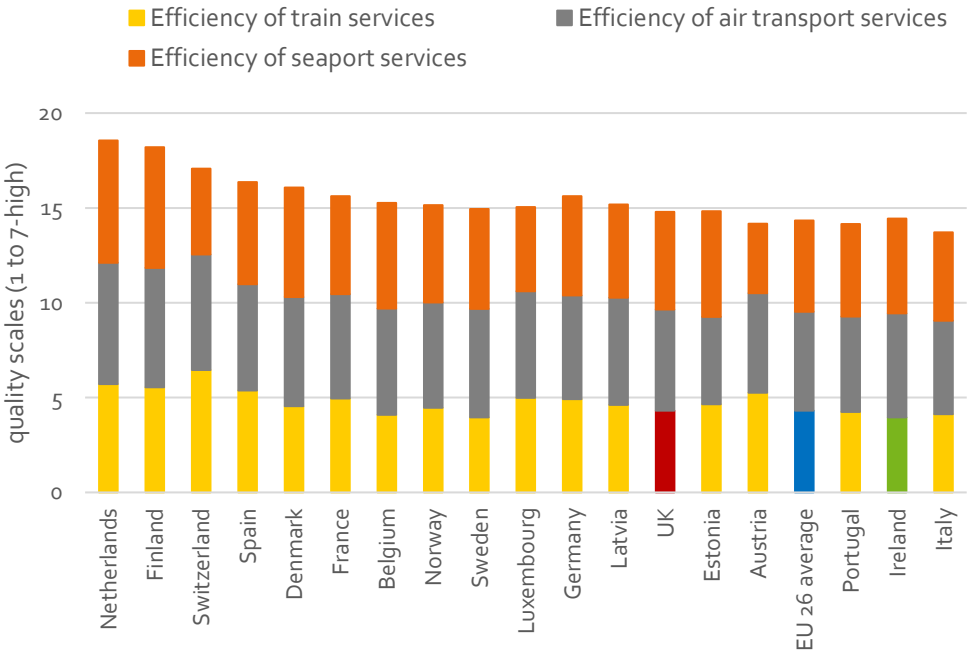
Fig 4.2.5 Perception of road Infrastructure Quality[55], 2019



In 2019, perception (WEF Survey among business executives) of the quality of road infrastructure was low in Ireland compared to perceptions in the EU on average and the UK. In the WEF survey, Ireland scored 4.4 out of 7 compared to the EU average of 4.77 and the UK's score of 4.86.

Source: World Economic Forum Survey

Fig. 4.2.6 Perception of Efficiency of Train services, Air Transport & Seaport services, 2019[56]



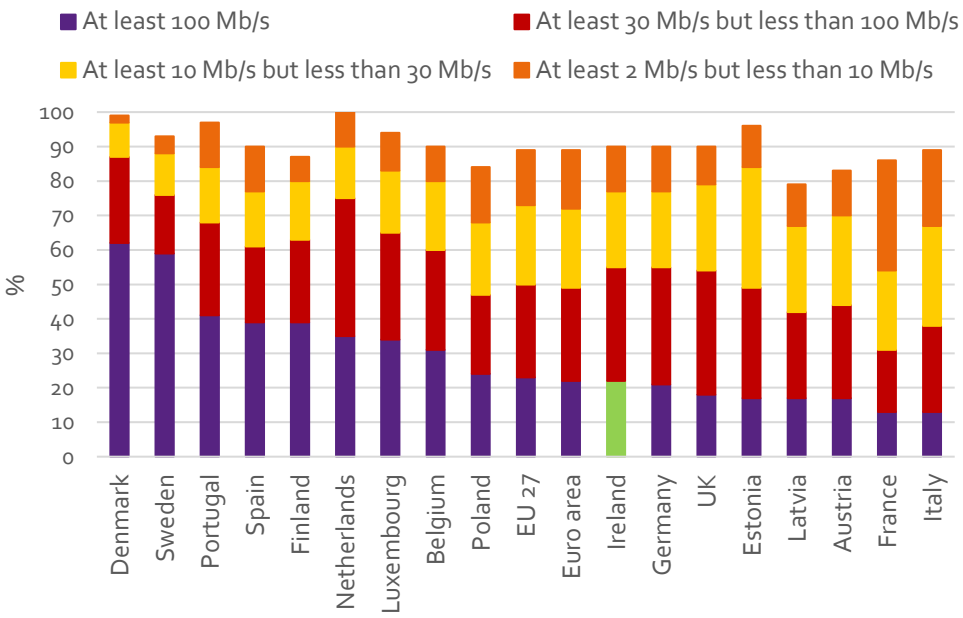
In 2019, the perception on the efficiency of airport services in Ireland (5.47) was above the EU average (5.22) and the UK (5.33). Ireland (4.99) also scored above the EU average (4.80) on the efficiency of seaport services but was behind on efficiency of train services (IRL 3.98, EU average 4.30). Ireland was behind the UK on both the efficiency of seaport services (5.15) and train services (4.31).

Source: World Economic Forum Survey

[55] WEF Survey data, which is based on the survey among business executives, is part of the dataset used in the calculation of the WEF ranking. The survey asks the participants to rank the answer from 1 (extremely poor, worst in the world) to 7 (one of the best in the world) to the question "In your country, what is the quality (extensiveness and condition) of transport infrastructure for the following: road, railroad, airports, and seaports. More details available at: WEF Executive Opinion survey

[56] Data based on WEF survey. The survey asks the participants to rank the answer from 1 (extremely poor, worst in the world) to 7 (one of the best in the world) to the question: In your country, how efficient (i.e., in terms of frequency, punctuality, speed, price) are the following transport services? Train services, air transport services and seaport services WEF business executive survey.

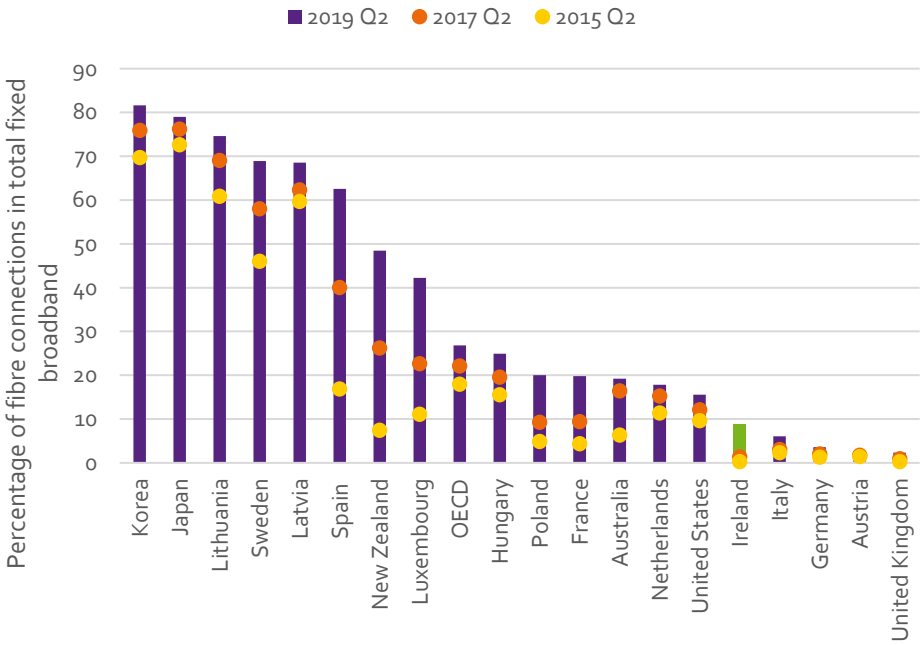
Fig. 4.2.7 Enterprises[57] with broadband access by maximum contracted download speed of fixed internet connection, 2019



In 2019, 22% of enterprises with fixed internet connection had access to high speed broadband (over 100mb/s) in Ireland, similar to the euro area average (22%) and above the UK (18%). Overall, 90% of the enterprises in Ireland had broadband access with the speed of at least 2mb/s, again similar to the euro area average (90%), but significantly below countries like Denmark (99%) and Sweden (93%).

Source: Eurostat

Fig. 4.2.8 Percentage of fibre connections in total fixed broadband, June 2019

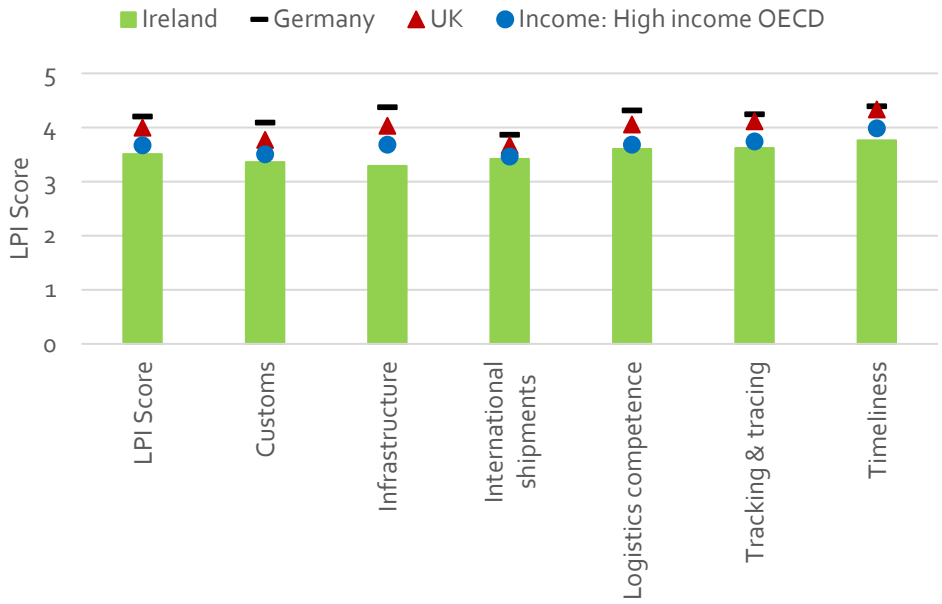


Korea and Japan remain long-term fibre broadband leaders, while a number of European countries have made significant improvements. Although Ireland's proportion of fibre connections grew from 1.4% in Q2 2017 to 8.8% in Q2 2019, Ireland has one of the lowest proportions of fibre connections of the countries considered. Ireland's digital capabilities are critical, particularly in the context of the abrupt shift to remote working during the COVID-19 pandemic.

Source: OECD Broadband Statistics

[57] All enterprises, without financial sector (10 or more persons employed)

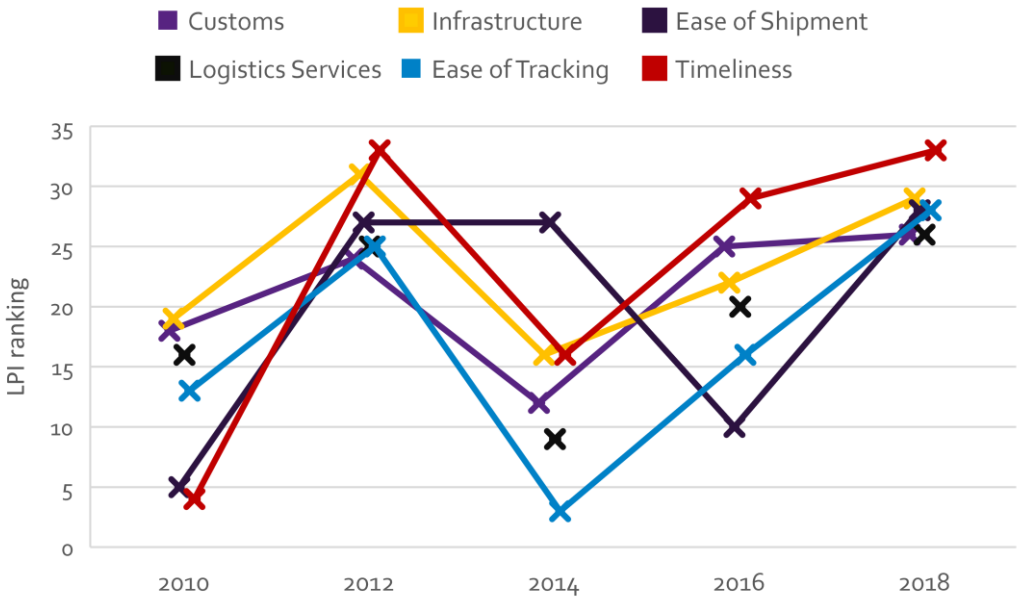
Fig. 4.2.9 Logistics Performance Index (LPI) Score[58], 2018



The World Bank LPI assesses six key dimensions of logistics performance including: infrastructure, international shipments, competence and quality of logistics services, tracking and tracing, and timeliness. Ireland is ranked 29th in the 2018 LPI index scorecard while Germany and the UK are placed 1st and 9th respectively. Ireland's score was highest in logistics competence (26th), but also well behind the UK and Germany .

Source: World Bank, International LPI Scorecard

Fig. 4.2.10 Logistics Performance Index (LPI) ranking, by category, 2018



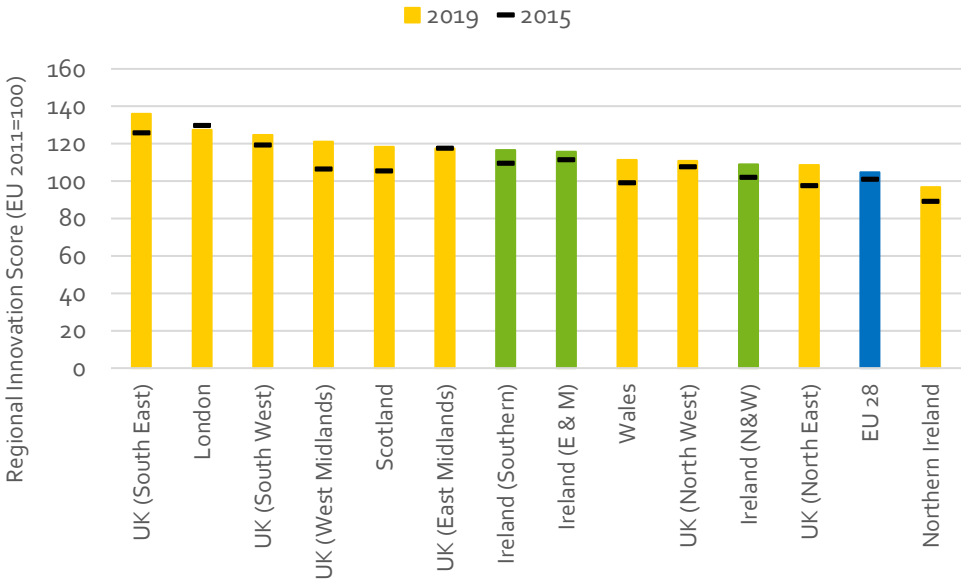
This figure shows the changes in Ireland's ranking across six dimesions of the Logistics Performance Index between 2010 and 2018. Ireland's ranking has been very volatile across all indicators in the time period.

Source: World Bank, International LPI Scorecard

58 The World Bank logistics performance (LPI) is the weighted average of the country scores on the six key dimensions based on : Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs; Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology); Ease of arranging competitively priced shipments; Competence and quality of logistics services (e.g., transport operators, customs brokers); Ability to track and trace consignments; Timeliness of shipments in reaching destination within the scheduled or expected delivery time. More details available at: The World Bank aggregated LPI

4.3 Clusters and Firm Sophistication

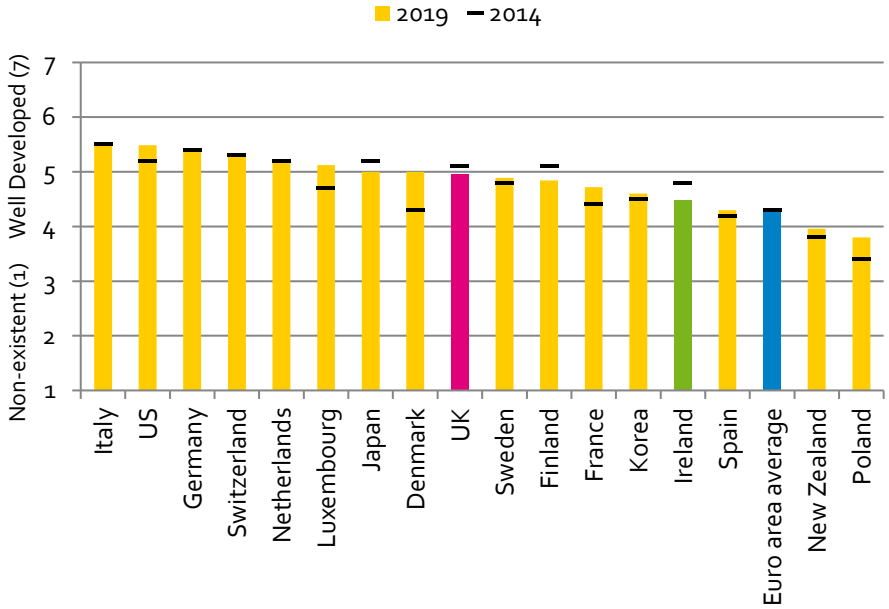
Fig. 4.3.1 Regional Ecosystem Scoreboard (RES)[59], 2019



The Regional Ecosystem Scoreboard (RES) composite index captures the quality of the regional business environment that facilitates the creation of new enterprises, the survival and the growth of business activities. Business environments have improved more across Irish regions in the last five years compared to the other UK regions.

Source: European Commission, Regional Innovation Ecosystem

Fig.4.3.2 Perceived State of Cluster Development[60], 2019



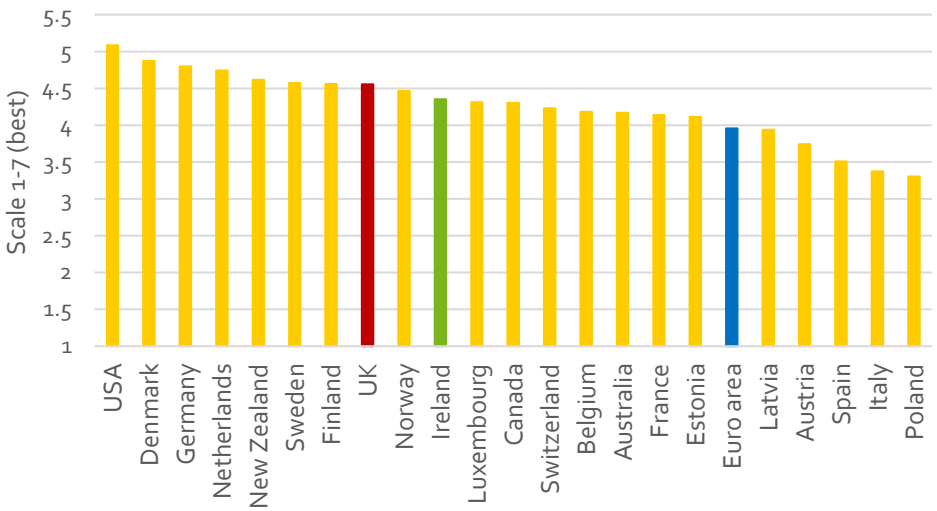
This figure presents WEF data based on the personal assessment of managers in surveyed companies about cluster development in their country. In Ireland the weighted average score in 2019 was 4.5, above the euro area average (4.3) but below the UK (4.95).

Source: World Economic Forum

[59]Regional Ecosystem Scoreboard provides comparative assessment of innovation performance among EU member states based on regional statistical facts. The Scoreboard consists of 50 indicators and composite indicators comprises across six key dimensions, namely Knowledge basis and skills, Collaboration and internationalisation, Access to finance, Demand conditions, Entrepreneurial conditions and the Quality of governance. These are further divided into seventeen sub-dimensions that determine the quality of conditions of regional ecosystems. Further details available on Regional Ecosystem Scoreboard Updated Methodology Report

[60] In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a field)? [1 = non-existent; 7 = widespread in many fields]

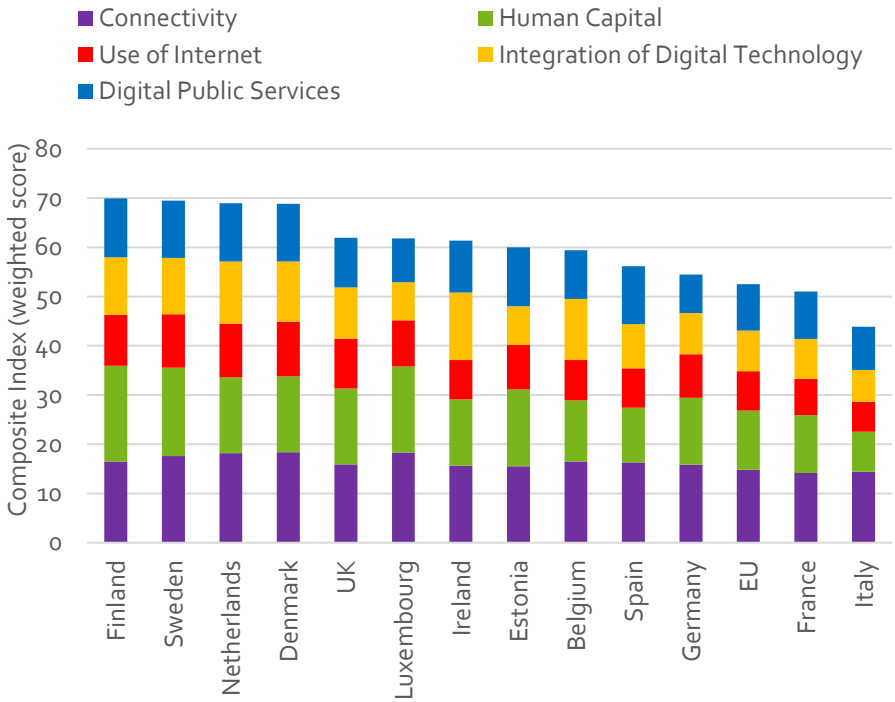
Fig. 4.3.3 Perception on Companies embracing disruptive ideas[61], 2019



In 2019, the perception of companies embracing disruptive ideas was relatively high in Ireland compared to the euro area, but lower than the UK. In the World Bank's Business Executive survey, Ireland scored 4.35 compared to the euro area average score of 3.96 and the UK's score of 4.55.

Source: World Economic Forum

Fig. 4.3.4 European Digital Economy and Society Index Innovation Scoreboard (DESI)[62], Overall ranking, 2019



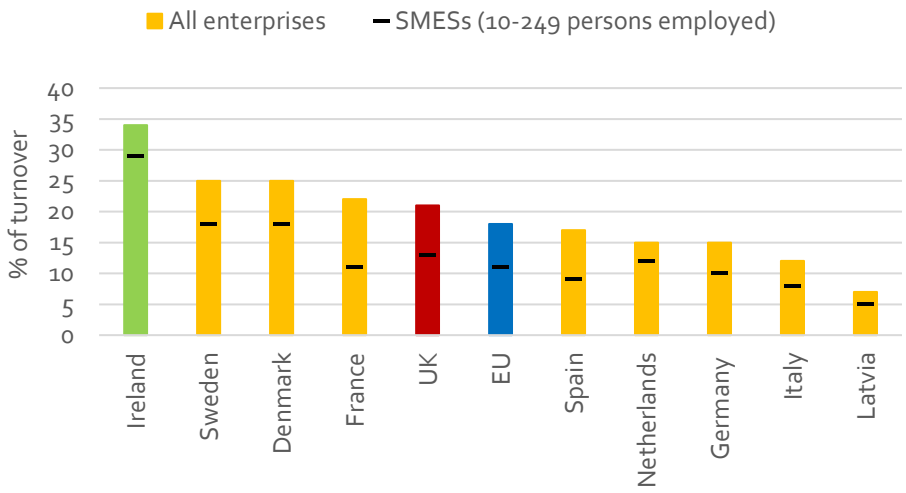
Overall, Ireland (7th) was ranked below the UK (5th) but well above the EU average (12th) in the 2019 EU DESI scoreboard. Ireland performs well across the six pillars relative to the EU, and was ranked 1st in the Integration of Digital Technology pillar.

Source: European Commission, DESI

[61] Data based on WEF survey. The survey asks the participants to rank the answer from 1 (not at all) to 7 (to a great extent) to the question: In your country, to what extent do companies embrace risky or disruptive business ideas. More details at: WEF business executive survey.

[62] The Digital Economy and Society Index (DESI) is a composite index that summarises digital performance of EU member states under five digital pillars - Connectivity, Human Capital / Digital skills, Use of Internet by citizens, Integration of Digital Technology by businesses, Digital Public Services. More details available at: DESI 2019.

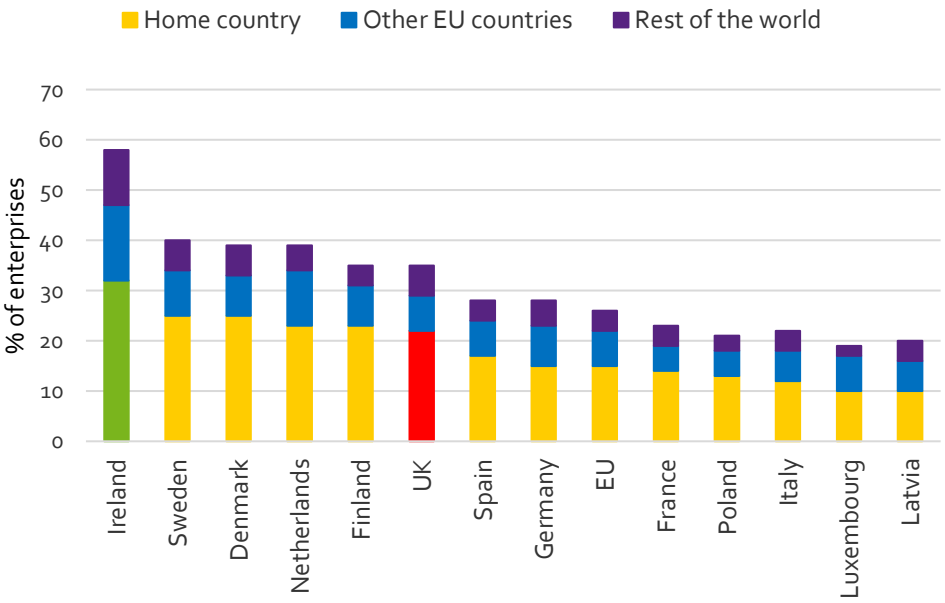
Fig. 4.3.5 Enterprises total turnover from e-commerce[63], 2019



This graph shows enterprise e-sales as a proportion of total turnover for selected countries in 2019. In Ireland, e-sales accounted for 34% of total turnover for all businesses, significantly above the proportion recorded by businesses in the UK (21%) and the EU (18%). SMEs e-sales were also higher in Ireland with 29% of total SME turnover arising from e-sales compared to 13% and 11% in the UK and the EU respectively.

Source: Eurostat, Digital Economy and Society

Fig. 4.3.6 Enterprises with web sales, by place of sale[64], 2019



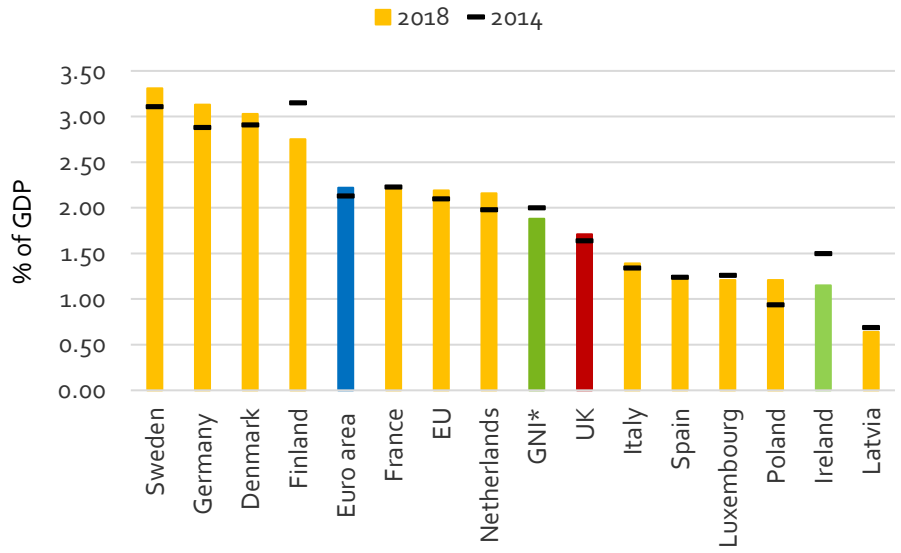
In 2019, 58% of Irish enterprises recorded web sales, a significantly higher proportion than in the UK (35%) and the EU (26%). Ireland also had the highest share of enterprises (15%) that conducted online sales compared to other EU member states. Some 11% of Irish enterprises also recorded web sales with the rest of the world, again well above their counterparts in the UK (6%) and the EU (4%).

Source: Eurostat, Digital Economy and Society

[63] Annual Eurostat Survey data on ICT usage and e-commerce in enterprises.
[64] Annual Eurostat Survey data on ICT usage and e-commerce in enterprises.

4.4 Knowledge and Talent

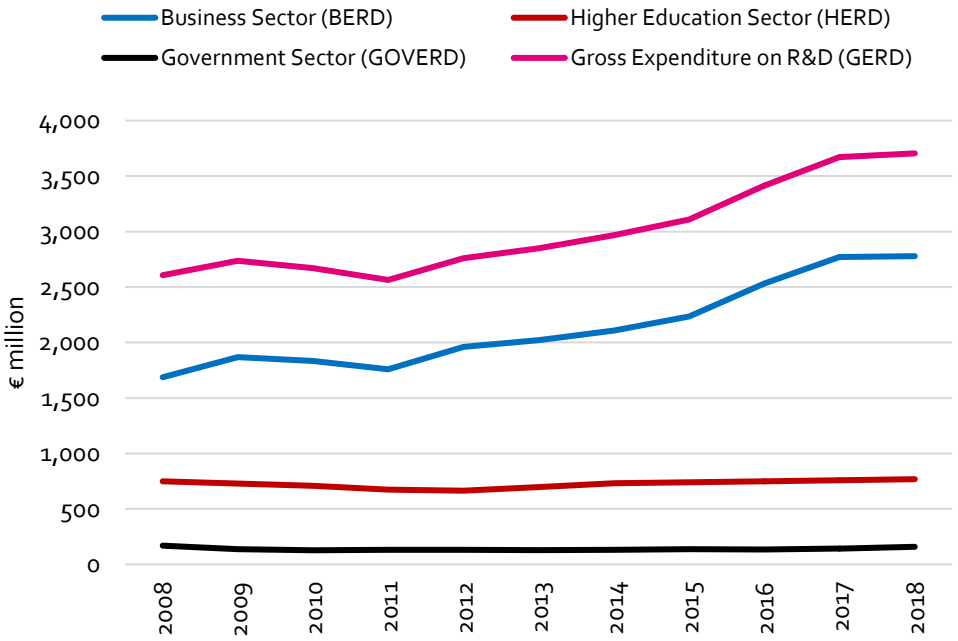
Fig. 4.4.1 Gross R&D[65] expenditure (GERD[66]) as a percentage of GDP/GNI*, 2018



In 2018, GERD as a percentage of GNI*, a better measurement of the Irish economy, was 1.88% in Ireland, above the percentage of GDP in the UK (1.71%) but below the EU average percentage (2.19%). Between 2014 and 2018, GERD as a percentage of GNI* fell by 0.12 percentage points in Ireland.

Source: Eurostat, Research and Development Statistics, Department of Business, Enterprise and Innovation[67]

Fig. 4.4.2 Expenditure on R&D by sector at current prices, Ireland, 2008-2018[68]



This figure gives the context to figure 4.4.1. While GERD has fallen since 2014 in percentage terms, the level of GERD has increased in the same period. In the last 10 years, the levels of BERD has trended upward, whereas levels of HERD and GOVERD have remained unchanged.

Source: CSO, DBEI

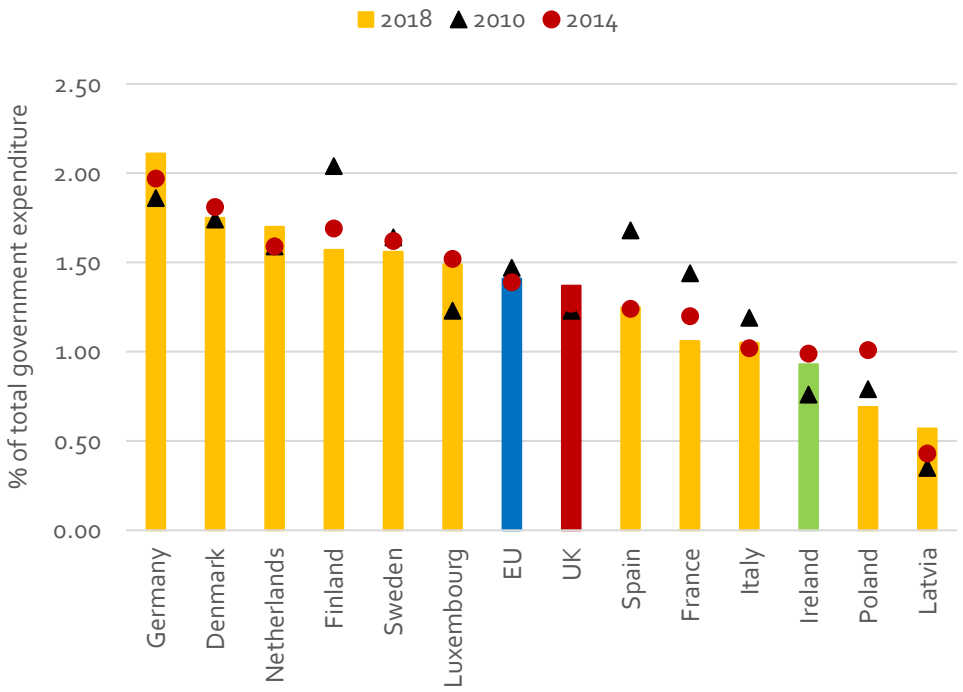
[65] Eurostat defines R&D expenditure as expenditure undertaken in order to increase the stock of knowledge - including knowledge of humankind, culture and society - and to devise new applications of available knowledge

[66] Gross Expenditure on Research and Development (GERD) is the sum of Government Expenditure on R&D undertaken in house in Government institutions, Business Expenditure on R&D, and Higher Education Expenditure on R&D.

[67] The Research and Development Budget (R&D) 2018-2019.

[68] Includes EU commission funding. Expenditure figures only and do not include the R&D tax credit. HERD 2017 figure is an estimate.

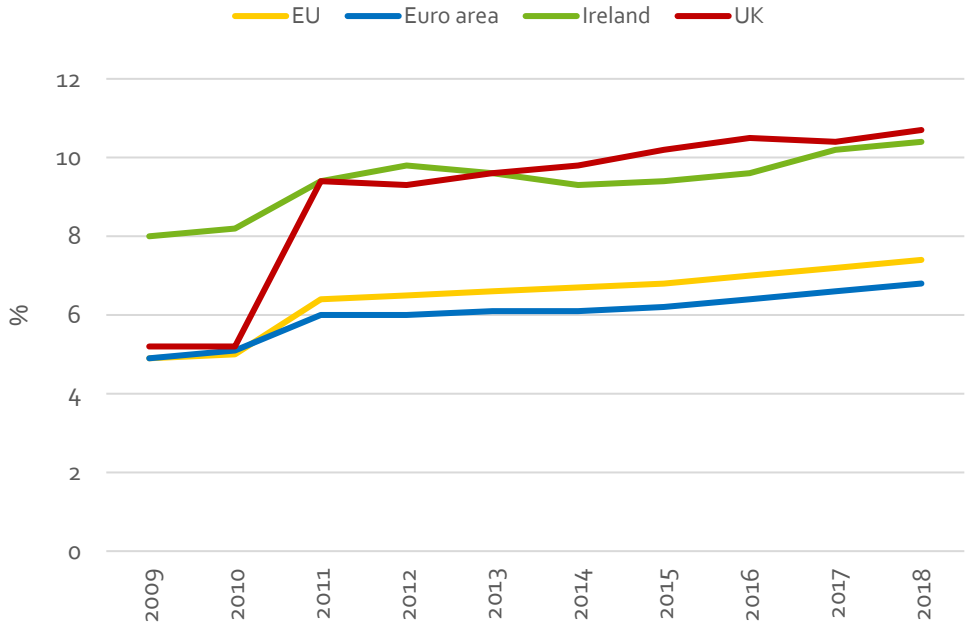
Fig. 4.4.3 Share of Government budget appropriations or outlays on R&D, 2018



This figure compares the estimated share of Government expenditure on R&D across selected countries. In 2018, at 0.93% of total Government expenditure, the outlay on R&D was significantly lower in Ireland compared to the EU (1.14%) and the UK (1.37%). While the outlay on R&D in Ireland fell by over 0.06 percentage points between 2014 and 2018, it increased from €726m to €765.7m in absolute value during the period.

Source: Eurostat, Research and Development, Government Expenditure

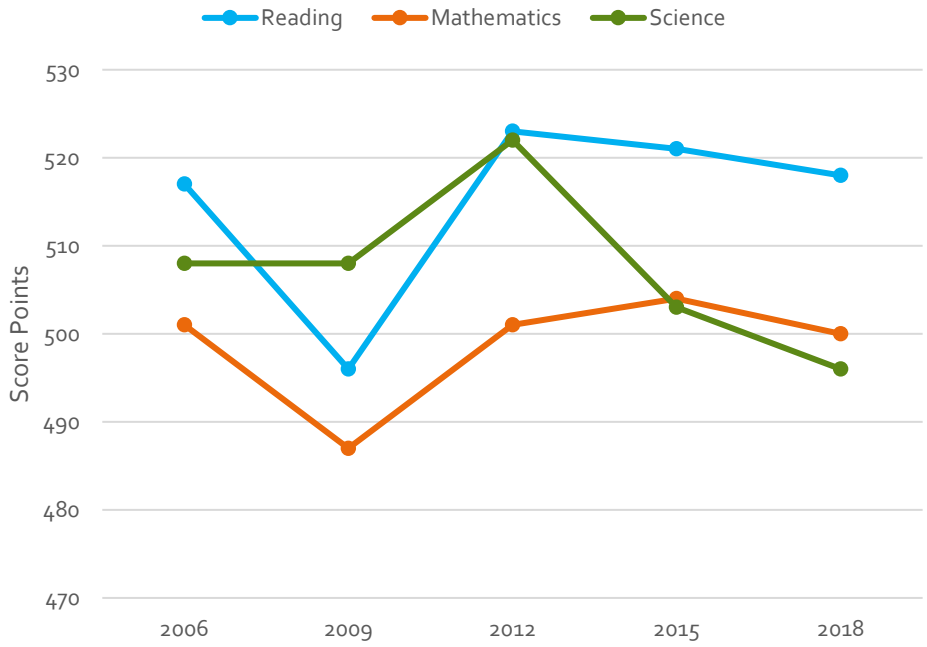
Fig. 4.4.4 Scientists and engineers as a percentage of active population aged 15-74, 2018



The number of scientists and engineers as a proportion of the active population in Ireland has continued to increase moderately in the last decade and remained above the EU and euro area averages in 2018. In 2018, 10.4 % of the active polulation in Ireland were classified as scientists and engineers, a significantly higher proportion than both the EU (7.4%) and the euro area (6.8%) and slightly lower than in the UK (10.7%).

Source: Eurostat, Human Resources in Science and Technology

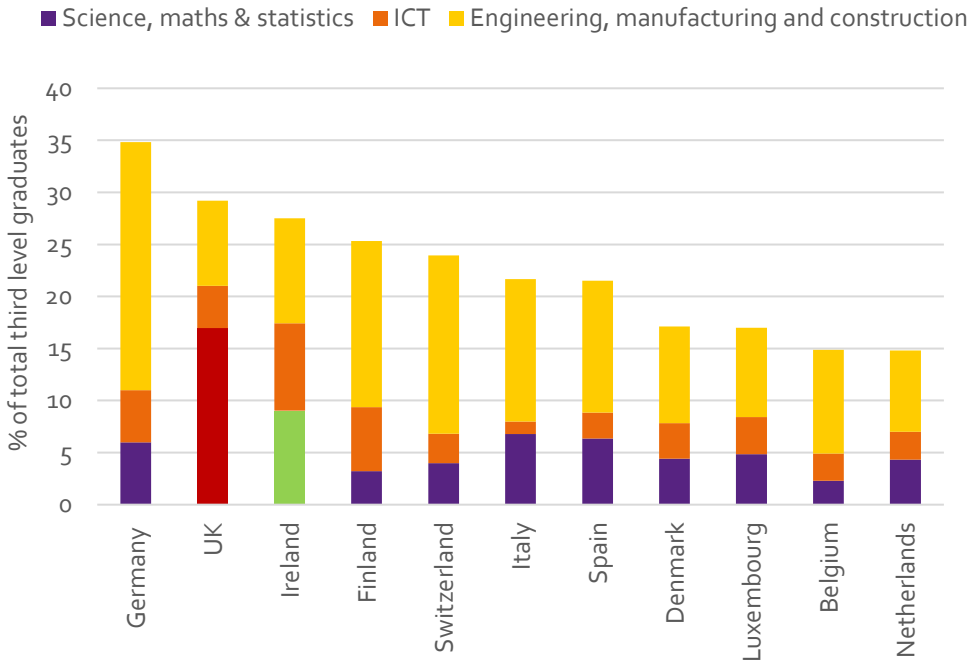
Fig. 4.4.5 PISA scores in reading, mathematics and science, 2006 – 2018



The OECD's triennial PISA survey assesses education trends in OECD countries. While Ireland's scores for reading and mathematics have remained relatively stable since 2012, the performance of Irish students in science has notably declined.

Source: OECD Programme for International Student Assessment (PISA)

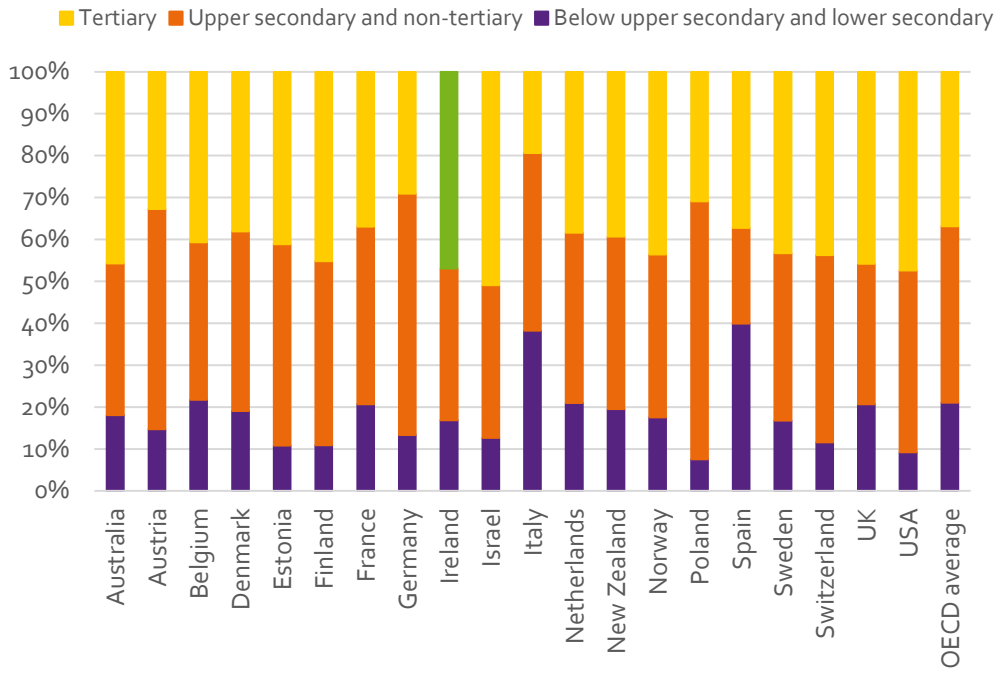
Fig. 4.4.6 STEM graduates as a percentage of total third level graduates, 2017



In 2017, Germany had the highest proportion of STEM graduates in the EU, with 34% of all graduates getting a STEM degree. In Ireland, the corresponding figure was 27%. The composition of these STEM graduates is quite different. Not surprisingly given its sectoral composition, a much larger proportion of STEM graduates in Ireland have taken ICT courses, while in Germany graduates in engineering, manufacturing, and construction comprise the largest numbers within STEM graduates.

Source: Eurostat, Graduates by Education level, Programme Orientation and Field of Education

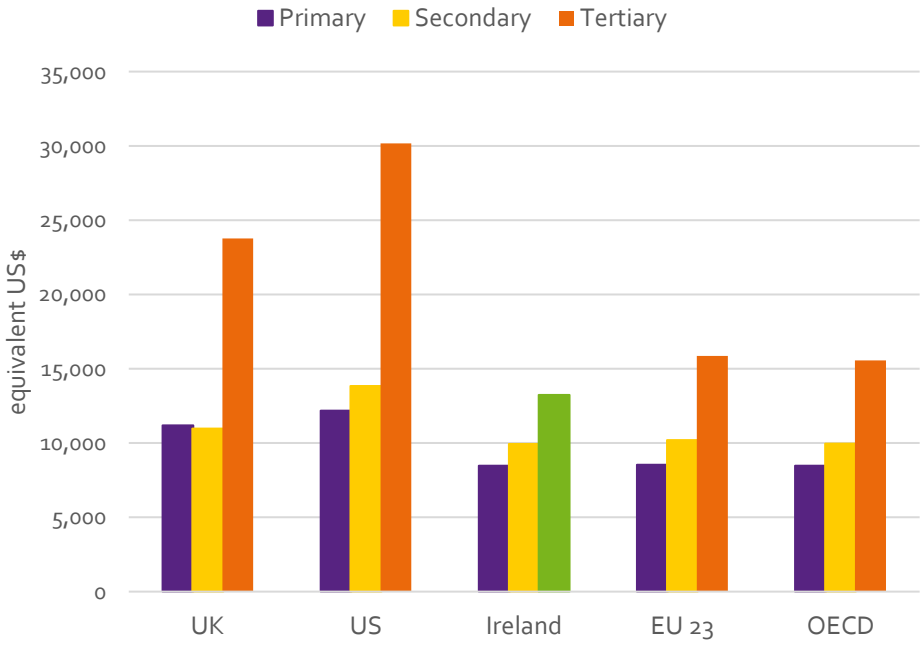
Fig. 4.4.7 Education attainment of population aged 25-64 by highest level of education[69] (%),2016



In 2016, Ireland had one of the highest shares of working age population with tertiary education (47%) among OECD high income countries. Ireland had one of the lowest proportion of working age population with below secondary level education (17%), slightly lowerthan the UK (21%) and significantly lower than Italy (38%) and Spain (40%).

Source: OECD, Education at a Glance 2019[70]

Fig. 4.4.8 Annual expenditure on educational institutions per student[71], $ (PPP adjusted), 2016[72]



In 2016, expenditure on education per tertiary student in Ireland was $13,237 (PPP adjusted), just below the OECD ($15,556) and the EU23 average ($15,863), but significantly lower than in the UK ($23,771) and the US ($30,165). Similarly, with $9,948/ student and $8,468/student expenditure among secondary and primary students respectively, spending per student was low in Ireland across all levels of the education system compared to the benchmarked countries.

Source: OECD, Education at a Glance 2019

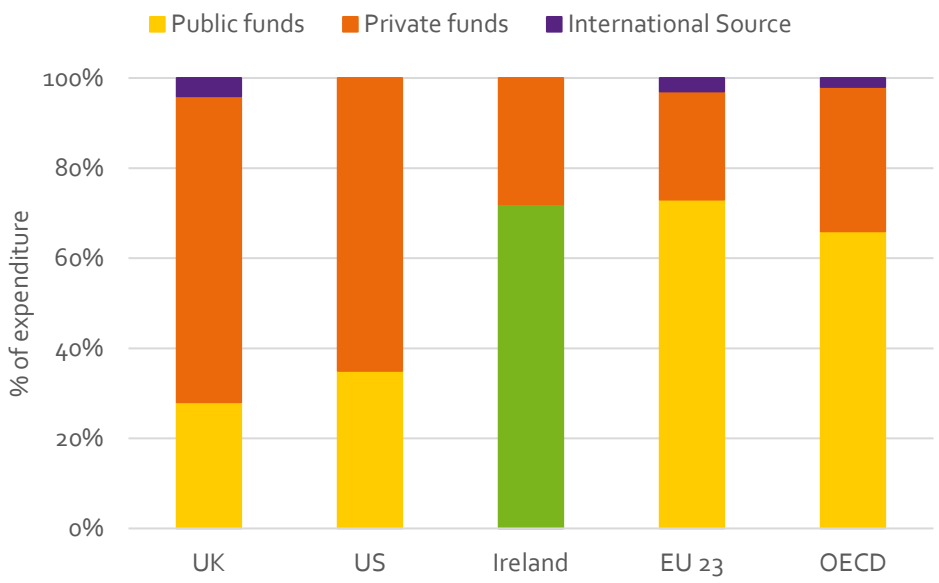
[69] Upper secondary and non-tertiary refers to people with upper secondary and post-secondary but non-tertiary education. Data missing for Japan for below upper secondary and lower secondary level.

[70] The OECD Education at a Glance Report was published in September 2019, using cross country data, some of which has not been updated since 2016.

[71] Expenditure per student on educational institutions at a particular level of education is calculated by dividing total expenditure on educational institutions at that level by the corresponding full-time equivalent enrolment.

[72] EU23 – Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, UK.

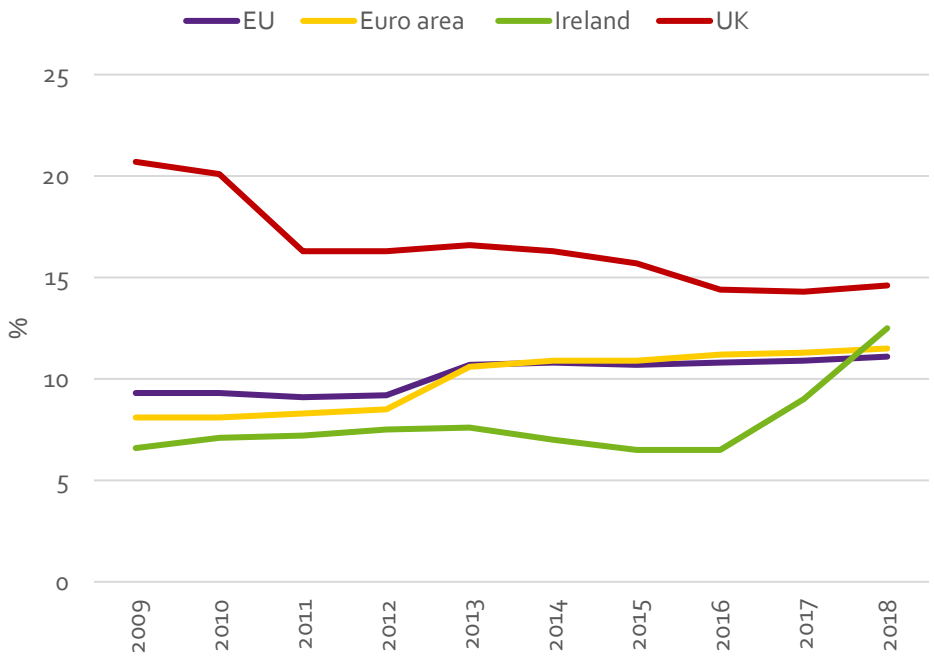
Fig. 4.4.9 Breakdown of tertiary educational expenditure, 2016



In 2016, public funds accounted for 72% of expenditure on tertiary education in Ireland. This was similar to the EU 23[73] average (73%) and above the OECD average (66%), and significantly higher than in the UK (28%) and the US (35%). Correspondingly, private funding on tertiary education was much more prevalent in the UK (68%) and the US (65%) compared to Ireland (28%).

Source: OECD, Education at a Glance 2019

Fig. 4.4.10 Lifelong learning[74] (as a percentage of population aged 25-64), 2018

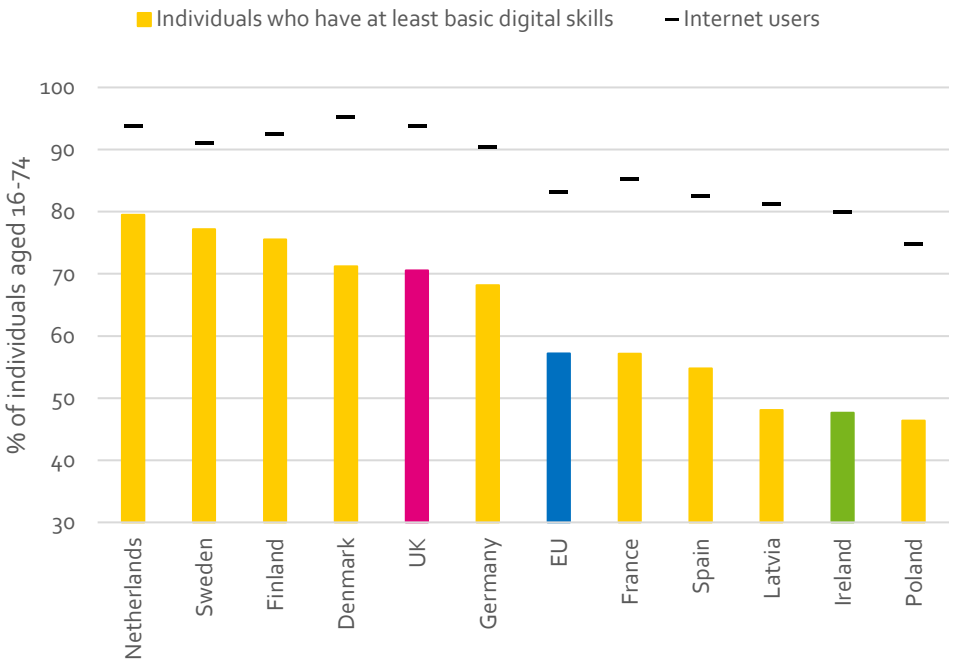


The participation rate in life long learning remained almost flat (and below the EU, the euro area and the UK) in Ireland between 2009 to 2016. Since 2016, the rate has trended upwards reflecting the focus on upskilling those in employment and in 2018, stood at 12.5%, above both the EU rate (11.1%) and the euro area average (11.5%) rate, but below the UK rate (14.6%).

Source: Eurostat, Participation Rate in Education and Training

[73] EU23 – Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, UK.
[74] Lifelong learning- people in receipt of education and training (both formal and informal).

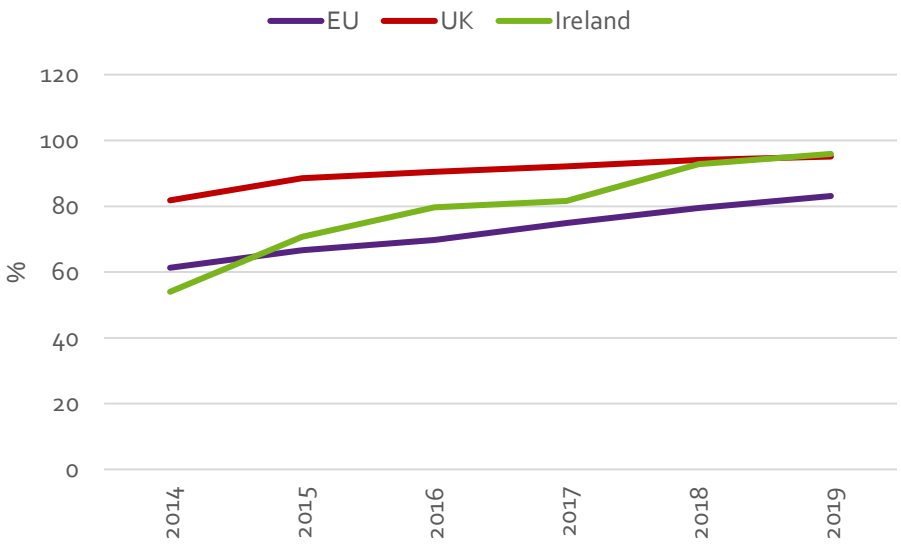
Fig. 4.4.11 Population having at least basic digital skills[75], 2019



Digital skills level refers to an individual's digital activities and competency across four dimesions - information, communication, content-creation and problem-solving. In 2019, only 48% of the population reported having at least basic digital skills in Ireland, one of the lowest levels in the EU. Ireland (80%) was also behind the EU (83%) and the UK (93.8%) in terms of the number of people actively using the internet.

Source: European Commission, Digital Economy and Society Index

Fig. 4.4.12 Proportion of households with broadband coverage (at least 30Mbps), 2019

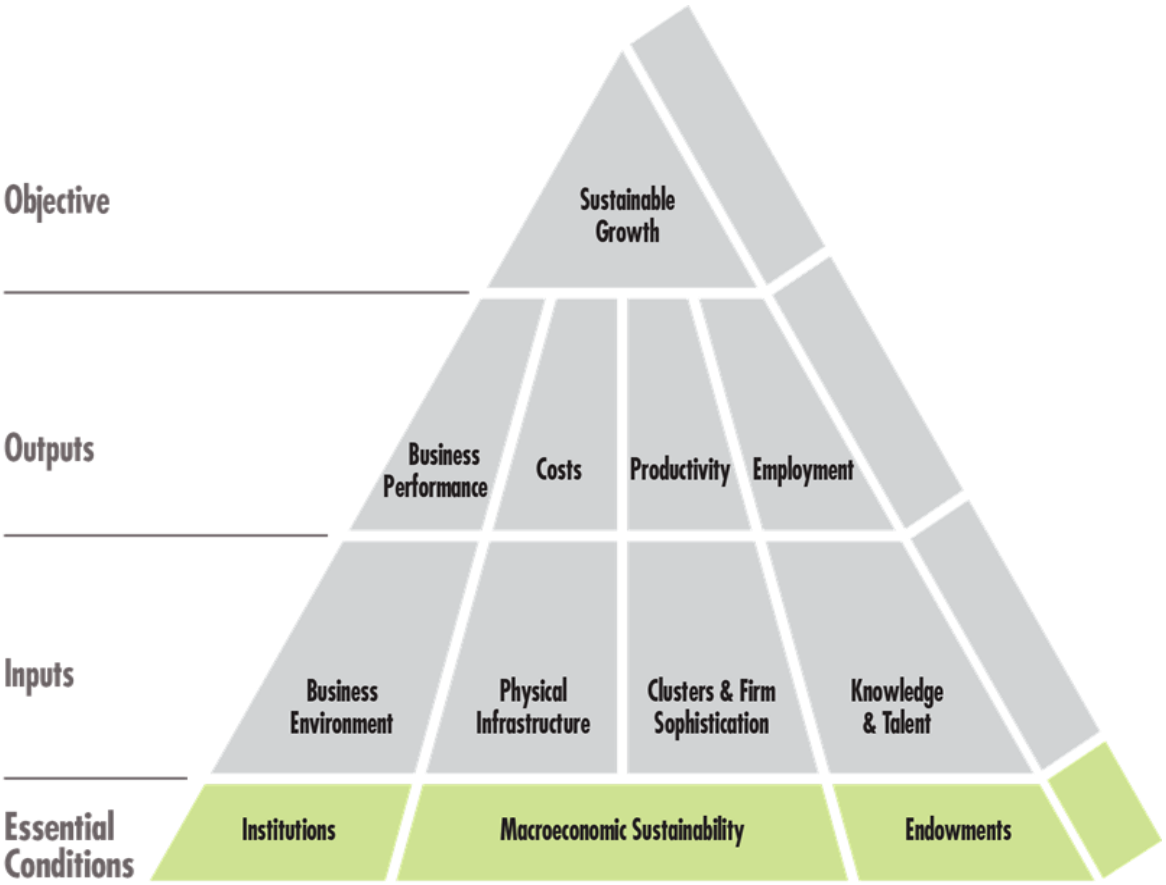


In the past six years, broadband coverage (defined as having download speeds of at least 30Mbps) for households in Ireland has expanded significantly. In 2019, 95.9% of households in Ireland were coverd by broadband, compared with 54% in 2014. This is well above the EU average (83.1%) and slightly above the UK (95.1%).

Source: European Commission, Digital Economy and Society Index

[75] Based on survey of individuals aged 16-74. Eurostat classifies an individual's digital skills level based on their digital activities and competency across four dimensions - information, communication, content-creation and problem-solving-of digital skills level : (i) low skilled – an individual that can and has carried out activities from only one of the four Digital Competence (ii) Basic skills – an individual with basic skills in at least one dimension, but no skills in none. (iii) Above basic – competent in all dimensions.

Chapter 5
Essential Conditions



Essential Conditions

In all circumstances, for an economy to be productive and competitive, several pre-conditions need to be in place to allow economic activity take place and ensure that there are adequate resources to facilitate production. This section looks at some of the necessary, but not sufficient, conditions for economic growth to take hold, and for competitive industries to emerge. Like other sections, it is important to understand these data in the changed environment that we are now operating in. Prior to the COVID pandemic, Ireland performed well in terms of sound institutions and ease of doing business. Moreover, in response to the crisis, certain public bodies have made dramatic changes to the way they deliver their services, and this momentum needs to be capitalised on. On the other hand, current high levels of private sector (company and individual) and public sector debt have left Ireland vulnerable. It is clear that the short-term response to the COVID pandemic requires the Government to boost the economy, but in the longer term, care needs to be taken with the public finances.

Institutions

Institutional quality is difficult to measure but is increasingly recognised as important in determining long term performance. As there are no simple metrics to assess the quality of institutions, the NCC focus on three sets of indicators that measure the burden of regulation on businesses, perceptions of the quality of public services, and regulatory effectiveness.

The World Bank's Doing Business Index assesses the burden of regulation on SMEs by focusing on several processes small businesses are likely to face and determines the time and cost of completing these processes. In 2020, Ireland was ranked 23rd in the world in this index (Figure 5.1.1), a fall from the 2009 peak when it ranked 7th. The fall in Ireland's relative position in the global rankings over the past decade is due to improvements made in other countries while Ireland's overall score remained relatively stable. While Ireland scores well in terms of paying taxes, protecting minority investors, and resolving insolvency, areas with potential for improvement include enforcing contracts, registering property, and trading across borders. In November 2019, the World Bank released the Subnational Doing Business report that benchmarked the ease of doing business in the five Irish cities set out in the National Planning Framework (i.e. Cork, Dublin, Galway, Limerick and Waterford). The headline result of the report is that no city is the top performer in all of the areas examined, and that Ireland's national position would improve significantly if the best practices in some cities were adopted in others (Figure 5.1.2).

The World Governance Indicators[76] are a research dataset summarising views on the quality of governance in selected countries. Ireland scores comparatively well in all of the subcomponents and is particularly strong on regulatory quality (Figure 5.1.4) while there is room for improvement in the area of government effectiveness[77] (Figure 5.1.3).

Macroeconomic Sustainability

The macroeconomic environment plays a vital role in determining the context in which business operates and the perceived sustainability of a country's economy. Several indicators are monitored under this heading, including the components of growth, government finances, and overall debt to income ratios. Ireland is a highly open economy, with net trade contributing significantly towards annual growth (Figure 5.2.1), and so is particularly vulnerable to a slowdown in the global economy as a result of COVID-19. Ireland enters this unprecedented economic period as a highly indebted country, in both the public and

[76] The Worldwide Governance Indicators project reports aggregate and individual governance indicators for over 200 countries and territories for six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms.

[77] The Government effectiveness indicator reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

private sector, despite some improvements in recent years. It is disappointing that favourable economic conditions and large tailwinds since 2015 did not see further improvements in the current budget balance [78]. Government support measures related to COVID-19 will likely result in a sharp reversal of the Irish fiscal position this year.

Strong public finances are imperative to a country's sustainable economic growth. While Ireland's fiscal balance returned a small surplus of €1.3 billion in 2019, general government debt as a percentage of GNI* remains elevated at 99.2%. When debt is measured on a per capita basis, the figures show that Ireland was still a heavily indebted country, even before COVID-19 supports were introduced. At €41,600 the general government debt per capita in Ireland is the highest in the EU, much higher than the euro area average (€29,300). Ireland's deficit and debt position are likely to deteriorate significantly following the surge in current spending and collapse in tax revenues in the context of the COVID-19 pandemic. Debt in the private sector also remains elevated with Irish households and firms carrying significantly more debt than their European counterparts (Figure 5.2.6 and Figure 5.2.7). While progress has been made in terms of deleveraging since the financial crisis, it is unclear if has been enough, and it is expected that COVID-19 will test the liquidity of many Irish firms.

Government support measures related to COVID-19, including unemployment and illness related payments, income and business supports, and additional health sector spending, combined with a collapse in income tax and VAT revenues due to the sudden stop of economic activity , are likely to result in a sharp deterioration of the Irish fiscal position this year, with the balance moving back into deficit, and a related worsening of the general government debt position.

Endowments

The productivity-based view of competitiveness emphasises the importance of endowments in determining national competitiveness performance, especially in the medium to longer run. Endowments cover natural resources, geographic location, and demographics (size and structure). While such factors cannot easily be impacted by policy, they impact on competitiveness. Indicators focus on demographic trends, labour force participation, migration and population density. Ireland performs well in terms of demographics, with a comparably younger population than our European neighbours and a higher labour participation rate than the euro area average.

In 2019, Ireland continued to have the youngest population in the euro area with a median age of 37.7 years (Figure 5.3.1). This compares favourably with the median age in the UK (40.2), the EU (43.3) and the euro area (44.3). Ireland's young population, coupled with a higher than average birth rate (Figure 5.3.2), will both help to curb Ireland's old age dependency ratio (Figure 5.3.3). However, this will merely help to slow down the inevitable ageing of Ireland's population, and spending on long-term care, pensions and healthcare is projected to increase over the coming decades[79].

Net migration into Ireland has risen steadily in the last five years and in 2019 it was 33,700, owing to the arrival of 88,600 individuals into the country, while 54,900 individuals left the country (Figure 5.3.4). Since 2016, immigration has provided an important source of highly skilled labour to the Irish economy (Figure 5.3.5), a source that may change due to COVID-19.

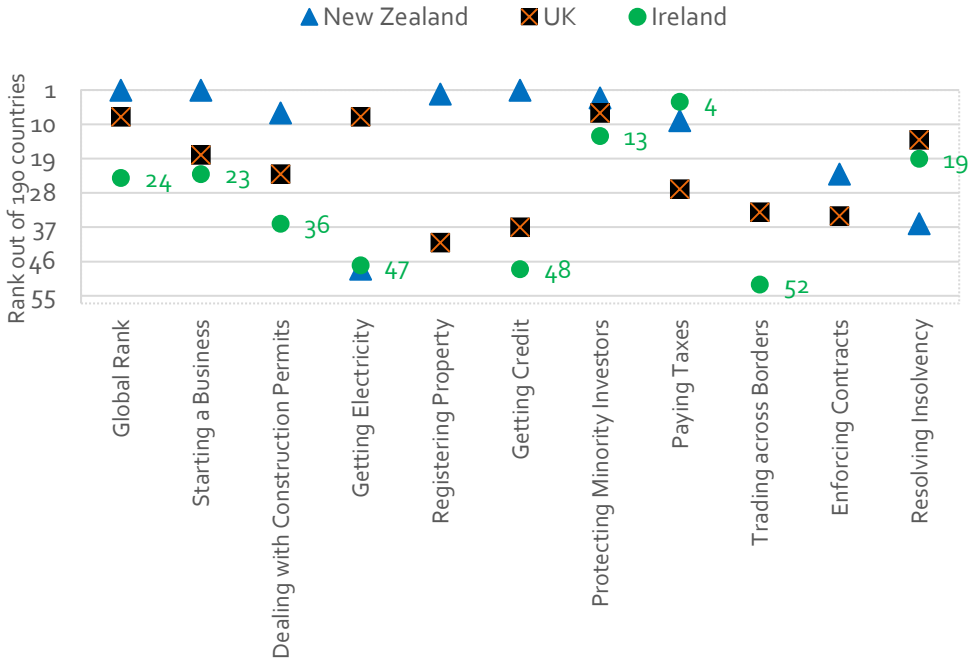
Summary

In the past, the essential conditions underpinning economic activity in Ireland have been relatively robust, with sound institutions, a supportive business environment and strong demographics. However, the COVID-19 pandemic has exposed particularly vulnerabilities. High – and likely rising - public, and private sector debt, will pose a particular challenge in the medium term as the Government, businesses and households take steps to address the virus.

[78] The tailwinds include surges in corporation tax, the reduced interest bill, as well as higher revenues and lower unemployment-related costs associated with the economic cycle. See the Irish Fiscal Council's November 2019 Fiscal Assessment Report for further details.
[79] 2019 European Semester Country Report Ireland

5.1 Institutions

Fig. 5.1.1 Ease of Doing Business Ranking by Theme, Selected countries, 2020



There was significant variation in Ireland's performance across different pillars of the World Bank's Ease of Doing Business 2020 indicator. Ireland ranked in the top 20 in Paying Taxes (4th) and Protecting Minority Investors (13th), but lagged significantly behind frontier countries in pillars such as Trading Borders (52nd), Getting Credit (48th) and Getting Electricity (47th).

Source: World Bank, Ease of Doing Business

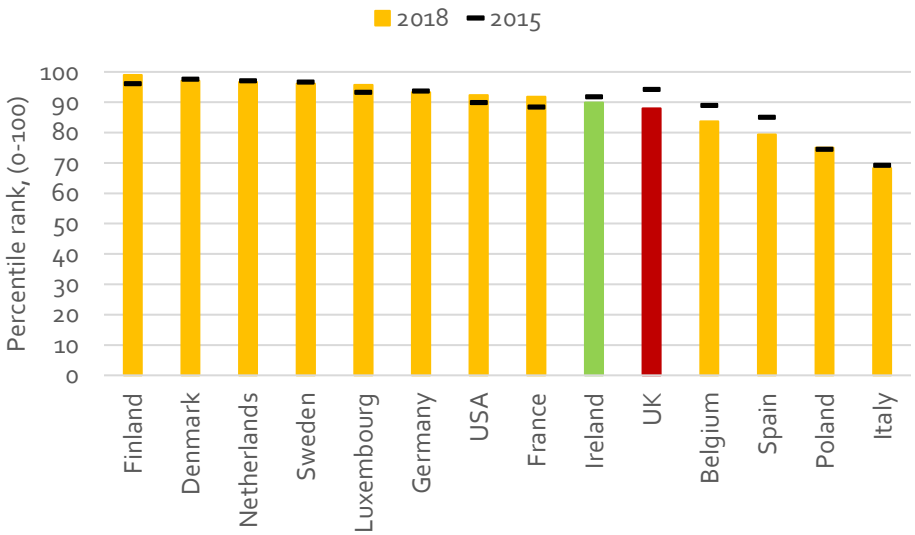
Fig. 5.1.2 Subnational Doing Business, Ranking of Irish Cities, 2019

	Starting a business	Dealing with construction permits	Getting electricity	Registering property	Enforcing contracts
Cork	3	5	2	4	1
Dublin	2	4	1	3	2
Galway	1	3	5	1	4
Limerick	3	2	3	2	5
Waterford	3	1	4	5	3

The World Bank's Subnational Doing Business report analyses the regulatory hurdles entrepreneurs typically face and ranks the five Irish cities set out in the National Planning Framework based on the ease of carrying out these common tasks. No city is the top performer in all of the areas examined and Ireland as a whole can benefit from cities learning from best practices demonstrated across the county.

Source: World Bank, Subnational Doing Business

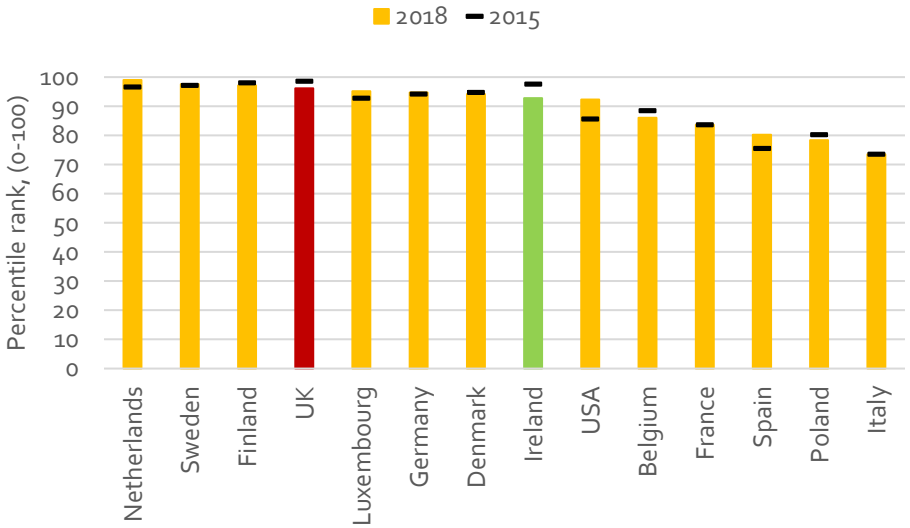
Fig. 5.1.3 Perception of Government effectiveness[80], 2018



Government effectiveness which captures the perception of governance system including the quality of public services has fallen in Ireland since 2015, partly reflecting the increasing cost and time in relation to enforcing contracts, trading across borders, and registering property, as highlighted by the recent World Bank's reports[81]. In 2018, Ireland was above the UK (87.98) with the percentile rank of 90/100.

Source: World Bank, Worldwide Governance Indicator[82]

Fig. 5.1.4 Perception of Regulatory Quality ranking[83], 2018



As per World Bank, perception among business executives on Irish Government's ability to formulate and implement sound policies and regulations that permit and promote private sector has fallen since 2015, largely due to the factor explained in the chart 5.1.3. In 2018, Ireland's regulatory quality percentile rank of around 93/100 was lower compared to 2015 (98), and below the UK (99.4).

Source: World Bank, World Governance Indicator

[80] The Government Effectiveness indicator reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

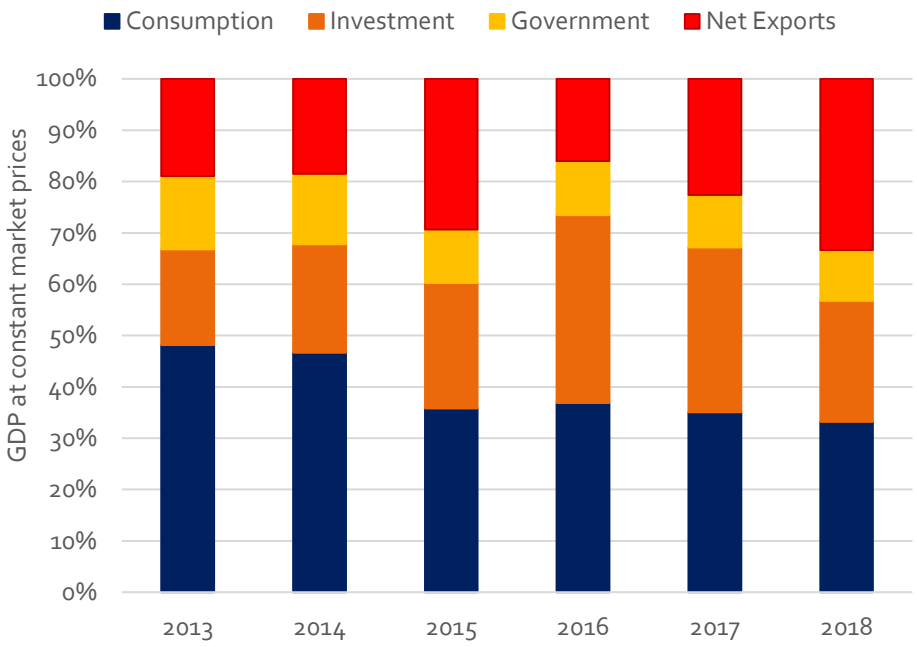
[81] World Bank Doing Business 2018,2019

[82] The Worldwide Governance Indicators (WGI) are a research dataset summarizing the views on the quality of governance provided by a large number of enterprises, citizens and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms.

[83] The Regulatory Quality indicator reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

5.2 Macroeconomic Sustainability

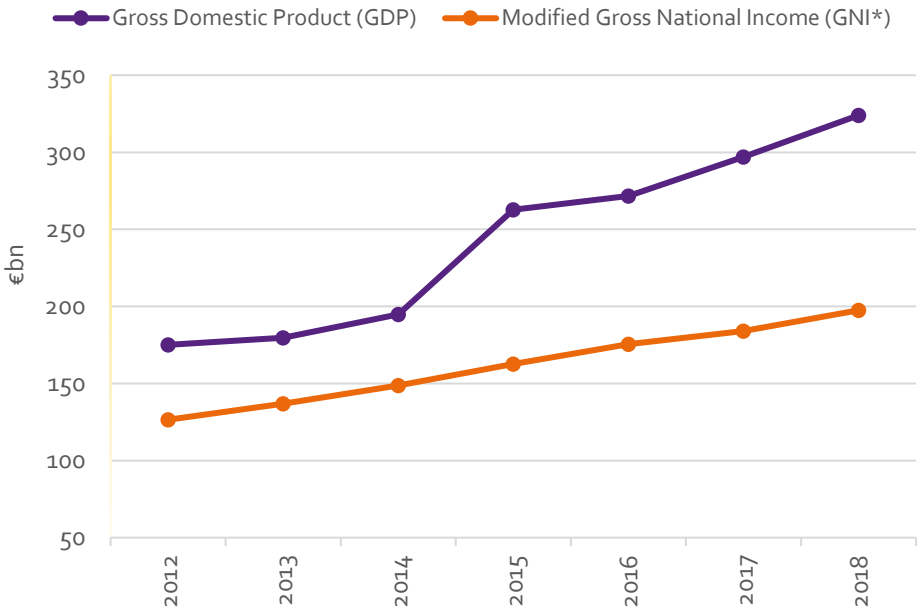
Fig. 5.2.1 Components of Gross Domestic Product (GDP), Ireland 2013–2018



Gross Domestic Product (GDP) increased by 8.2% in 2018 with growth in exports (10.4%) and consumer spending (3.4%). In 2018, two thirds of Irish GDP accounted for by private consumption spending and net exports, at 33% each. Investment accounted for 23% and government spending accounted for over 9%. Year on year, consumption increased by 5%, government spending rose by 8%, exports increased by 10%, imports reduced by around 2% and investment fell by 18%.

Source: CSO, National Income and Expenditure

Fig. 5.2.2 Gross Domestic Product and Modified Gross National Income (GNI*)[84], Ireland 2012-2018

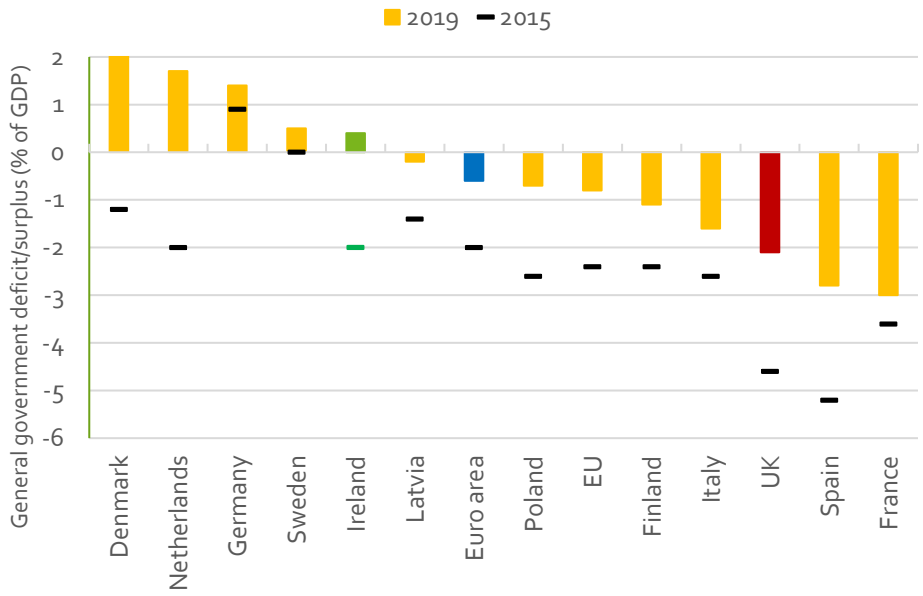


Ireland's GDP and GNI* both have trended upwards in recent years. However there is a marked difference, with GDP exhibiting a significant jump between 2014 and 2015, whereas GNI* recorded more steady growth. In 2018, Irish GDP at current prices was €324billion (y-o-y, up 9%) and GNI* was €197.5 billion (up 7%).

Source: CSO, National Income and Expenditure

[84] Modified GNI means GNI adjusted for- factor income of redomiciled companies, depreciation on R&D service imports and trade in IP, and depreciation on aircraft leasing.

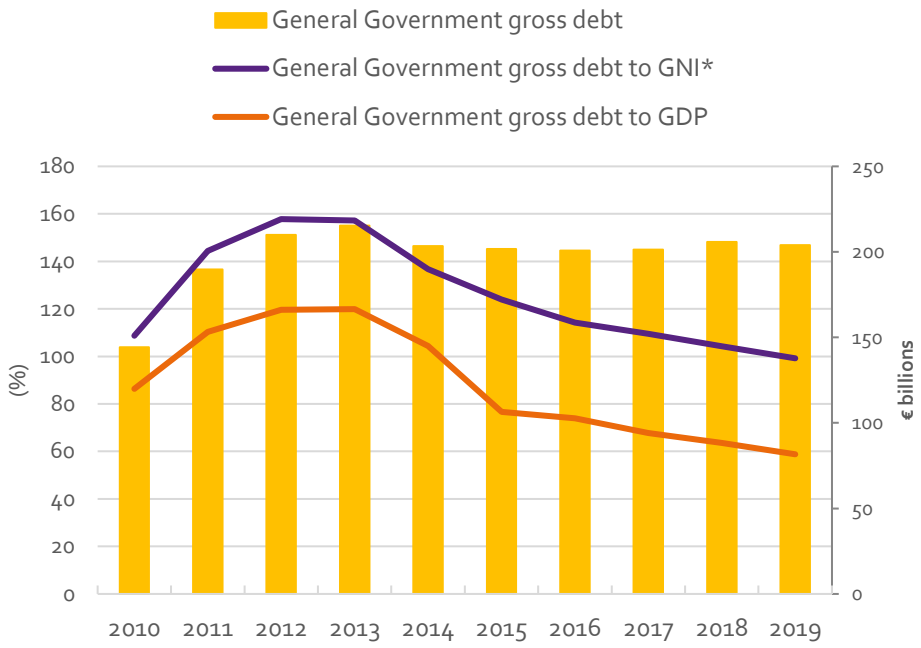
Fig. 5.2.3 General government deficit/surplus (% of GDP), 2019



This chart depicts the change in the general government balance sheet of selected countries between 2015 and 2019. In the last five years, the Irish government balance sheet has improved significantly, from the deficit (as a % of GDP) of 0.2% in 2015 to the surplus of 0.4% in 2019. In 2019, the UK deficit stood at 2.1% and the overall euro area deficit was 0.6% .

Source: Eurostat, Government Finance Statistics (GFS)

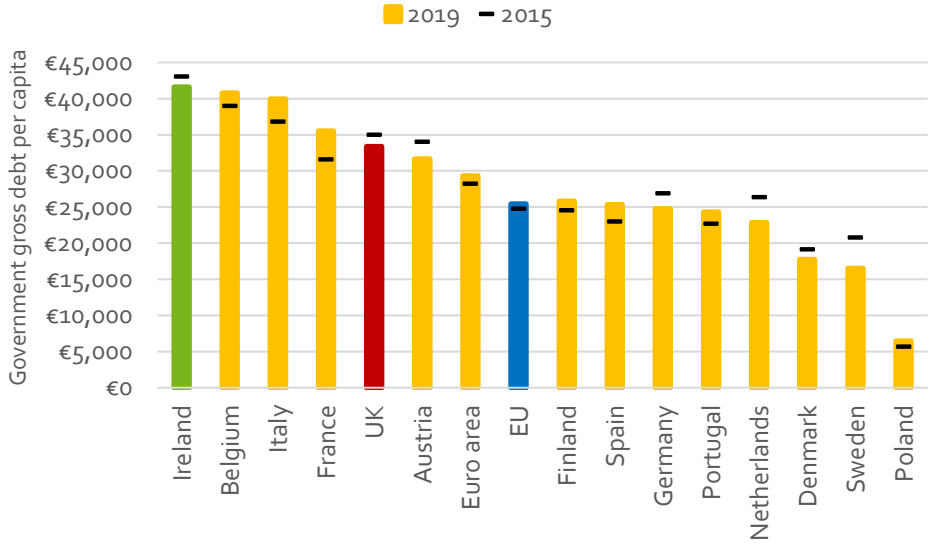
Fig. 5.2.4 General Government gross debt, 2010 - 2019



The general government gross debt to GDP and GNI* ratios both trended upward in the period 2010-2013, peaking at 119.9% and 157.2% respectively in 2013. Since then, both have fallen significantly and in 2019, the debt to debt-to-GDP ratio stood at 58.8% and GNI* ratio stood at 107% (2018). However, nominal general government debt remains high and limits Ireland's capacity to deal with unexpected shocks.

Source: CSO, Government Finance Statistics

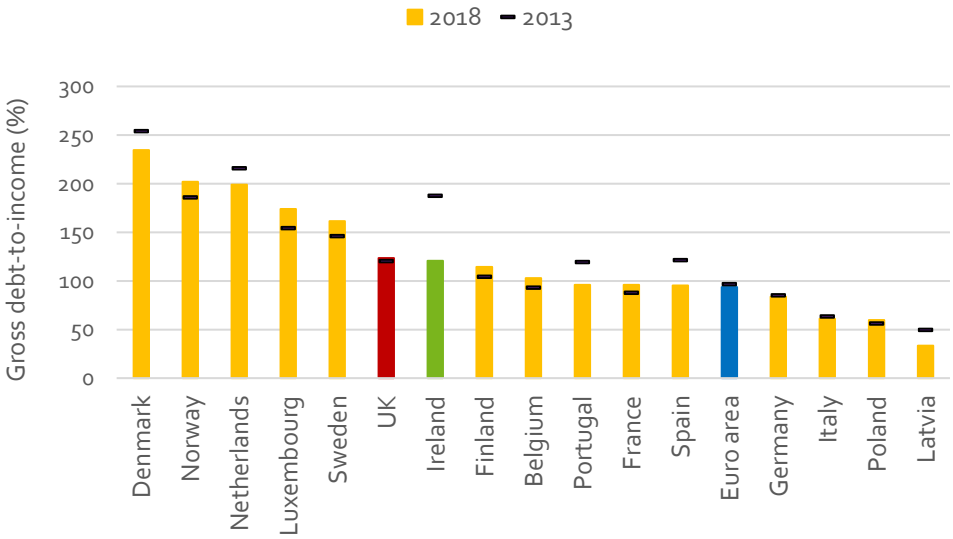
Fig. 5.2.5 Government consolidated gross debt per capita[85], 2019



The fluctuations in the general government debt per capita reflects the dynamics of the Irish economy over the last 15 years. General government debt per capita in Ireland jumped from one of the lowest in the EU in 2005 (€10,793) to one of the highest during the financial crisis. Debt per capita in Ireland remains high but has fallen slightly (3.47%) in the last five years. In 2019, debt per capita in Ireland was €41,605, significantly higher compared to the euro area (€29,314) and the UK (€33,362).

Source: NCC calculations based on Eurostat data, Government Finance Statistics

Fig. 5.2.6 Gross debt to income ratio of households, 2018

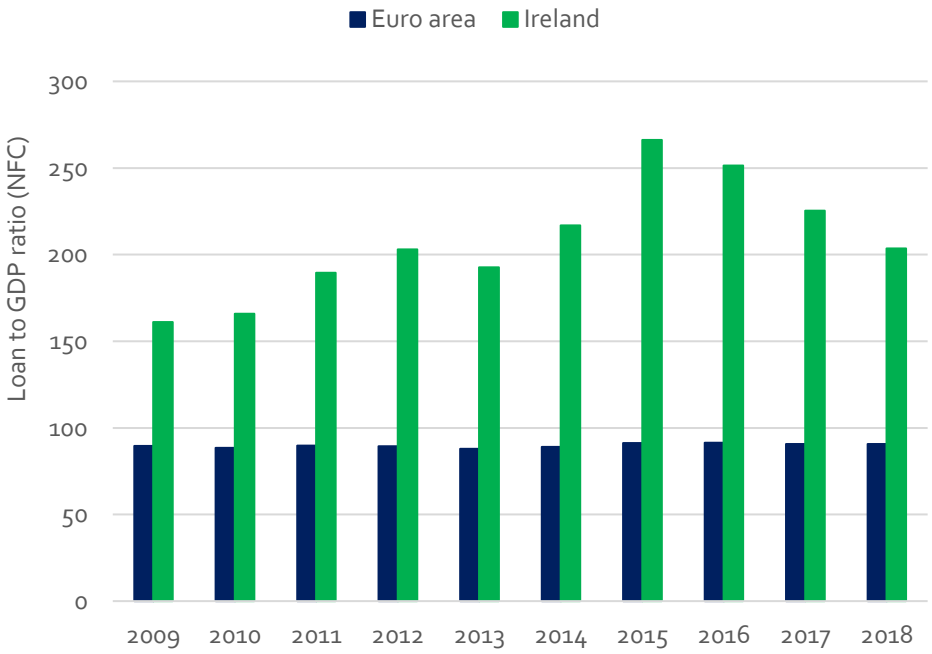


The gross debt to income ratio of Irish households fell by over 67 percentage points between 2013 and 2018. However, it still remains high and at 120.7% in 2018 was significantly above the euro area average (93.6%). The ratio in the UK stood at 123.5% in 2018.

Source: Eurostat, National Accounts

[85] Population as of 1 January 2019.

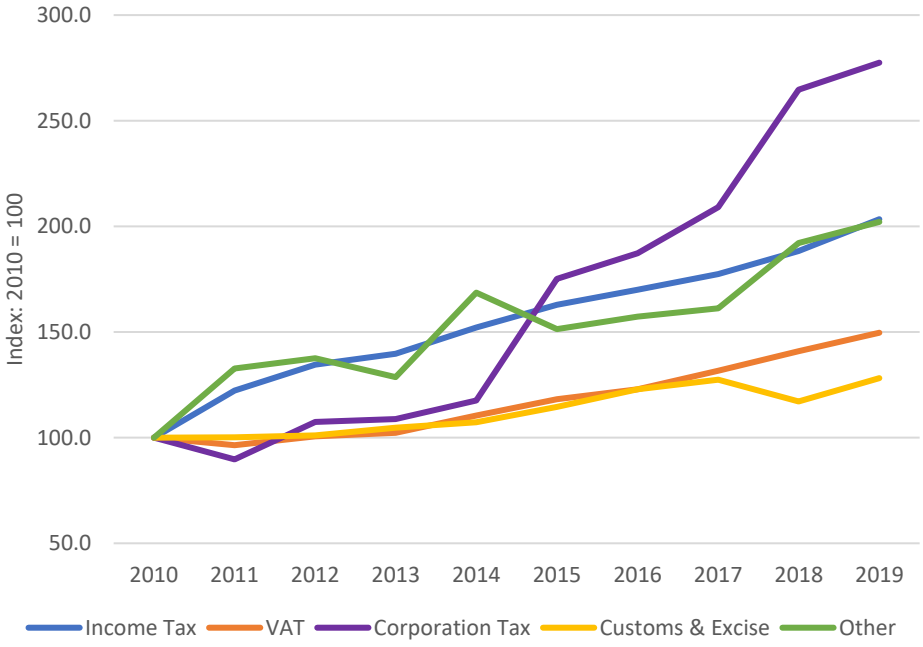
Fig. 5.2.7 Business (non-financial corporation) Loan-to-GDP ratio, 2009-2018



The loan liabilitites of the NFC sector in Ireland has fallen significantly since 2015, but remains noticeably higher compared to the euro area average. At 203.6% in 2018, it was 113 percentage points higher than the euro area avearge (90.6%). While the evidence in recent years suggests that the Irish SME sector is having difficulties obtaining credit, the high loan liabilities for NFCs suggests it the predominantly driven by the activities of MNCs.

Source: Eurostat, Financial Balance Sheets

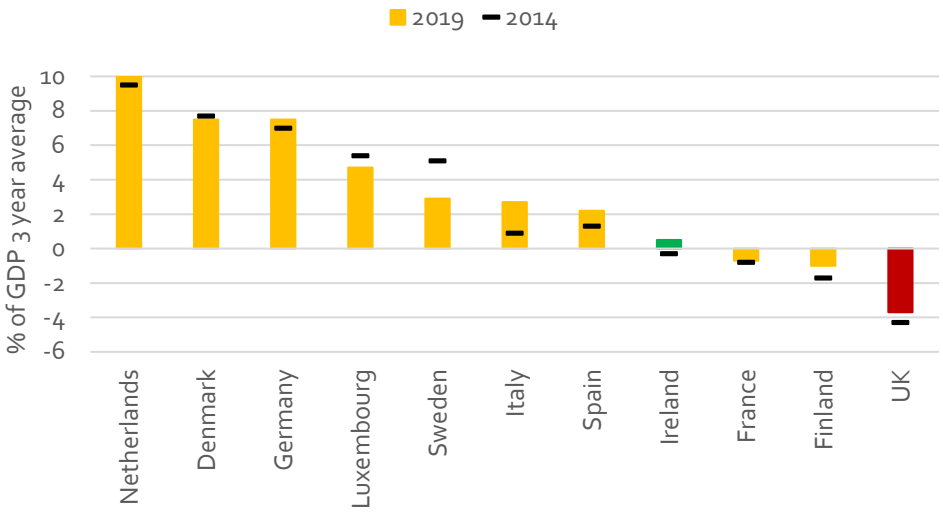
Fig. 5.2.8 Tax revenue in Ireland by category, index: 2010 = 100



Tax receipts across all categories have increased in recent years with income tax more than doubling since 2010 and corporation taxes playing an increasingly prominent role since 2015. In 2019, income tax (€22.9bn) was the main source of tax revenue for the Irish exchequer followed by VAT (€15.1bn) and corporation tax (€10.9bn), with each accounting for 39%, 26% and 18% of the total tax take respectively.

Source: Department of Finance - Databank

Fig. 5.2.9 Balance of Payments Current Account as percentage of GDP 3- year average

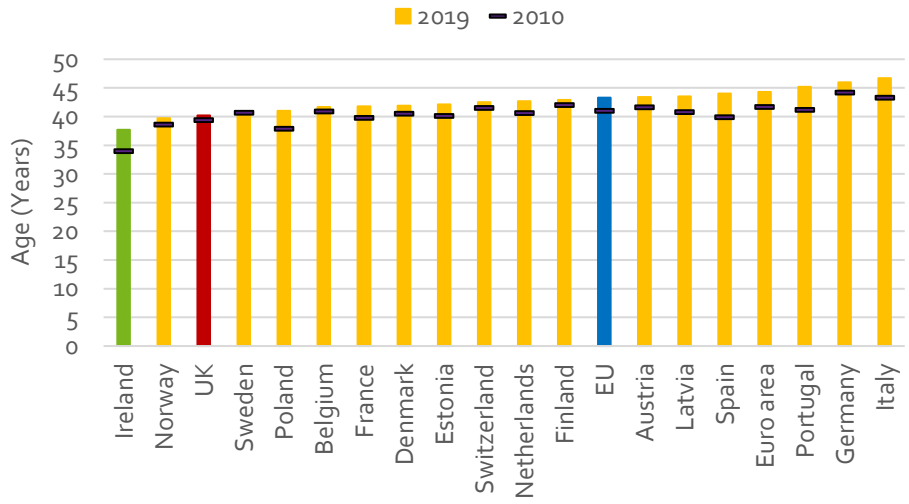


Ireland's current account balance has improved markedly since 2014 as shown in the figure. Ireland's current account as a percentage of GDP has moved from deficit (-0.3%) in 2014 to surplus (0.5%) in 2019 largely due to the strong growth in exports.

Source: Eurostat, National Accounts, BOP, Current Account Balance

5.3 Endowments

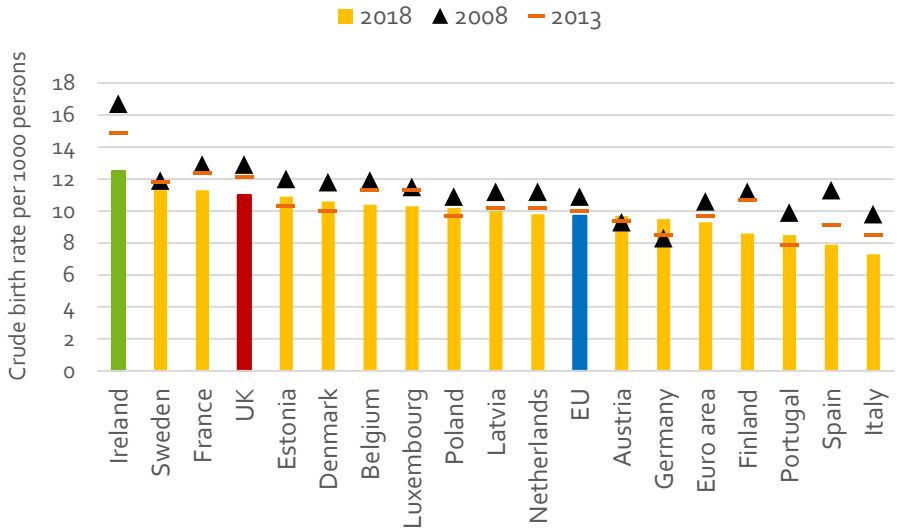
Fig. 5.3.1 Median Population age, 2019



The age structure of the Irish population which is a significant determinant of Ireland's long-term economic growth with it's impact on public policy, finances and labour market compares favourably with other EU countries . In 2019, the median age of Irish population, an important single distribution of a population, was 37.7, up 3.7 years since 2010, but around 6 years younger than in the EU (43.3) and 2.5 years younger than in the UK(40.2).

Source: Eurostat, Population Structure

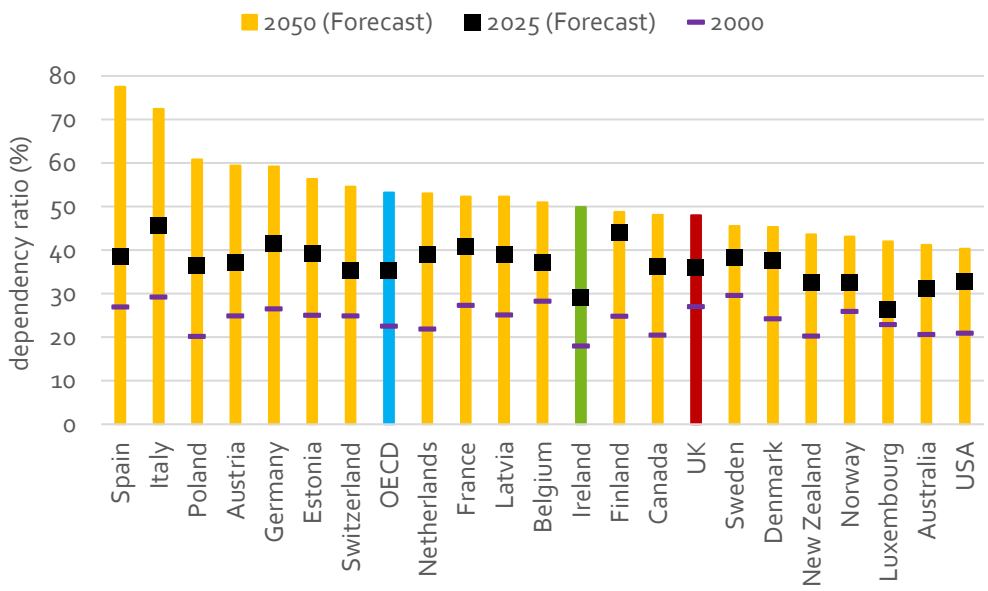
Fig. 5.3.2 Crude Birth Rate, 2018



The crude birth rate, an important public health indicator which significantly affects a country's long-term public policy and budgeting due to it's impact on policy areas like education and health, has fallen in the last ten years in Ireland, but remains favorable compared to the other EU countries . In 2018, at 12.5 persons per 1000, the crude birth rate in Ireland was higher than the rate in UK (11 persons per 1000) and the EU (9.7 persons per 1000).

Source: Eurostat, Population, Fertility

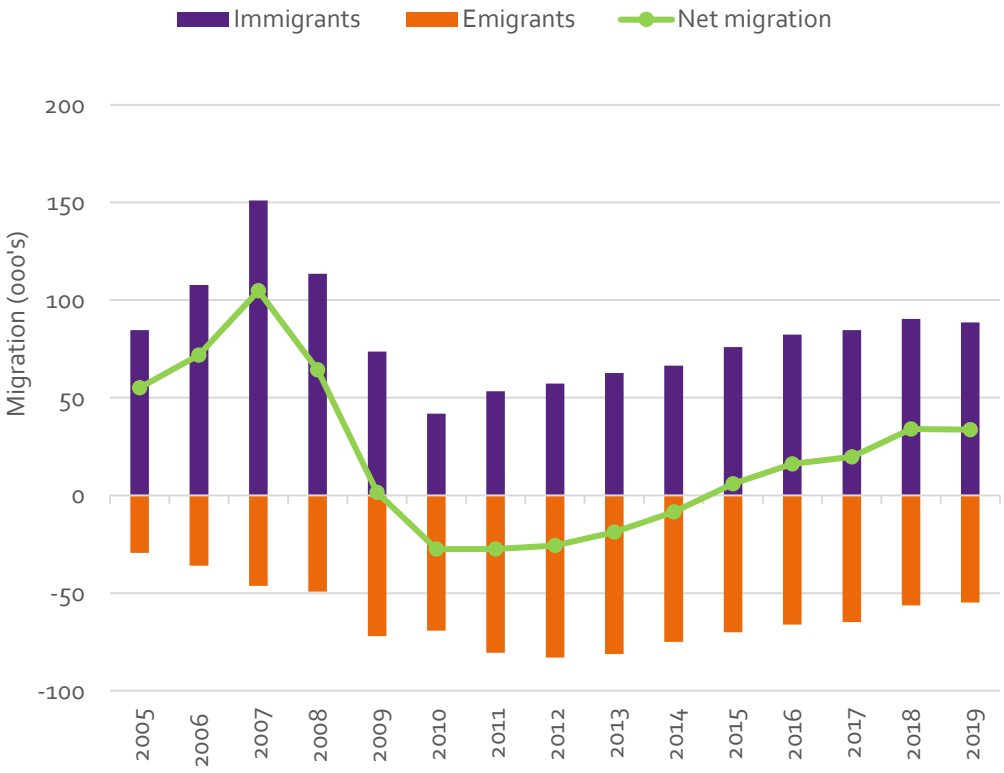
Fig. 5.3.3 Old age dependency ratio



The old age dependency ratio (ratio of over 65's to the working age population) has significant fiscal implications for a country in terms of sustainalibilty of the public pension systems. Recorded at 18% in 2000, Ireland's old age depency ratio is projected to reach over 29% by 2025 and around 49% by 2050. In comparision, the rate in the UK and the OECD is projected to be 48% and 53% respectively by 2050.

Source: OECD, Demographics Statistics

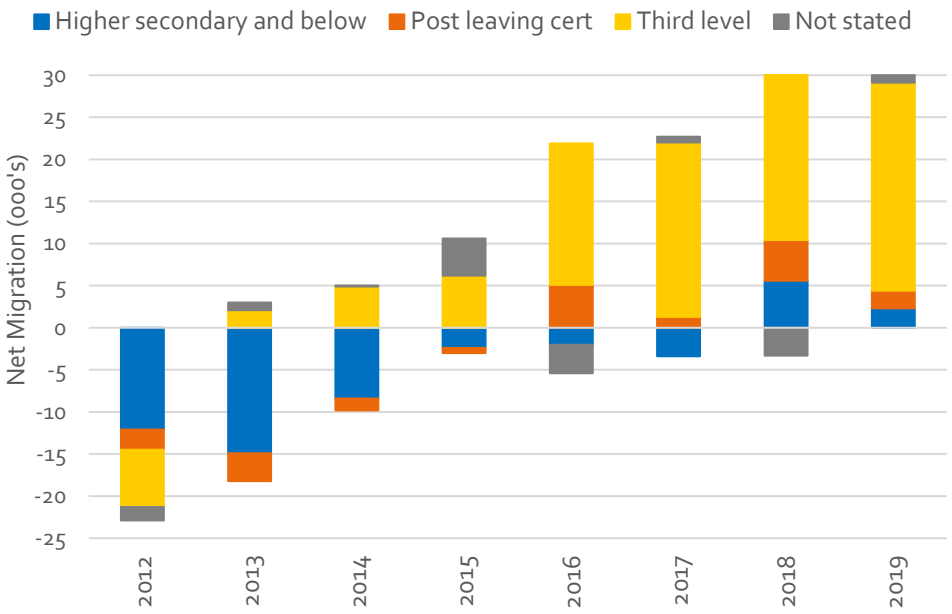
Fig. 5.3.4 Net Migration (thousands), 2005-2019



The changes in net migration in Ireland in the last fifteeen years illustrates four broad trends and mirrors the country's economic performance and labour market environment in the period. Initially, between 2005 to 2007 at the height of economic boom, the net migration figures went up reaching their peak in 2007. The trend reversed over the next three years reaching the lowest level in 2010, again in line with economic downturn and increasing unemployment rate in the country. It has picked up once again since 2012, and stood at 33,700 in 2019, reflecting the economic recovery.

Source: CSO, Components of Population Change

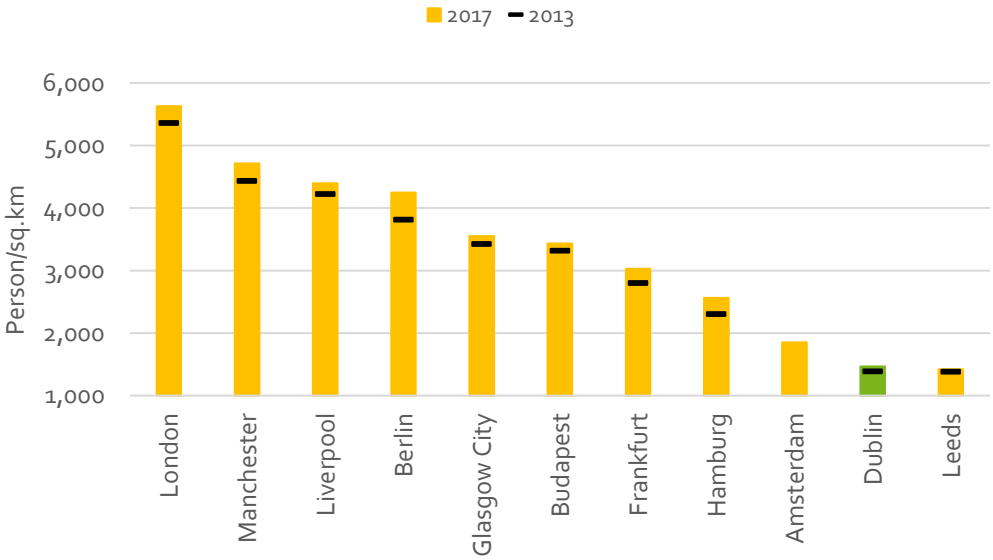
Fig. 5.3.5 Net Migration 15 years and over by educational attainment, 2012-2019



There has been a significant increase in the net migration of third level qualified persons into Ireland in recent years. In 2019, net migration for persons with third level qualifications was 24,700, an increase of over 8% from 2018.

Source: CSO, Population and Migration Statistics

Fig. 5.3.6 Population density, cities, 2017



In 2017, the population density in Dublin was 1,466 person/sq.km, up from 1,388 person/sq.km in 2013. Among the benchmarked cities, London was the most densely populated city with 5,628 person/sq.km and Leeds was the most sparsely populated city with 1,424 person/sq.km.

Source: Eurostat, Demography, Population and Migration Statistics

Chapter 6: Summary

The evidence set out in this report indicates that, until early 2020 and the onset of the COVID-19 pandemic, the Irish economy remained internationally competitive. However, there are still several critical areas where Ireland currently falls behind our competitor countries, and improvements in these areas will be particularly important to Ireland's economic recovery in light of the unprecedented COVID-19 shock. Taking this evidence forward, *Ireland's Competitiveness Challenge 2020* will make recommendations to Government on the best ways to improve the competitiveness and sustainability of the economy as we start the process of recovery. The National Competitiveness Council has a primary focus on competitiveness and productivity, and through this lens it has identified five broad challenges that will be critical to economic recovery and that will help ensure that balanced growth going forward can bring about an improvement in the standard of living for all of society.

Support Ireland's Workers and Seize Opportunities for Upskilling

The COVID-19 pandemic has had an unprecedented impact on the labour market with more the 1 million people receiving state supports in April 2020 through jobseekers-allowance, the COVID-19 Pandemic Unemployment Payment or the Temporary Wage Subsidy Scheme. Once the recovery begins, it will be important to prevent unemployment becoming entrenched and efforts should be made to reskill workers from sectors that are not likely to recover quickly. It is also important that any licencing issues or other regulatory barriers to starting a business are minimised so that enterprises are encouraged to form during the economic recovery in order to meet the demands of new markets and to provide employment opportunities for those whose jobs are displaced by the COVID-19 pandemic.

Ensure the Economic Recovery is a Sustainable Green Recovery

There is mounting support within EU institutions for the idea of linking recovery strategies to Climate Action policy. Ireland is currently falling far behind its carbon emissions targets and environmental commitments. Early action on initiatives in Ireland's Climate Action Plan, and linking economic stimulus measures with environmental objectives can be an engine for growth and innovation. Restrictions required in response to the virus, though disruptive and destructive in many sectors, have also demonstrated potential for productivity and quality-of-life improvements enabled through remote working and reduced commuting in others. There is significant potential for existing enterprise, agricultural and sustainability initiatives to be reframed and expanded in order to provide a stimulus for sustainable growth, and spur a transition in our economy and society toward low carbon activities.

Investing Strategically in Ireland's Future

Government expenditure on capital projects has increased steadily over the past number of years following sharp cutbacks during the global financial crisis. It is essential that public investment does not suffer similar cutbacks during this economic disruption, as high-quality infrastructure boosts long-term economic growth and productivity. The National Development Plan should continue to be rolled out, and the frontloading of some projects could be considered in order to provide economic stimulus once the recovery begins. The rapid shift to remote working by a significant proportion of the labour force has highlighted the need for quality, high speed broadband across the country. The NCC has called in the past for the continued roll out of the National Broadband Plan, and recent events have made this more vital, as we have seen the benefits of that investment to date and the challenges for individuals and businesses working in areas where the quality of connectivity is low. The need to expand the digital skills of workers is also important in light of the changes brought about due to social distancing needs of COVID-19 and there is scope for improvement in Ireland.

Address Long Standing Issues

In certain sectors, market inefficiencies – that result in higher costs – mean Irish businesses (particularly SMEs) face difficulties in being able to compete internationally. These costs can be in the form of direct financial costs on enterprises, including access to short-term liquidity and investment capital at affordable rates, as well as the cost of insurance and legal services. Indirect costs that impact on labour, such as housing and childcare, are also important considerations for Irish businesses, as well as operational burdens (associated with public administration or inefficient/non-competitive private markets), or under-investment in key public infrastructure. Many of these issues are not new, and the NCC has drawn attention to them in previous reports. They are not necessarily related to COVID-19, but if we want a robust and productive economy, we need to take decisive action now. Where action is underway, we need to scale up ambition and accelerate progress.

Robust Support for an Open International Economy

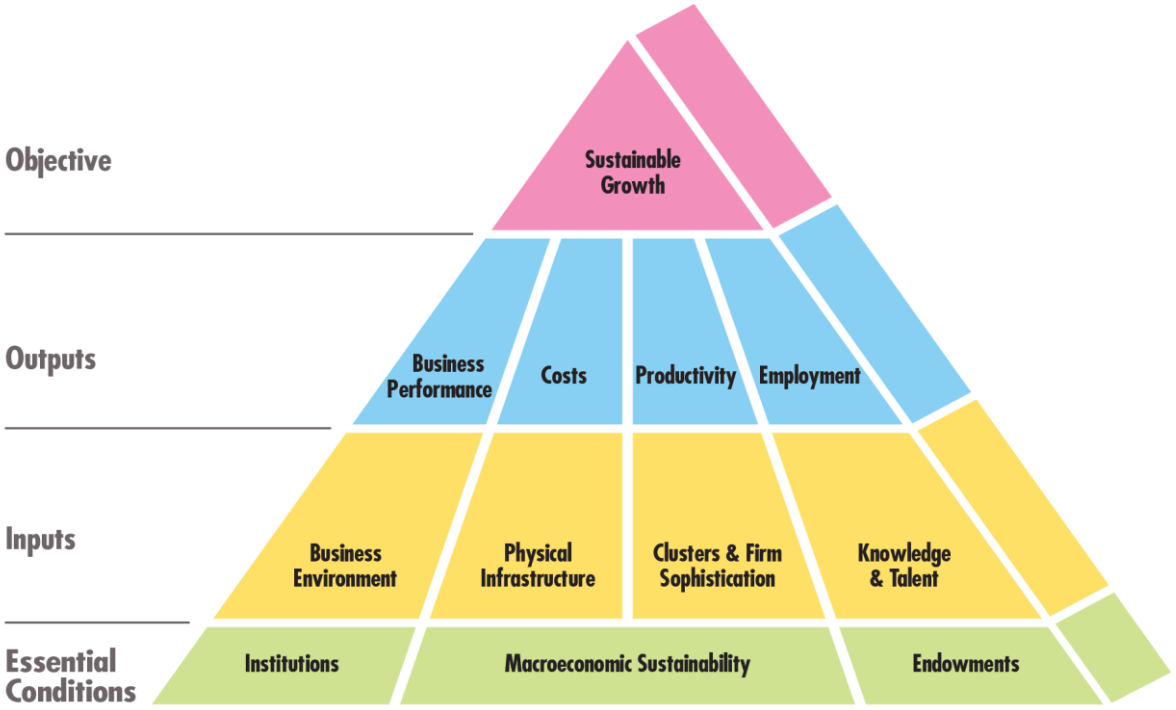
As a small open economy, Ireland is especially exposed to global economic conditions, leaving the economy particularly exposed to the COVID-19 related disruptions worldwide. Global trade and travel patterns could potentially be disrupted for some time in the aftermath of COVID-19, which could negatively impact Ireland's ability to attract and recruit highly mobile specialist labour. The shortage of some medical supplies during the COVID-19 pandemic, including testing kits and personal protective equipment, led to concerns in some countries that these products were not produced domestically, with international pressure building to bring the production of pharmaceutical and medical devices back onshore. It is important that the Irish Government strongly resists protectionist policies that restrict the free movement of people and capital, and continue to fully support the completion of the European Single Market.

In the past Ireland has proven resilient and must remain flexible and ready to adapt to the new global conditions in the aftermath of COVID-19. While the country's immediate efforts will be focused on saving lives and supporting all members of society, it is important to ensure that the economy is on a sound footing and to ensure we are ready to seize opportunities for a speedy and balanced economic recovery. A number of indicators have been identified in *Ireland's Competitiveness Scorecard 2020* as being particularly important to Ireland's economic recovery in light of the unprecedented COVID-19 shock and the National Competitiveness Council believes that these shortcomings can be addressed under the five broad challenges outlined above. These issues will be further explored in *Ireland's Competitiveness Challenge 2020*, and the Council will make recommendations to Government on the best ways to improve the competitiveness and productivity of the Irish economy.

Annex 1

The National Competitiveness Council's Approach to Benchmarking

The Council uses a "competitiveness pyramid" to illustrate the several factors (essential conditions, policy inputs and outputs), which combine to determine overall competitiveness and sustainable growth. Under this framework, competitiveness is not an end in and of itself, but is a means of achieving improvements in living standards and quality of life for all of society.



- At the top of the pyramid is **sustainable growth** in living standards – the fruits of competitiveness success.
- Below this are the key policy outputs for achieving competitiveness, including **business performance** (such as trade and investment), **costs**, **productivity**, and **employment**. These can be seen as representing the metrics of current competitiveness.
- Below this in the third tier are the policy inputs covering three pillars of future competitiveness, namely the **business environment** (taxation, regulation, and finance), **physical infrastructure, clusters and firm sophistication**, and **knowledge and talent**.
- Finally, at the base of the pyramid are the essential conditions for competitiveness, these foundations are based on **institutions**, **macroeconomic sustainability**, and **endowments**.

The 2020 Competitiveness Scorecard is set out in four main sections - sustainable growth (Chapter 2), competitiveness outputs (Chapter 3), competitiveness inputs (Chapter 4) and essential conditions for competitiveness (Chapter 5) – these correspond to the layers of the NCC's competitiveness framework.

Box 1: The National Competitiveness Council's Approach to Benchmarking

The Scorecard uses internationally comparable metrics from the Organisation for Economic Cooperation and Development (OECD), the European Union, (EU) the United Nations (UN), the International Monetary Fund (IMF), and the World Trade Organisation (WTO). Indicators from specialist international competitiveness bodies such as the World Bank's *Doing Business* WBDB) report, the World Economic Forum's (WEF) *Global Competitiveness Report* and the Institute for Management Development's (IMD) *World Competitiveness Yearbook* are also used. Where further depth is of benefit, national sources such as the Central Bank of Ireland and the Central Statistics Office (CSO) are used. We have endeavoured to collect data from high-quality, internationally respected sources, and where necessary, caveats on data are set out.

In international benchmarking exercises, the selection of indicators is crucial as is the selection of comparator countries chosen to ascertain Ireland's performance against our competitors and the world's best performers. The NCC's approach is to benchmark Ireland against a mix of euro area countries, non-euro area European countries, and various OECD high income countries, subject to data availability. These countries are chosen because they represent global best performance in a particular area, are countries with similar economic models/size to Ireland, or are some of Ireland's closest trading partners[86].

Ireland's performance is benchmarked over time against 19 countries. The countries chosen include euro area members (Finland, France, Germany, Italy, the Netherlands and Spain), other non-euro area European countries (Denmark, Sweden, Switzerland and the UK), and newer EU member states (Latvia and Poland). In some areas, the focus of comparison is with the UK given the common labour market, the importance of the UK as a trading partner, and the potential impact on the Irish economy of the UK's withdrawal from the EU on 31 January 2020. Seven non-European countries which are global leaders or are of a comparable size to Ireland are also included where data is available. These countries include Brazil, China, Japan, South Korea, New Zealand, Singapore, and the US. This allows for comparison between Ireland and many of its closest trading partners and competitors. Ireland is also compared to a relevant peer group average where data is available – either the OECD, EU or the euro area average.

Measuring competitiveness performance relative to other countries highlights Ireland's strengths but is also intended to identify potential threats and weaknesses and to determine corrective actions. Benchmarking competitiveness is useful – it informs the policymaking process and raises awareness of the importance of national competitiveness to Ireland's wellbeing. Nonetheless, there are limitations to comparative analysis:

- Every effort has been made to obtain the most recent data available. However, given the natural lag in collating comparable official statistics across countries, some of the recent changes, especially in areas particularly impacted by COVID-19, are not captured by the report. Performance is generally considered over a five-year or annual basis. In some instances, a longer time frame is used, particularly considering the major changes in the economic cycle over the past fifteen years.

- Competitiveness indices and rankings can seek to measure a vast range of issues. Generally, these indices are based on weighting systems. The relevance and importance of the individual metrics included will vary across countries. There are also factors that are difficult to benchmark (e.g. the benefit of being in the GMT time zone or of speaking English fluently).

[86] The euro area consists of Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Non-euro area Europe consists of Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and the United Kingdom (before the UK's exit from the European Union on 31 January 2020). OECD rankings and averages are based on a maximum of 32 countries: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK and the US. Turkey and Mexico are not included in the analysis, in part due to how their size and income levels affect averages and in part due to data availability.

- Given the different historical contexts and economic, political and social goals of various countries, and their differing physical geographies and resource endowments, it is not realistic or even desirable for any country to seek to outperform other countries on all cost measures.

- There are no generic strategies to achieve an optimum level of cost competitiveness; as countries face trade-offs and may be at different points in the economic cycle.

- Finally, it is worth noting that individual metrics have strengths and weaknesses (i.e. in terms of definitions used, in how the data is collected etc.). When analysing the individual metrics, it is important, therefore, to consider all the data as the analysis of the individual metrics combine to tell a coherent story about Ireland's current competitiveness performance.

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