An Chomhairle Náisiúnta Iomaíochas
National Competitiveness Council

Ireland's Competitiveness Challenge 2017

December 2017

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. Each year the NCC publishes two annual 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:

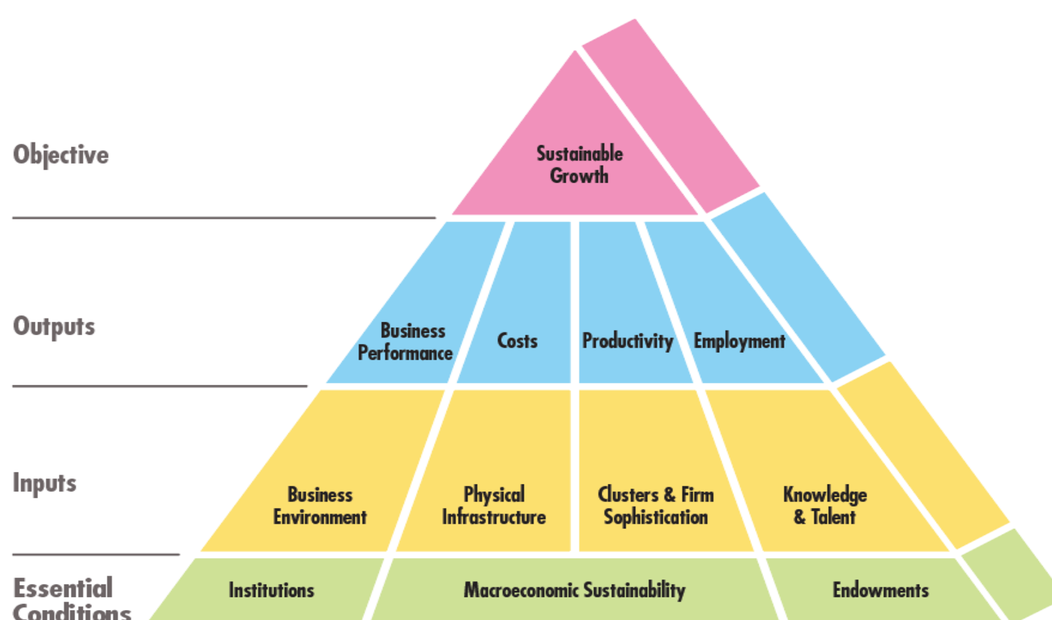
- Publishes the Costs of Doing Business where key business costs in Ireland are benchmarked against costs in competitor countries; and
- Provides an annual Submission to the Action Plan for Jobs and other papers on specific competitiveness issues.

The work of the National Competitiveness Council is underpinned by research and analysis undertaken by the Strategic Policy Division of the Department of Business, Enterprise and Innovation.

The NCC's Competitiveness Framework

The Council defines national competitiveness as the ability of enterprises to compete successfully in international markets. National competitiveness is a broad concept that encompasses the diverse range of factors which result in firms in Ireland achieving success in international markets. For the Council, the goal of national competitiveness is to provide Ireland's people with the opportunity to improve their living standards and quality of life. The Council uses a "competitiveness pyramid" to illustrate the various factors (essential conditions, policy inputs and outputs), which combine to determine overall competitiveness and sustainable growth. Under this framework, competitiveness is not viewed as an end but as a means of achieving sustainable improvements in living standards and quality of life.

The NCC Competitiveness Framework



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Taoiseach's Foreword

The Irish economy continues its upward trajectory and is now one of the fastest growing economies in Europe. Our progress is evident in the labour market where the Government is not only on track to meet its employment target next year, but we expect to have more people in employment than ever before by the end of the decade; in the maintenance of prudent fiscal policies that will allow us to balance the books in 2018 for the first time in ten years and in the exports performance of clients supported by our enterprise agencies.

However, our economic success has also brought its own challenges. The fast growth of the economy is beginning to manifest itself in cost pressures and capacity constraints, impacting on our national competitiveness. Irish SMEs, in particular, face increased challenges in innovation, productivity, internationalisation, and competing for skilled labour. At the same time, looking beyond our shores, we see uncertainties, risks and a rapidly changing global economy. The UK vote to leave the EU marked the beginning of another period of uncertainty and challenging economic environment. Brexit is an overarching theme with potentially far reaching impacts on all aspects of our economy.

In our response to these challenges, the Government is determined that we do not repeat the mistakes of the past. We are continuing to prudently manage our public finances while prioritising investment to optimise the conditions for future competitiveness, specifically building innovation capacity, modern infrastructure and enhancing our productivity and skills base.

We are working with business and relevant stakeholders to ensure that there is a coherent response to Brexit, and that measures are put in place to protect and improve our national competitiveness and help companies diversify their export destinations, products and services. To ensure enterprise has access to talent, the Government has prioritised increasing labour market participation, by supporting people who wish to return to work and by attracting and retaining talent to this country.

The focus of the Government is to build a sustainable and resilient economy that has tangible benefits for our people by rewarding work, protecting the most vulnerable and creating opportunity. In this regard, the National Competitiveness Council makes a valuable contribution to our understanding of the competitiveness challenges we face in an uncertain global environment and helps identify actions to address those that are within our control.

I would like on behalf of my colleagues in Government to thank the Council for its important work, and I am pleased to introduce Ireland's Competitiveness Challenge 2017.

Leo Varadkar TD,

Taoiseach

Chairman's Preface

A Remarkable Recovery but is it Sustainable?

Ireland economic performance since the mid-1990s has been marked by years of rapid economic growth, followed by rising prices and competitiveness loss and, in the recessionary years of 2009 and 2010, a crisis in the public finances and a near collapse of the banking system. Ireland's economic recovery since then has been exceptional and is a credit to the resilience of the economy driven by Ireland's pro-business environment and the firms and employees who showed remarkable flexibility in the face of adversity. However, growth is putting upward pressure on costs (acutely in some areas) and infrastructural investment is unable to keep up with the needs of this rapidly growing economy. A significant challenge for policy is whether, in one of the world's most globalised economics, can Ireland avoid another boom-bust cycle of fast growth followed by recession or, if we can put competitiveness at the centre of our economic model, can we achieve a stable and sustainable economic growth rate.

The sustainability of Irish growth is not only threatened by the potential for boom and bust, but the reliance of the economy on a small number of highly productive large companies. That our indigenous exporting base exports a narrow range of products and services, and relies on a small number of export markets is also a serious concern. Smaller companies, who provide the majority of employment, are far less productive, less likely to invest in innovation, least likely to be able to afford the management talent they need and most prone to cost increases, in particular, wage demands driven by increases in the cost of living, most notably, housing.

This is even more concerning now that the external favourable winds have turned against us. While we hope that a sensible transition period will be agreed for the exit of the UK from the European Union, we must plan for the worst. Certain sectors are particularly under threat such as agri-food and traditional manufacturing. However, small firms, in many sectors, rely on the UK as a destination market for their produce but also as a source market for their raw materials or intermediate products. We have already seen a structural shift in exchange rates due to Brexit which has put Irish exporters to the UK under considerable pressure. Without a relentless focus on competitiveness, many of these firms may not survive, even without the likely introduction of tariffs.

Competitiveness is the key ingredient for Ireland's economic performance and stability

So, what to do. It won't surprise you that the National Competitiveness Council is calling for competitiveness to be positioned as the central pillar of Ireland's economic policy. We need to pursue the improvement of our competitive position with the same rigour which proved successful in the Action Plan for Jobs. Ireland's ability to provide those well-paid jobs and good-quality public services like health, education and social protection, relies upon us being able to sell our goods and services abroad. This requires a competitive economy and boosting productivity by investing in people and capital, thereby equipping individuals with the skills and tools to work smarter. It is also the primary way to ameliorate, as best as is possible, the potential damage from Brexit and this is a theme throughout this report. We are at a critical juncture. Ireland is ranked highly in terms of our competitiveness (6th in the IMD rankings) but it is the decisions we make now that will determine our competitiveness in the future. We have trade-offs and difficult choices to make if we are to maintain growth, limit increases in the cost of living, and continue to support quality jobs and public services.

This year's Competitiveness Challenge, we believe, provides the basis to maintain and improve our competitiveness as a response to the serious and imminent danger presented by Brexit, a narrow economic base, rising costs, and infrastructural deficits. It identifies a range of policy challenges and recommendations that address both immediate competitiveness issues, and more medium-term challenges to enhance Ireland's performance. The Council has sought to strike a balance between addressing issues that are manifest, and well-known, such as infrastructure, Brexit and

housing, with challenges that might be considered 'under the radar', such as, broadening the productivity base, export diversification and the digital economy. Two overarching themes are considered. The first theme, ensuring growth is sustainable, addresses Macroeconomic Stability, Physical Infrastructure, Climate Change and Talent. The second theme addresses the need to generate an uplift in enterprise competitiveness and considers costs, productivity, innovation and Ireland's export base. So, what should be done?

Ensuring Growth is Sustainable

- **Public Finances:** Ensuring that the State's finances are carefully managed remains a crucial element in providing a stable business environment in which enterprise can thrive. The Council considers that government policy must reduce the exposure of the economy to cyclical developments and maximise the effectiveness of public expenditure. It is critical that we develop a stronger focus on improving Ireland's relative tax competitiveness, as it applies to enterprise, investment and employment, particularly, with respect to the UK.
- **National Planning:** Developing our infrastructure base remains a fundamental challenge to enhancing competitiveness. We must do more to improve our capacity to deliver effectively connected infrastructure projects in a timely manner that maximise returns on investment. Coherent and coordinated delivery and monitoring of the forthcoming National Planning Framework and the National Investment Plan are essential. A key issue we face is balancing the developmental trajectory of Dublin and our regional cities and other parts of the country. With more people (and consequently more skills) concentrating in cities, urban areas are increasingly becoming the driving forces of national economies. The spatial distribution of economic activity in Ireland is not unusual for a very small country and Ireland cannot be competitive without Dublin being competitive. It is critical that, in bringing forward the accelerated development of a "next tier" of cities as key engines of economic performance, the competitiveness of Dublin is not damaged by diverting expenditure away from investing in the critical infrastructure needed to avoid a deterioration in quality of life and a rapid rise in the cost of living. Ireland needs to use the NPF as the primary vehicle to ensure that, with scarce resources, a rigorous and transparent evaluation system is used to allocate funds across government departments so as they are invested with the greatest return.
- **Housing:** The most immediate and critical infrastructural deficit is in housing. The shortage and cost of residential property is damaging competitiveness. It impacts upon our attractiveness for mobile investment and talent. High rents affect decisions around labour mobility and entering employment. In addition to being an important element of Ireland's cost base, housing impacts on productivity. The severe problems in the Irish housing market require an acceleration of supply by the private and social sectors and it will take time. Given the urgency and scale of the challenge and the complexity of the market, it is important that interventions by the State are not pursued in a piecemeal fashion. Our fragmented approach to place making, particularly urban and rural planning must be addressed. We must ensure short term requirements do not compromise the need to ensure that the housing stock in Ireland is future proofed, constructed to the reasonable standards, carefully located, well designed with social, educational and recreational facilities and transportation connections in mind. It is vital that housing policy is underpinned by a coherent and effective planning and regulatory framework which encourages higher densities that can be serviced by public transport
- **Climate Change:** Related to infrastructure prioritisation and planning for the future, meeting Ireland's climate change commitments and transitioning to a low emissions economy presents significant challenges and opportunities. The National Mitigation Plan is a critical milestone. In progressing the Plan, the Council considers that meeting our obligations under climate change agreements must be done in a way that minimises the impact on the competitiveness of enterprise. This will be achieved by making reductions in emissions in a least cost

manner. It is critical that work continues to identify the least costly ways of achieving emissions reductions and, in doing so, it should be recognised that exempting any sectors may increase the overall cost to the economy.

- **Talent and Skills:** Talent is the key to retaining and winning mobile investment, enabling entrepreneurship and growing a cohort of internationally-trading indigenous companies. Demographic trends mean Ireland will require additional investment in schools, staff and related facilities. The adequacy and sustainability of education funding remains a significant challenge and it is time to stop long-fingering a decision to close the funding gap in the higher-education sector which poses a significant threat to our competitiveness rankings and FDI. To ensure skills gaps do not intensify, it is essential to align further the education and training output with labour market needs. Realising the potential of those excluded from the Labour Market remains a challenge. While employment growth remains strong, the pace of growth slowed in 2017. We have learned through painful experience how quickly jobs can be lost and the damaging effects of unemployment. We must not be complacent about the importance of growing quality jobs.

Improving the Competitiveness of Irish Enterprise

- **Business Environment and Costs of Doing Business:** Since the recession, much has been done to improve the environment for enterprise in Ireland. This is to be commended. However, we can, and must, do more to deliver further improvements across a range of policy areas to secure stable foundations for future growth. Improving the competitiveness of our tax offering, legal, regulatory and administrative environment, particularly as they impact on SMEs remains vital. While inflation is subdued, this is largely due to currency effects and Ireland remains a relatively high-cost location. Higher international oil prices would exert a significant influence on energy and transport prices. The recent appreciation of the euro relative to sterling shows how vulnerable Irish enterprise is to external shocks. The impact of Brexit will be felt particularly among firms that are most embedded in the domestic economy. Many are small companies with low profit margins with limited room to manoeuvre. The affordability of credit, particularly working capital, remains a major issue. The availability and cost of property and construction is once more a significant threat to sustained cost-competitiveness. As the economy continues to grow, it can be expected that upward pressure on labour costs will intensify as the labour market tightens. To maintain cost competitiveness, it is vital that growth in our labour-cost base is in line with productivity developments at sectoral level and not significantly out of line with our competitors across the OECD. Government, enterprise and trade unions have a role in ensuring that Irish wage levels do not move in a manner that outstrips growth in productivity and labour cost growth in competitor economies. In the face of growing supply side constraints, we must avoid past mistakes where rising costs outstripped productivity gains and pushed up prices and eroded competitiveness.
- **Productivity:** A focus on improving the drivers of productivity performance is urgently required. Increasing productivity across all sectors remains a significant challenge in ensuring growth is sustainable in the long run. Ireland can take advantage of a sizeable competitiveness opportunity if we can avoid the 'productivity trap' being experienced by many developed economies. Irish enterprise needs more effective investment in Knowledge Based Capital, a competitiveness-based approach to supporting start-ups and scaling, and enhanced management practices to drive productivity performance at firm level. Ireland has made significant progress in building a research and innovation infrastructure. Ireland requires closer synchronisation between research endeavour in HEIs, Government agencies, and industry as well as continuous, sufficient and effective investment in R&D, not only by the State, but especially by the private sector; the presence of high-quality scientific research institutions; extensive collaboration in research between universities and industry; and sophisticated business practices and effective clusters.
- **Innovation:** To future proof our competitiveness, policy must support Ireland moving to the forefront of digital and innovative activity. Greater participation in the digital economy is vital. The adequacy and availability of digital skills and high-level ICT skills in enterprises, and the capability of entrepreneurs and SMEs across all sectors

of the economy to exploit digital technologies, could be further exploited through a new digital economic strategy. The challenge we face to evolve into new products, markets and sectors, whilst maintaining competitive advantage in existing ones is not easy. Brexit has exposed how Irish export markets are geographically concentrated and the range of products and services exported has become increasingly concentrated. Brexit means further company-led expansion into new markets and a deepening of trade links with the world's leading emerging economies is required. The Council considers policy needs to support Irish based exporters, particularly SMEs to intensify their efforts to scale and diversify sustainably and to reduce, strategically, exposure to external economic shocks. Despite intense competition, Ireland has maintained a remarkably strong performance in terms of jobs and investments from inward investment. Deepening and broadening the FDI base and maintaining Ireland's competitive advantage as a location for new and existing mobile investment will not be easy but must remain a cornerstone of enterprise policy.

Improving competitiveness is the key to our efforts to ensure a sustainable economic model that avoids a boom and bust cycle. While the challenges we face are significant, we must face them with confidence and, importantly, we must face them together. The focus of this report leans towards government policy as an essential enabler of competitiveness. However, it will be the businesses and their employees who will largely determine Ireland's future economic success.

Professor Peter Clinch

Chair, National Competitiveness Council

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Executive Summary

Background

National competitiveness is a broad concept that encompasses a diverse range of factors, essential conditions and policy inputs including education and training, innovation, clusters and firm sophistication, Ireland's economic and technological infrastructure, and the business environment (which includes entrepreneurship, taxation and the regulatory framework). Competitiveness is not an end but as a means of achieving sustainable improvements in living standards and quality of life. Only by ensuring that firms based in Ireland can compete successfully here and abroad can we create the employment, income and wealth necessary to improve the lives of people living in Ireland.

While the overall economic outlook for Ireland is positive, the economy faces significant downside threats, including Brexit, a potential shift in trade and taxation policy in the US and the uncertain trajectory of global growth. The competitiveness and consistency of tax offering, legal, regulatory and administrative environment, ease of starting and running a business, cost base, the availability of talent, technology and property solutions will remain vital to Ireland's ability to withstand the ebb and flow of global economic developments and external economic shocks.

As set out in the Council's report Ireland's Competitiveness Scorecard 2017, many of Ireland's relative strengths (highly skilled young workforce, and supportive environment in which to do business) remain relatively competitive. It is imperative particularly in the context of Brexit that Ireland's strengths in these areas are consolidated and improved and that we address areas where there is scope for improvement.

The economy is at a critical juncture, and the Council considers it more important than ever action is taken to improve Ireland's competitiveness performance in areas that can be influenced by domestic policy. The overarching themes in the Council's 2017 Competitiveness Challenge Report and several critical challenges and areas for further improvement which must be considered are summarised below.

Theme 1: Ensuring growth is sustainable

- The stability of the **macroeconomic environment** is a significant component of national competitiveness. While the exact cyclical position of the economy is difficult to precisely estimate, careful management of the public finances will remain a challenge. The Council considers it imperative that an appropriate fiscal and budgetary stance consistent with the EU budgetary framework is adopted to ensure Ireland is best positioned to withstand shocks, and ensure that the economy does not overheat. To ensure debt is sustainable for future generations and to reduce revenue foregone on interest payments, Ireland should continue to reduce our debt levels. It is important that we do not loosen the fiscal discipline (i.e. unsustainable current expenditure increases, or shrinking tax ratios for example) at this stage as this would undo much of the progress achieved to date, and would have potentially significant negative implications for future competitiveness. To ensure capacity to absorb and respond to economic shocks we should avoid any narrowing of the tax base. Brexit means it is essential that our tax system is internationally competitive and provides certainty in a manner that supports and rewards employment, investment, innovation and entrepreneurship. Ireland must maximise the effectiveness of public expenditure. We encourage that investment is targeted at investing in the conditions of future competitiveness, specifically building innovation capacity, economic infrastructure and on enhancing our productivity and skills base.
- **Infrastructure** bottlenecks represent an immediate challenge. Developing our infrastructure base, particularly the shortfall in housing, while complying with the EU's fiscal rules, is a fundamental challenge to enhancing competitiveness. Improving and prioritising public investment, particularly our capacity to deliver strategically connected projects in line with the National Planning Framework, are essential. The Council considers it vital that sustained investment is made in quality public transport projects, broadband and housing which offer the

highest economic and social returns and is future-proofed. In view of demographic change and the long lead times for the delivery of road, air and sea port infrastructure and services, it is critically important that we plan now to ensure Ireland is well positioned to meet longer term infrastructure needs.

- **Climate Change** presents very significant challenges for Ireland, both in terms of mitigating our emissions and achieving national and international binding targets, as well as adapting to the effects of a changing climate. EPA projections indicate that by 2020, Ireland's emissions are likely to be in the range of 4-6 per cent below 2005 levels, well short of the target reduction level of 20 per cent. Meeting our current and future internationally binding renewable energy and greenhouse gas emissions targets is a significant challenge for Ireland. The Council considers accelerated effort is required, above and beyond that which has occurred to date. Of critical importance, is the allocation of "fair and achievable" targets for Ireland as part of the EU's increasingly ambitious 2030 climate targets and delivering on the National Mitigation Plan in a manner which does not adversely impact on enterprise costs.
- The availability of well-educated, skilled **talent** is a fundamental driver of national competitiveness. Under the Action Plan for Education framework, Ireland has set itself the target of having the best education and training service in Europe within a decade. The Council strongly supports this ambitious target and the strategic framework set out in Ireland's National Skills Strategy and considers Ireland has a strong base on which to realise this bold ambition. However, the adequacy and sustainability of education funding, particularly at third level remains a significant challenge. The education and training system must continue to provide people with the skills that businesses need and with the ability and opportunity to contribute, particularity in an increasingly digital world. The continued supply of well-educated and skilled labour depends on all elements of the education and training system being adequately resourced, working to the highest quality standards, efficiently, effectively and in harmony with each other. It is also vital that the enterprise sector deepens and intensifies its engagement with education and training providers. Despite the significant upturn in the labour market, reducing involuntary unemployment will require continued evolution and innovation in relation to labour market activation policies.

Theme 2 Generating an uplift in enterprise competitiveness

- The openness of the Irish economy means enterprise **cost competitiveness** is particularly sensitive to shocks. The Council's Costs of Doing Business in Ireland 2017 concluded that despite the low inflation environment, Ireland is a relatively expensive location in which to do business. Ireland's price profile is described as "high cost, rising slowly". Specifically, in terms of business costs, the return to sustained levels of growth has resulted in upward cost pressures at sectoral level and in property costs. The Euro's appreciation relative to sterling poses significant concerns for parts of the exporting sector reliant on trade with the UK. The Council welcomes the elements in Budget 2018 focussing on improving the competitiveness of enterprise but considers that further fiscal measures are needed to strengthen the competitiveness of Irish SMEs and that it is vital that policy makers continue to monitor the landscape for enterprise finance so that viable businesses are not constrained by an inability to access finance. The Council is concerned that upward pressure in relation to labour costs has the potential to undermine enterprise competitiveness and fuel inflation. Government, enterprise and trade unions have a role in ensuring that Irish wage levels do not move in a manner that outstrips growth in productivity and labour cost growth in competitor economies. Notwithstanding the vital social dimension, a relentless focus on addressing the supply and affordability of housing is required from a competitiveness perspective. While appreciating the need for policy to support a significant uplift in housing supply, the Council considers it vital that today's solutions do not become tomorrow's problems. Policy must ensure short term requirements do not compromise the need to ensure

that the housing stock in Ireland is future proofed. It is important that units are constructed to the highest possible standards which cater to varying household sizes and needs and considers variations between urban and rural needs and lifestyles. The Council recognises and supports the identified need for higher residential density in Irish cities. Developments must be carefully located, well designed with social, educational and recreational facilities and transportation connections in mind. It is vital that housing policy be facilitated by a coherent and modern planning and regulatory framework.

- **Productivity** levels and growth rates in Ireland have been strong in recent years but overall performance in Ireland is heavily influenced by the performance of the Manufacturing and ICT sectors and the performance of a small cohort of Foreign Direct Investment (FDI) enterprises in these sectors. Bridging the productivity gap that exists between the most productive firms and laggard firms is a major challenge to sustainable growth prospects. There is a need to increase productivity across many sectors and firms, particularly in the indigenous and locally trading sectors of the economy. We must do more to ensure Irish enterprise stays at the forefront of technology and innovative activity. Supporting an increase at firm level in terms of investment and utilisation of knowledge based capital, particularly organisational, process and marketing innovation is crucial. Improving management practices and skills and labour force quality at all levels is vital to support productivity growth. Facilitating a continuous flow of new business start-ups that can survive and thrive in international markets is also vital to strengthen the productivity base.
- From a competitiveness perspective, the returns from **innovation** are a vital component in securing productivity growth, diversifying and broadening the enterprise and exports base, growing FDI, and creating competitive advantage in intellectual property and commercial products and services. To remain globally competitive, Ireland requires continuous, sufficient and effective investment in R&D not only by the State but especially by the private sector; the presence of high-quality scientific research institutions; extensive collaboration in research between universities and industry; and sophisticated business practices and effective clusters. While public investment in R&D is increasing, meeting our intensity targets by 2020 is a significant challenge. Business R&D expenditures as a percentage of GDP have been relatively static over the period 2010-2015. To affect a real step-change in innovation performance there is a need to increase innovation activity amongst firms in sectors where such activity is currently less intensive, particularly amongst Irish-owned firms.
- The importance of **enhancing and diversifying Ireland's export base** to secure future jobs and growth has been underlined by Brexit. A more diverse export base can reduce exposure to external demand shocks, exchange rate fluctuations and instability in export earnings, upgrade value-added, and enhance growth and jobs. A cross Government approach is essential to building on established and new markets which present growth opportunities. A careful balance needs to be struck between prioritising resources on those export opportunities (product-country combinations) where Irish based exporters already have proven capabilities and a sizeable market and targeting resources at alternative growth market opportunities that are relatively unexploited. Policies to facilitate enterprise to move into new products, markets and sectors, whilst maintaining the competitive advantages in existing ones, are now critical. The Council considers policy needs to further enhance support for Irish based exporters, particularly SMEs to intensify their efforts to scale and diversify sustainably and strategically to reduce exposure to external economic shocks. Related to this, developing the resilience of our enterprise base to gain competitive advantage in international markets, and realise export opportunities through greater participation in the digital economy is vital. Foreign Direct Investment (FDI) will remain critical to Ireland's economic development. Deepening and broadening the inward investment base and enhancing Ireland's attractiveness as a location for new and existing mobile investment must remain a cornerstone of enterprise policy.

- **Brexit** represents the foremost downside economic risk for Ireland. As set out in the Council's *Benchmarking Competitiveness Ireland & the UK 2017* report, the imminent structural shift in the UK's trading relations with the EU has far reaching implications for Irish competitiveness across a range of policy areas – including trade, investment, skills, and sector specific competitiveness impacts – particularly, for indigenous Irish enterprise in sectors such as Agri-food, Traditional Manufacturing and Tourism. The depreciation of Sterling relative to the Euro and dealing with the permanency of the exchange rate shift is an important competitiveness consideration. The challenges posed by Brexit are addressed throughout this year's Competitiveness Challenge.

A range of policy challenges and recommendations for consideration by Government are proposed in the areas outlined above. The specifics of the challenges and recommendations set out in this year's report range from detailed to more principle-based actions. In some cases, the recommendations address the need to complete or expedite ongoing work or to implement existing strategies. Others set out the case for strategies to be developed.

In finalising this report, the Council are cognisant of the parallel development of the Action Plan for Jobs 2018, which provides further opportunity to maintain a focus on competitiveness. Bearing this in mind, the Council will highlight those actions in this year's Competitiveness Challenge which it considers should be prioritised for inclusion in APJ 2018 (i.e. actions which can commence in 2018) in a separate submission which will be published in December 2018.

Theme 1: Ensuring growth is sustainable

Introduction

While Ireland's economy is now growing rapidly, to ensure that economic and jobs growth are sustainable, we must also pay close attention to the medium term. Only sustainable growth built on solid foundations will allow Ireland to finance quality public services, create employment, improve incomes and living standards for all and protect the environment for future generations.

The Competitiveness Challenge is focused on the medium term. Therefore, many of the policy challenges and recommendations throughout this theme consider and address issues of sustainability to meet future economic, demographic and environmental requirements. This year's report considers the theme of ensuring growth is sustainable throughout four chapters.

1. **Delivering Macroeconomic Stability:** The stability of the macroeconomic environment is important for enterprise and, therefore, is significant for the overall competitiveness of a country. The challenge for Ireland is to maintain a sound budgetary position whilst simultaneously increasing capital investment to enhance competitiveness and support enterprise. The State cannot provide services efficiently if it must make high-interest payments on its past debts. Running fiscal deficits limits the government's future ability to react to business cycles. Firms cannot operate efficiently when inflation rates are out of hand. The economy cannot grow in a sustainable manner unless the macro environment is stable.
2. **Delivering Productivity Enhancing Infrastructure:** The availability of competitively priced world-class infrastructure (e.g. energy; telecoms; transport – road, public transport, airport, seaports; waste and water) and related services is critical to support competitiveness which in turn determines the sustainability of living standards. Well planned infrastructure can increase mobility of workers and goods, reduce traffic congestion and increase productivity. Infrastructure is also about supporting people to have places to live near their work, making sure there is the substructure for them to get to work, enjoy their leisure time and have a good quality of life. This not only affects existing firms, but also affects a country's attractiveness as an investment location and general quality of life. Demography must be a feature of any discussion about sustainability – the size and age profile of the population, amongst other factors, combine to impact upon the shape of our labour market, patterns of development and a range of other policy areas including healthcare, education and pensions policy.
3. **Environmental Sustainability and transitioning to a low carbon economy:** The quality of a natural environment and the commitment to environmentally sustainable policies is a key determinant of sustainable growth. The essence of environmental sustainability is a stable relationship between human activities and the natural world, one that does not diminish the prospects for future generations to enjoy a quality of life at least as good as our own.
4. **Building and Sustaining Talent:** The availability of qualified work ready skills and talent is becoming the leading source of competitive advantage. Ireland's standard of living and future competitiveness can only be maintained and improved upon, through increasing productivity which in turn is facilitated and sustained by a talented work force and high levels of educational attainment. At an individual level, labour force status, earnings inequality, health and wellbeing are all positively related to educational attainment, and the returns are particularly strong for higher levels of education.

Theme 1: Chapter 1- Delivering Macroeconomic Stability

Introduction

Ensuring that the State's finances are prudently managed is a crucial element in providing a stable business environment in which enterprise can thrive. The Council considers Ireland's approach to fiscal sustainability should involve:

- Attaining sound budgetary positions (i.e. conducting sustainable fiscal policy by avoiding high deficits and/or increasing debt ratios);
- Reducing the cyclical nature of fiscal policy making; and
- Maximising the effectiveness of public expenditure.

Economic and employment growth and prudent fiscal policies resulted in significant improvements in the Irish public finances over the period 2012-2016. The debt and deficit ratios are expected to continue a downward path meaning Ireland is moving towards a position where balanced budgets are achieved. Given the highly-globalised nature of economic activity, the GNI* indicator is an essential supplementary measure for informing policy development. The Council recognises the budgetary challenges of reducing the deficit and debt levels while at the same time ensuring fiscal policy supports sustainable growth, and facilitates sufficient public investment in productivity enhancing capital projects. While the exact cyclical position of the economy is difficult to precisely estimate, after three years of strong economic and labour market growth, the Council considers it important that an appropriate fiscal and budgetary position consistent with the EU budgetary framework is adopted to ensure Ireland is best positioned to withstand adverse shocks, and to ensure that the economy does not overheat. Ireland should continue to achieve an appropriate balance between the need to meet our obligations under the Stability and Growth Pact and the need to put in place a sustainable, counter-cyclical, medium-term fiscal planning process.

Reducing the cyclical nature of fiscal policy making is a common challenge across the EU. The EU's Stability and Growth Pact was reformed after the financial crisis and the new integrated system ensures that there are clearer rules, better coordination of national policies throughout the year, regular follow up and swift sanctions for breaching the rules. It is important to ensure our fiscal position remains sustainable in the face of an uncertain international trading and investment environment. Maintaining a growth and entrepreneurship-friendly taxation system, whilst simultaneously broadening the tax base, is critical to maintaining existing levels of employment and creating new jobs. Efforts to secure the tax base should reflect the OECD tax hierarchy for growth, which outlines that taxes on immobile bases, such as property, and consumption are less distortive than those on personal and corporate income.

Ireland cannot afford to loosen the fiscal discipline (i.e. unsustainable current expenditure increases) as this would undo much of the progress achieved to date, and would have potentially significant negative implications for future competitiveness. The Council supports the Government's approach to broadly balancing the books as sets out in Budget 2018 and the approach of a 'counter-cyclical' fiscal stance. It recognises the challenge faced by policy makers in ensuring compliance with the prudent fiscal rules, reducing our high debt levels while increasing capital investment to boost competitiveness. Public investment is essential to maintain and expand Ireland's capital stock; it is also a significant driver of long term productivity growth and plays a crucial role in driving competitiveness, with the gains from public investment accrue not just to those undertaking the investment, but to a wide range of people and enterprises.

It is imperative that we derive maximum impact from State expenditure. Ensuring an effective, integrated and coherent approach to State led infrastructure planning and delivery is vital to facilitate improved efficiency and enhance the effectiveness of capital investment at minimum cost. The Council encourages joined up investment through the National Investment Plan and National Planning Framework in competitiveness enhancing areas in innovation capacity, broadband and transport infrastructure, costs and productivity.

Policy Challenges and Recommendations

Attaining Sound Budgetary Positions

Stable and sustainable public finances are a prerequisite for competitiveness. This requires an appropriate balancing of the need to meet our obligations under the Stability and Growth Pact and put in place a sustainable, counter-cyclical, medium-term fiscal planning process with the need to increase capital investment to enhance competitiveness. The Department of Finance's estimates indicate that the structural balance in 2016 was -1.9 per cent of GDP, and that based on the current trajectory and an assumption within Budget 2018, Ireland is on track to reach the target of 0.5 per cent in 2018. Economic growth has contributed to improvements in the debt to GDP ratio. However, while the debt to GDP ratio decreased substantially from its peak of 119.5 per cent in 2012-2013 to 73 per cent in 2016, it remains high, exposing Ireland to external shocks and particularly to a potentially 'Hard Brexit' scenario. IFAC's data[1] suggest that using the Modified Gross National Income indicator, Ireland's net debt burden ranks as the fourth highest in the OECD.

It is important that the downward trajectory of the net debt burden continues if Ireland is to achieve the Stability and Growth Pact target of a 60 per cent debt-to GDP ratio by 2022. To ensure that public finances can withstand Brexit related shocks, the Department of Finance had set an additional mid-term goal of achieving debt-to-GDP ratio of 45 per cent, which target has consequently been amended to 55 per cent, to allow for boosting output through increasing expenditure on capital formation.

The Government's short-term objective is to achieve a balanced budget in 2018 which is in line with the fiscal rules. A balanced budget over the economic cycle ensures long-term fiscal sustainability. The Government's 'Counter-cyclical' fiscal stance is welcome – this equates to reducing both Ireland's debt and deficit when the economy is growing, and particularly when the economy is growing strongly which it is at present. The Summer Economic Statement sets out that unallocated fiscal space amounting to around €500 million is available for new measures next year, consistent with achieving a balanced budget. €180 million of this space has since been committed to the Public Service Stability Agreement. The total voted expenditure in 2018 will be around €60.9 billion, of which €55.6 billion has been allocated to current expenditure to ensure the continued delivery of sustainable and high quality public services and €5.3 billion has been allocated to capital spending. The Government has committed to prioritising investment to address the infrastructural gaps that have emerged over the last decade.

To ensure Ireland has the capacity to absorb and respond to economic shocks, it is important to ensure our fiscal position remains sustainable. Strong economic growth coupled with expansion in public investment may necessitate reassessment of the fiscal stance to ensure that investment stimuli do not contribute to any overheating should the economy grow at a faster pace than expected. Complying with the provisions of the fiscal rules, including the Expenditure Benchmark, and the development of a Rainy-Day fund could serve as buffers against potential adverse shocks.

The Council recognises the budgetary challenges of reducing the deficit level while at the same time ensuring that fiscal policy supports sustainable economic and employment growth, and facilitates sufficient public investment in productivity enhancing capital projects. It is important to achieve appropriate balancing of the need to meet our obligations under the Stability and Growth Pact and put in place a sustainable, counter-cyclical, medium-term fiscal planning process. While the application of defined and prudent fiscal rules is welcome, there is a concern that any underestimation of Ireland's medium term growth potential, for example, could limit our ability to increase capital investment and could, therefore undermine competitiveness.

The Council considers maintenance of a prudent fiscal policy approach within the margins of the EU Budgetary framework as essential. A continuation of prudent fiscal policy is still a necessity – in particular, to continue to reduce our stock of debt. Ireland will need to carefully manage the public finances, prioritising expenditure and investment to

1 Irish Fiscal Advisory Council, Pre-Budget 2018 Statement, 2017

support competitiveness and maintain essential services, whilst simultaneously maintaining a growth-friendly taxation system. The Council considers expenditure and investment to support competitiveness should be prioritised and implemented in a manner that does not overload the capacity of the economy to absorb the additional funding at each point in time. In this regard, there may be a need to consider further countercyclical measures such as broadening the tax base should the economy show signs of overheating. Sustained vigilance is required to ensure that the Exchequer does not become over reliant on any single or temporary sources of revenue which may be a result of cyclical fluctuations, rather than a sustainable, permanent increase in revenue.

Recommendation: Continue to implement a growth-friendly fiscal stance to further lower the government debt and deficit, reduce the risk of the economy overheating and to build buffers and enhance resilience to external shocks.

Responsibility: Department of Finance

Rainy-Day Fund

The establishment of a Rainy-Day Fund was announced in the Programme for Partnership Government. It is intended that the Fund will contribute towards maintaining sound public finances by serving as a counter-cyclical buffer to financial shocks. The Summer Economic Statement 2017 provided further details on the timeframe and resourcing of the Fund. Subject to achieving the Medium-Term Objective in 2018 (achievement of a balanced budget in structural terms), the Rainy-Day Fund will be capitalised with annual contributions of €500 million from the Exchequer (and not €1 billion allocation as originally envisaged) in each of 2019, 2020 and 2021. The remaining annual contribution of €500 million will be used to finance investment in physical and social infrastructure. In its Budget Statement, the Minister for Finance proposed to establish the Fund in 2018 and to transfer at least €1.5 billion to it from the Ireland Strategic Investment Fund.

As part of the review of the Irish Strategic Investment Fund's (ISIF), the Government has undertaken to consider whether an element of the ISIF should be reoriented towards complementing the role of the Rainy-Day fund. Adequate resourcing of the fund is important for achieving its goals; therefore, consideration should be given to alternative sources of funding, including efficiency gains and temporary revenue receipts.

The Council supports the principle of a Rainy-Day Fund as a counter-cyclical buffer. In addition to absorbing financial shocks, the Fund could also be used to avoid the need for forced fiscal consolidation in the event of a sudden loss of financial market access. However, further elaboration by Government on the long-term funding, scope and operational guidelines of the Fund is important. Details are also required on the trigger for deploying the fund, its operation within the scope of the fiscal rules and the investment strategy to ensure that the resources dedicated to the Rainy-Day Fund yield a return. In this regard, the Council welcomes the consultation paper on the establishment of the Fund published by the Department of Finance in October 2017.

Recommendation: Provide a clear statement on the scope and operational guidelines of the Rainy-Day Fund to serve as a counter-cyclical buffer to adverse shocks.

Responsibility: Department of Finance

Measuring Economic Activity

The nature of the Irish economy presents a significant challenge in terms of assessing the size and drivers of economic activity. Increased levels of contract manufacturing activity carried out by multinationals abroad; together with the relocation of intellectual property products and the increasing share of assets owned by Irish based aircraft leasing firms have a significant impact on the national accounts and form part of Irish GDP and GNP. As a result, metrics derived with respect to national income, such as the structural deficit, debt, export values, expenditure ratios-to-GDP and measures of potential output are overstating our overall performance. This can mask weakness in the underlying drivers of future competitiveness performance, particularly regarding productivity performance. The Council has previously warned that measures relative to GDP and GNP have become less meaningful in the last few years and must be interpreted with caution.

The Council welcomes the launch by the Central Statistics Office (CSO) of the Modified Gross National Income indicator (GNI*) which more accurately reflects the underlying state of the Irish economy. Following the launch of GNI*, the National Income and Expenditure Annual results indicate that the Modified Gross National Income was more than 30 per cent lower (€189.2 billion) than the Gross Domestic Product (€275.6 billion) in 2016. In addition, the newly published CSO data indicates that when measured using GNI* as a denominator, the debt ratio (106 per cent) is substantially higher than the standard indicator debt to GDP ratio of 73 per cent. In this regard, the appropriateness of existing policy targets made with reference to GDP growth may be problematic. The Council is concerned that the health of our public finances is being compromised by the lack of credible growth indicators as key fiscal ratios; when expressed as a share of GDP the indicators overstate the underlying health of the government accounts. The GNI* suggests that borrowing levels remain high, a timely reminder that continuation of prudent policy on public finances is crucial to reduce our debt burden.

The introduction by the CSO of the GNI* measure will help better inform domestic policymaking but internationally measures relative to GDP will remain the benchmark against which many measures of Ireland's competitiveness performance will be assessed. GNI* will have a knock-on effect on several other growth driven metrics, including structural deficit and the expenditure benchmark. Given the complex and highly-globalised nature of the Irish economy, the measure is an essential supplementary measure for informing and revaluating Government policy development and the Council would encourage making use of GNI* in analysis using growth indicators.

Recommendation: Continue developing the suite of national account measures that reflect actual real economic activity in terms of output and expenditure measures. Continue the analysis to better understand the factors driving the national accounts results.

Responsibility: Central Statistics Office

Fiscal Policy and Tax Competitiveness

The Competitiveness of the Irish Taxation System

Reducing the cyclical nature of fiscal policy making is a challenge not only in Ireland but across the EU. The EU's Stability and Growth Pact was reformed after the financial crisis. In Ireland, the Fiscal Responsibility Act established the Irish Fiscal Advisory Council as a statutory body and legislated for the implementation of national and EU fiscal rules. Member States are expected to reach their Medium-Term Objective (MTO) or to be heading towards their MTO by adjusting their structural budgetary positions by at least half a per cent of GDP annually. For Ireland, the MTO is a balanced budget in structural terms; and the Expenditure Benchmark requires that government expenditure grows at or below a country's medium-term potential economic growth rate, depending on the country's position with respect to the MTO. Any spending increases beyond this rate must be matched by additional discretionary revenue measures. Furthermore, the Government should on an ongoing basis assess whether the budgetary stance is appropriate from a

macroeconomic stability perspective. It should reassess the fiscal stance to ensure budgetary policy does not contribute to any overheating should the economy grow at a faster pace than expected.

The Department of Finance[2] reported that tax revenues for the month of October were 6.2% or €219 million ahead of target and cumulative tax revenues of €38,986 million are on profile (up €7 million or 0.0%). This represents a year-on-year increase of 6.2% or €2,283 million. While the cumulative tax revenue is on target, developments in this area should be monitored closely to ensure that the deficit is contained should the tax revenues fall significantly below target.

Compared to our OECD peers, Ireland's tax system has a higher reliance on more distortionary direct taxes and is less reliant on property and wealth taxes; indirect taxes in Ireland are around the EU average. In particular, personal income taxation has a relatively narrow base (about 35 per cent of households are exempted) and a relatively rapid progressivity (i.e. the top marginal rates are among the highest in the OECD). To ensure the sustainability of the public finances, it is important that the principle of maintaining a broad tax base is applied. As noted by the European Commission[3], the use of a narrow base of revenues (particularly regarding corporation tax receipts which can be volatile) to fund current expenditure makes public finances more vulnerable to the risk of future shortfalls in revenue. A broader stable tax base is crucial in achieving the same degree of tax revenue stability that applies in other countries. A balanced mix of tax sources and avoiding the reliance on volatile and potentially temporary revenue sources for funding increased levels of public spending and reductions in tax rates which can prove hard to reverse, will also contribute to achieving efficiency and resilience of the tax system. Ireland's exposure related to the concentration of corporation tax receipts among a very small cohort of firms remains a serious risk in terms of the long-term sustainability of the public finances.

Tax reforms have also contributed to Ireland's recent fiscal adjustment, but there is further scope to improve the efficiency of the tax system. From a competitiveness perspective, it is crucial that the taxation system is balanced in a way that supports both indigenous and multinational enterprises. The tax system should support and reward employment, investment and entrepreneurship. The piecemeal reform of taxes has resulted in increased complexity and is likely to continue to generate anomalies. A medium-to-long term perspective on taxation would contribute to clearly defining the objectives being pursued through our tax system, and should consider whether current structures are fit for purpose. This could be achieved by a comprehensive review of the system of tax expenditure considering the interaction and impact of the full range of direct and indirect taxes on individuals and firms.

Brexit means Ireland's tax competitiveness relative to the UK is crucial. From an enterprise perspective, it is important that the taxation system makes Ireland an attractive location in which to do business relative to the UK. In this regard, conducting a review of the Irish Tax System as it applies to SMEs and Small Mid-Caps to consider how its competitiveness could be enhanced in the context of Brexit might be helpful in encouraging enterprise in Ireland, and identifying whether there is scope for changes to the existing tax system. This would build on and complement the work conducted by the Department of Finance in 2015 in its review of Tax and Entrepreneurship.

Recommendation: Continue to review, simplify, and bring coherence to Ireland's overall taxation system over the medium term.

Responsibility: Department of Finance

2 Fiscal Monitor, October 2017, Department of Finance
3 European Commission, Country Report, Ireland 2017

Recommendation: Conduct a review of the Irish Tax System as it applies to SMEs and Small Mid-Caps to consider how its competitiveness could be enhanced in the context of Brexit.

Responsibility: Department of Finance

Income Tax

Personal income taxes are the single largest source of tax revenue to be raised by the Exchequer in 2017, amounting to 40 per cent of the total tax take (of c. €20.2 billion income tax is expected to comprise c.€16.5 billion and USC is expected to comprise c.€3.7. billion).

The design of the income tax system is an important tool for stimulating labour market participation. As a small open economy, and as the country is moving towards full employment, it is also important that Ireland's income tax regime contributes to attracting and retaining talent including those coming from abroad. The IMF noted[4] that Ireland's personal income tax (PIT) base remains narrow and complex, and that entry to the higher income bracket occurs at a low level, placing a heavy tax burden on middle-income households and undermining efforts to support female labour force participation. Reducing average labour taxes has the potential effect of increasing labour force participation while lowering the marginal tax rate can potentially result in raising the hours worked per individual. The OECD has also found that lower marginal rates increase productivity in industries with potentially high rates of enterprise creation.

The OECD study on "Tax and Growth" argues that high top marginal personal income tax rates reduce productivity growth, especially in industries characterised by high entry rates of new firms. Ireland remains competitive in terms of the levels of income tax and social security contributions as a proportion of total labour costs. The difference between labour costs to the employer and the corresponding net pay of the employee is the sum of personal income tax, social security contributions together with payroll tax, minus benefits as a percentage of labour costs. The Irish income tax system is progressive particularly at low and middle incomes. OECD[5] analysis shows the average single worker in Ireland faced a net average tax rate[6] of 19.7 per cent in 2015, compared with the OECD average of 25.5 per cent and 23.4 per cent in the UK. In Ireland, the take-home pay of an average single worker, after tax and benefits, was 80.3 per cent of their gross wage, compared with the OECD average of 74.5 per cent and 76.6 per cent in the UK. Ireland's marginal tax rate is high particularly relative to the UK. Ireland's relatively high marginal tax rates at higher incomes may have negative effect on incentives to work and for attracting mobile skilled labour. At present, including PRSI, the marginal rate of tax for a single person on incomes between €34,550 and €70,044 will be 48.75 per cent in 2018 compared to 52 per cent for employees with incomes above €70,044 and 55 per cent for the self-employed with incomes above €100,000[7]. In addition, the highest income tax rate applies at €33,800 which is just below the average industrial wage (€37,600 in Q1 2017), compared to the UK's rate applying at 4.2 times the average industrial wage. Reducing the top marginal rate, moving the entry point of the top marginal rate closer to or above the average wage, or a combination of both could contribute towards economic growth and to labour force participation. In doing so, the policy makers could offset potential revenue foregone by introducing less harmful forms of taxation while considering the overall taxation burden on individuals and households.

The increase of the entry point at which an income earner attracts the higher rate of income tax by €750 per annum[8], and the reduction of the USC, which in effect reduces the top marginal rate of income up to €70,044 to 48.75 per cent enhanced in Budget 2018, are steps in the right direction. However, further efforts are needed to bring the marginal tax rate in line with the marginal rates in competitor countries.

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4 Ireland: 2017 Article IV Staff Report, IMF
5 OECD Taxing Wages, Ireland 2016
6 The employee net average tax rate is a measure of the net tax on labour income paid directly by the employee.
7 Parliamentary Budget Office, Post-Budget 2018 Commentary for the Committee on Budgetary Oversight, October 2017
8 The entry point for single earners increases from €33,800 to €34,550 and for married one earner couples from €42,800 to €43,550

The design of the income tax regime is essential to encourage people to remain in or return to the labour market. The Low Pay Commission report published in July 2017 recommended an increase in the national minimum wage of 30 cents to €9.55 per hour (3.2 %). The Council supports the recent recommendation by the Low Pay Commission to remove the anomaly created by the sudden increase in the rate of employers' PRSI from 8.5 per cent to 10.75 per cent on weekly earnings above €376 which creates step effects. A moderate increase in the current Minimum Wage rate without an appropriate adjustment in employer PRSI would have a major impact, particularly on small business costs. It is important that this issue is resolved in the context of progressing Budget 2018.

The Government is committed to the development of a medium-term income tax reform which keeps the tax base broad, reduces excessive tax rates for middle income earners, and limits the benefits for high earners. As part of the reform of the Income Tax System, the Government introduced an Earned Income Credit in 2016 for self-employed who do not avail of the PAYE tax credit. Budget 2018 provides for a €200 increase in the Earned Income Credit, bringing it to €1,150 per year from 2018. While the increase is welcome, the Programme for a Partnership Government committed to a higher increase in the value of the Earned Income Credit to €1,650, to match the PAYE credit by 2018.

Recommendation: Continue to reform and simplify the current regime of taxes and charges on employment, specifically to further encourage the take-up of employment, recruitment and retention of talent, whilst simultaneously maintaining a broad personal tax base. In the context of progressing Budget 2018, remove anomalies in relation to PAYE and the USC to support labour market participation and entrepreneurship.

Responsibility: Department of Finance

Recommendation: Review income taxes (e.g., credits, thresholds and rates.) to support improvements in after-tax income, enhancing the incentive to work while simultaneously protecting labour cost competitiveness. Building on the changes in recent Budgets, the entry point to the top marginal income tax rate should be increased and maximum marginal rates for all employees should be below 50 per cent.

Responsibility: Department of Finance

Replacement Rates

Income taxes are a direct factor in determining a person's decision to take up employment. Generally, a replacement rate (measuring a person's financial incentive to take up employment) more than 70 per cent is considered to act as a disincentive to work. A Staff Paper produced by the Department of Public Expenditure and Reform[9] notes that changes in tax and welfare policy, and the interplay between both, can impact on a household's replacement rate. Other disincentives, limiting the attractiveness of returning to work, also exist. The high cost of childcare is a pressing concern.

Ireland's Competitiveness Scorecard 2017 reports that for a long term unemployed, one earner married couple with 2 children earning 100 per cent of the average wage, the Irish replacement rate (80%) exceeds the OECD average (54.4%). The rate for single individuals (50.6%) also exceeds the OECD average (31.5%). The unemployment trap measures the percentage of gross earnings lost to taxes when a person becomes employed. This occurs through the loss of unemployment benefits combined with higher tax and social security contributions. The Irish tax system has reformed over the 5 years to 2015 and now provides more incentives for job seekers. The implicit tax rate on returning to work for low wage earners is 71.6 per cent in Ireland compared with the Euro area rate 76.5 percent.

9 Staff Paper 2015, Analysis of Replacement Rates from 2010 to 2015

Recommendation: Consider further changes to the income tax system which will contribute to the decline in replacement rates as part of the Government's consideration of income tax, and considering the factors encouraging take-up of employment.

Responsibility: Department of Finance, Department of Employment Affairs and Social Protection

Value Added Tax (VAT)

VAT is the primary source of indirect tax revenues for OECD countries and is the second highest contributor to the overall tax take in Ireland. The OECD considers consumption taxes to be the second least damaging to economic growth after recurrent property taxes. Consumption taxes are generally flat rate and not (or not very) progressive, hence they do not discourage growth more per unit of tax revenue, like income taxes. A broad-based VAT limits the distortion of consumption choices and minimises compliance and administrative costs.

The VAT system in the EU is governed by a common legal framework (the VAT Directive) which imposes a minimum standard VAT rate of 15 per cent, above which Member States are free to set their own national VAT rates. The existing VAT system in Ireland continues to be very complex and there are currently many different applicable rates ranging from a standard rate of 23 per cent, several reduced rates, ao per cent rate and goods and services exempt from VAT.

The Government has committed to introducing a process for systematically evaluating the costs and benefits of reduced VAT rates in Ireland. Considering the complexity of the current system and the various exemptions which exist, the Council welcomes the pending review of the VAT regime to outline the rationale for different VAT treatments of goods and services, with a view to creating a more growth-friendly taxation system without affecting the overall tax burden on the economy (i.e. the tax to GDP ratio). The application of reduced rates should demonstrably achieve defined objectives, rather than simply represent a transfer of tax revenue from the State to individual interest groups.

The current 9 per cent VAT rate for the tourism/hospitality industry illustrates the need for a review of the VAT rate reductions. Introduced as a temporary measure to provide support to the tourism sector during the economic downturn, the reduced rate was retained in Budgets 2017 and 2018 on the basis that it would counteract the weakness in sterling which increases the cost of holidaying in Ireland for British tourists.

While there are concerns that recovery in tourism has not benefited all regions, and that the hospitality industry will be negatively affected by Brexit, the increased number of tourists, recorded growth in the accommodation and food services sector (+5.5 per cent)[10] and higher levels of employment in this sector indicate that the reduced VAT rate may have fulfilled its objective. In terms of the impact of the preferential VAT rate on the Exchequer, estimates by the Tax Strategy Group[11] indicate that returning to 13.5 per cent VAT rate would result in increased revenues of €491 million.

In addition, the OECD emphasises[12] that while there is a strong case for removing all reduced VAT rates, it is particularly important to remove reduced rates on restaurant food, hotel accommodation, books and cultural activities. Those preferential VAT provisions often provide proportionately larger tax savings to higher income households and have a regressive effect. The European Commission[13] suggests that several measures, including eliminating reduced VAT rates could, in addition to broadening the tax base, help re-balance the tax mix, while enhancing the growth friendliness of the tax system.

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10 CSO, Gross Value Added for Foreign-owned Multinational Enterprises and Other Sectors Annual Results, 2016

11 Selected VAT issues, Tax Strategy Group – TSG 17/06

12 Brys, B., et al. (2016), "Tax Design for Inclusive Economic Growth", OECD Taxation Working Papers, No. 26, OECD Publishing, Paris.

13 Post-Programme Surveillance Report: Ireland, Spring 2017

Recommendation: Review VAT exemptions and outline the case for current reduced rates and exemptions. Consider the merits of further standardisation of rates to allow for reductions in more distortionary taxes such as those on labour.

Responsibility: Department of Finance

Recommendation: Conduct an updated cost benefit analysis on the impact of the reduced VAT rate on the tourism and hospitality sector.

Responsibility: Department of Finance

Corporation Tax

Ireland's corporation tax regime is a major factor for creating favourable conditions in which Irish based enterprises operate and ensuring a stable environment, transparency and predictability for inward investment. Ireland's competitive, stable and transparent corporation tax offering remains an important part of Ireland's wider competitiveness offering to support enterprises based in Ireland invest, innovate and compete internationally.

Corporation tax receipts at end-October 2017 were €753 million, 6.6 per cent or €47 million above profile. The cumulative tax position shows that corporation tax receipts are 13.5 per cent (€644 million) higher compared to the previous year. The Revenue Commissioners report[14] that both the numbers of gross and net CT payers increased in recent years. Since 2014, the number of gross CT payers has increased by over 8,300 (+22 per cent), whereas the number of net payers has increased by nearly 8,500 (+24 per cent) in the same period. While the growth in corporation tax receipts is welcome, concentration of corporation tax receipts among a very small cohort of firms remains a risk in terms of the sustainability of public finances. In 2016 with 37 per cent of receipts paid by the 10 largest firms

Given that the share of corporation tax in the total tax revenue has gradually increased over the last years (currently it represents 15 per cent), and the fact that in the past some of the corporation tax receipts proved to be of transitory nature, it is important to establish the extent to which the strong performance of this tax head is sustainable. In this regard the 2017 Review of Ireland's Corporation Tax Code points to sustainability of our current corporate tax receipts to 2020.

As set out in this year's *Competitiveness Scorecard Report*, the Irish corporation tax regime remains stable and internationally competitive at 12.5 per cent. While Ireland's corporation tax rate has remained consistent over recent years, an increasing number of EU countries such as Spain, Denmark, and Sweden have reduced their rates. The UK has cut its main rate of corporation tax to 20 per cent and plans to further reduce it to 17 per cent by 2020. The US administration's intention to reform its tax system may potentially have a negative impact on Ireland. The exact impact would depend on the nature of the measures to be agreed.

Proposals published in October 2016 which could potentially see the introduction of a Common Consolidated Corporate Tax Base (CCCTB) would have significant implications for competitiveness and growth. The CCCTB is a complex proposal and Ireland and other EU Member States need to analyse fully its potential impact on national tax systems. For small countries, such as Ireland, the Netherlands and Denmark the estimated impact of mandatory CCTB on Government revenues could be significant15. Recent research by the ESRI[16] models the impact on Ireland and estimates the result could be a reduction in Irish potential output of 1.5 per cent below baseline growth. In addition, the European Commission has seen scope within the current CCCTB proposal to ensure that digital activities are fairly taxed. Proposals in relation to CCTB would need further careful consideration and analysis by the Irish Government to

14 Revenue Commissioners, An Analysis of 2015 Corporation Tax Returns and 2016 Payments, 2017
15 Department of Finance, Study on the Economic and Budgetary Impact of the Introduction of a Common Consolidated Corporate Tax Base in the European Union, 2011
16 ESRI, Ireland's Economic Outlook: Perspectives and Policy Challenges, December 2017

avoid any potential unintended effects which could damage Ireland's competitiveness and hard won economic recovery. Accordingly, in terms of taxation of digital business, it is important to gain an understanding on where the actual value is created. An additional consideration is that implementing EU-wide rules which differ from the rules applied globally could potentially lead to double taxation and greater uncertainty.

EU Member States have stepped up efforts to combat aggressive tax planning in recent years and are constructively engaging in the Base Erosion and Profit Shifting project (BEPS). Ireland remains committed to global tax reform and is a strong supporter of the BEPS project. Ireland has consistently implemented the BEPS recommendations and is amongst the countries who have adopted early the country-by-country reporting for large firms. In addition, the Irish Government has introduced domestic measures to address tax evasion and avoidance. The Council supports the Government's policy on actively engaging in the world-wide tax reform driven by the BEPS project.

It is vital that Ireland's tax offering remains competitive for firms seeking an EU base for operations. Ireland also needs a competitive tax offering to attract and develop knowledge-based investment, related to research and development and intellectual property. Maintaining the competitiveness of our R&D tax credit and Knowledge Development Box also form part of Ireland's competitive offering to attract FDI and supports Irish enterprises to invest, innovate and compete internationally. As the international tax environment is changing rapidly, maintaining a good reputation has become increasingly important for the sustainability of corporation tax policy here in Ireland. When making investment decisions MNCs consider the integrity of a country's taxation system. Therefore, protecting and maintaining Ireland's reputation in relation to Corporation Tax is of paramount importance given the importance of FDI to the country. Against the backdrop of a rapidly changing international tax environment, in 2016 the Department of Finance commissioned a Review of Ireland's Corporation Tax Code by independent expert Seamus Coffey. The Report, released in September 2017, indicates that Ireland's corporation tax regime provides transparency and certainty for business and that, increases in corporation tax receipts in recent years can be expected to be sustainable over the medium term to 2020. To ensure that Ireland continues to meet the highest international standards, the report sets out several recommendations which will be subject to a public consultation, including:

- Scrutiny of proposed measures to meet OECD and EU standards on preferential treatment;
- Supporting the EU Directive on mandatory disclosure in line with OECD recommendations;
- The passage of the Taxation and Certain Other Matters (International Mutual Assistance) Bill through Dáil and Seanad Éireann should be facilitated;
- Updating and expanding the scope of Ireland's transfer pricing regime;
- Consideration of whether to change to a territorial tax system; and,
- Enhancement of the resources of the Revenue Commissioners to deal with international dispute resolution.

The recommendation for the introduction of a cap on capital allowances claims with respect to intangible assets as a way of smoothing corporation tax revenues over time has already been implemented.

The Council welcomes the findings of the report on the Government's approach to achieving the highest standards in tax transparency and exchange of information and the active engagement in the OECD Base Erosion and Profit Shifting ('BEPS') project. Given that some of the recommendations of the report, if implemented, will have a considerable impact on business (e.g. expanding the scope of the transfer pricing regime to include SMEs), the Council supports the government's plan to conduct a consultation seeking views on the recommendations.

Recommendation: Maintain the 12.5 per cent of corporation tax. Continue to develop our suite of tax offerings to ensure it is internationally competitive for enterprise and relevant to evolving sectors and activities in the context of collaborating with OECD on the Base Erosion and Profit Shifting project.

Responsibility: Department of Finance, Tax Strategy Group

Capital Gains Tax & Foreign Earnings Deduction

Capital Gains Tax (CGT) rates are not easy to compare across countries given differences in tax design and integration with other taxes. In 2016 data from the Tax Foundation[17] shows Ireland has the 5th highest rate of capital gains tax in the OECD at 33 per cent. Ireland's CGT rate is particularly high relative to the UK's 20 per cent. The UK's Entrepreneur's Relief provides for a 10 per cent CGT rate on business investments by both entrepreneurs and passive investors, this relief is subject to a lifetime threshold of Stg£15 million per individual. Recent budgets have seen Ireland start to address the gap with the UK. CGT Entrepreneur Relief introduced in Budget 2017 provided for a reduced CGT rate of 10 per cent for entrepreneurs, (20 per cent in 2016) and subject to a lifetime threshold of €1m in gains, and to certain criteria. Further alignment with the UK's Entrepreneur's Relief scheme would increase Ireland's competitiveness position in relation to attracting entrepreneurial businesses, skills and start-ups. The Council notes that the Government's commitment to reduce the rate of Capital Gains Tax for new start-ups to 10 per cent from 2017 (held for five years and subject to a €10million cap on gains) has not been delivered in Budget 2018.

Recommendation: Reduce Capital Gains Tax for start-ups to 10 per cent (held for 5 years and subject to a €10 million cap on gains).

Responsibility: Department of Finance

The Foreign Earnings Deduction is an income tax deduction for employees who travel abroad to certain non-EEA countries as part of the duties of their employment. Recognising that some sectors of the Irish economy are highly reliant on the UK as an export destination, Budget 2017 extended the scheme until 2020 and reduced the minimum number of days required to be spent abroad to encourage Irish firms to expand their business into new markets. Past amendments to the Foreign Earnings Deduction Scheme as a means of supporting exporters were welcomed. *Ireland's Competitiveness Scorecard 2017* reports that the UK accounted for €13.3 billion, (11.5%) of total Irish merchandise exports and is the primary destination for Food exports, accounting for 28 per cent of total Food exports in 2016. Budget 2018 is a missed opportunity to extend the scope of the scheme in the context of the need for firms to diversify their export and import markets and get ahead of the Brexit curve.

Recommendation: Consider extending the scope of the Foreign Earnings Deduction Scheme to all non-EEA countries.

Responsibility: Department of Finance

Share Options Scheme

Due to the return to economic growth and decline in unemployment, coupled with the presence of a large cohort of multinationals, Irish indigenous SMEs are facing increased pressure in competing for skilled labour. Such firms often experience difficulties in offering market level wages due to cash flow constraints. A recent European Commission study[18] reported firms offering employee financial participation are more likely to experience significant increases in both productivity and employment and thereby competitiveness. The Commission has also recognised that a shortage

17 Tax Foundation, International Tax Competitiveness Index 2016

18 European Commission, The promotion of Employee Ownership and Participation, 2014

of skilled employees adversely impacts innovation and growth by restricting small firms' abilities to explore the productive potential of innovation and ideas and acknowledged the need to promote a more entrepreneurial culture and create a supportive environment for SMEs[19]. Several EU Member States have introduced share based schemes. The UK Enterprise Management Incentive Scheme, which is designed for small firms, and which has been in operation for several years sets out that, on acquisition of the shares, the employee is liable to Income Tax or National Insurance if the market value exceeds the offered price of the shares. On disposal, the employee pays a CGT. Subject to certain conditions, this tax could be as low as 10 per cent.

The most recent share based scheme has been designed by Sweden and approved by the Commission in June 2017. The scheme assists young and small firms in recruiting and retaining key employees to achieve their growth potential. On exercising the option Swedish start-ups and SMEs are not liable for tax or social contributions. On disposal of the shares, the employee is required to pay CGT (normally 25 per cent) on the difference between the value realised on selling the share and the total price paid for the share at acquisition.

The Council considers that the tax system could be used more efficiently to attract and retain talent in a competitive mobile labour market and a share based scheme, targeting specifically SMEs and Small Midcaps, would contribute towards matching of labour resources to the economic needs of businesses to boost their productivity. The scheme would serve as an additional incentive to key employees as the performance of their company will affect their return and the value of their shares.

Accordingly, the Council views the Government's decision to introduce a SME-focussed, share-based incentive scheme for key employees in Budget 2018 (Key Employee Engagement Programme - KEEP) as a step in the right direction. The scheme envisages that gains arising to employees on the exercise of the share options will be liable to Capital Gains Tax on disposal of the shares, in place of the current liability to income tax, USC and PRSI on exercise of the option, thereby reducing tax payable by between 15 and 19 per cent. It is contended that the financial and administrative burden associated with the pre-Budget share option schemes make them less attractive to SMEs than the schemes designed by other EU countries[20], therefore it is of critical importance that KEEP is implemented in an effective manner and closely monitored in a way that improves Irish SMEs ability to attract and retain talent and strengthens their competitiveness.

Recommendation: Establish the Key Employee Engagement Programme (KEEP) scheme. Monitor the level of uptake and effectiveness of the scheme to ensure that it delivers on its objectives, particularly regarding enabling smaller firms attract and retain key employees.

Responsibility: Department of Finance

Local Property Tax

Recurrent taxes on immovable property are considered as the least damaging to economic growth by the OECD. Such taxes can be an efficient form of taxation because the tax base – typically land and improvements – is highly immobile, and consequently there is limited behavioural response to the tax. Recurrent immovable property taxes are also difficult to evade due to the highly visible nature of immovable property (the 2017 compliance rate with local property

19 Communication from the Commission to the European Parliament, the Council, the European economic and social Committee and the Committee of the Regions, Entrepreneurship 2020 Action Plan, Reigniting the entrepreneurial spirit in Europe, COM (2012) 795 final of 9.1.2013

20 The Irish Tax Institute ("A Future Tax Strategy to Grow Irish Indigenous Exports") argues that the UK share regime specifically targets SMEs and is employee-friendly from a tax perspective.

tax is estimated at 92% in Ireland[21]). These taxes can also be used as an instrument to ensure more efficient land use. At the same time, it is acknowledged that property taxes impose an unfair burden on middle-income families because of the high rates of home ownership among this cohort in Ireland[22].

A Staff Working Paper[23] published by the Department of Finance estimates that a revenue neutral shift of €1 billion from labour taxes to property taxes would result in GDP being 0.38 per cent higher and employment 0.43 per cent higher after 5 years. Such a shift would not impact on labour supply and has the advantage of being highly efficient and, in the case of market value based property taxes, equitable. The Council would support as part of a comprehensive tax reform exploring the possibility of a revenue neutral shift from personal income taxes to property taxes.

The Government introduced Local Property Tax (LPT) in 2013. Revenues from immovable properties in Ireland continue to be below the EU and OECD average. Such revenues amounted to 1.5 per cent of GDP in 2015, below the OECD average of about 1.9 per cent of GDP. The LPT Exchequer Receipts in 2017 are approximately €225m. The initial plan to revaluate the self-assessment property values in 2016 has been postponed, and the valuation applies up to and including 2019. The Council has advocated in the past for closer alignment of self-assessed property values to current market values and emphasised the importance of this measure for broadening the tax base. This is particularly valid today as residential property prices have increased substantially since the first self-assessment in 2013. CSO data indicates that prices nationally have increased by 49.6 percent, while Dublin residential property prices increased by 65.2 percent between the first months of 2013 and January 2017.

The 2017 Country Specific Recommendation [24] has also advocated for a gradual indexation of property values to help to smooth the local property tax profile by preventing a sudden increase in tax liabilities when properties are revalued in 2019.

Recommendation: Expedite the revaluation of property prices in relation to residential property tax. Adjusted bands and rates should be applied gradually to ensure increases are affordable as a once off exercise to reflect the long period since the initial valuations

Responsibility: Department of Finance

Recommendation: As part of a comprehensive tax reform explore the possibility of a revenue neutral shift from personal income taxes to property taxes.

Responsibility: Department of Finance

21 Local Property Tax Statistics, 2017, Office of the Revenue Commissioners

22 Brys, B., et al. (2016), "Tax Design for Inclusive Economic Growth", OECD Taxation Working Papers, No. 26, OECD

23 O'Connor, B., The Structure of Ireland's Tax System and Options for Growth Enhancing Reform, Economic and Social Review, Vol. 44, No. 4, Winter, 2013

24 Council recommendation of 11 July 2017 on the 2017 National Reform Programme of Ireland and delivering a Council opinion on the 2017 Stability Programme of Ireland

Maximising the Effectiveness of Public Expenditure

The Council welcomes the efforts of the Oireachtas and the Government to deliver the reform of the budgetary architecture to enhance the quality of public finances. The establishment of a Parliamentary Budget Office to equip parliamentarians to engage more effectively on budgetary matters is under way. The publication of the Summer Economic Statement and the Spending Review now form an integral part of the reformed budgetary process and contribute towards ensuring targeted, effective and efficient public service delivery.

The Summer Economic Statement sets out a fiscal space amounting to €1.2 billion is available for next year, consistent with achieving a balanced budget. Considering the cost of measures introduced last year, in the absence of additional revenue-raising measures, this leaves around €500 million for new measures. €300m of this amount is available for new expenditure increases, which when added to the pre-committed spending will bring the overall expenditure increase to €2 billion. Fiscal realities and competing demands for finite resources necessitate a rigorous process of prioritisation and sequencing of public expenditure to position Ireland to take advantage of growth opportunities

Public spending will be around €60.9 billion in 2018 which amounts to an increase of €2.4 billion or 4.2 per cent over 2017 Total Gross Voted Government expenditure peaked at €63,051 million in 2009 and per Budget 2018 total Voted Expenditure will surpass this figure in 2020[25]. The magnitude of spending reaffirms the importance of obtaining real value for money. The Capital Plan "Building on Recovery" of 2015, set out a €42 billion framework to address our priority capital needs up to 2021. In SES 2016, the Government committed an additional €5.14 billion to the €42 billion Plan. The report of the Mid-Term Capital Review, published in September 2017, sought to ensure that capital spending remains strictly aligned with national economic and social priorities, consistent with the Programme for Partnership Government objectives.

The challenge for Ireland is to maintain a sound budgetary position whilst simultaneously increasing capital investment to enhance competitiveness and support enterprise. Developing our infrastructure base, while complying with the EU's fiscal rules, is a fundamental challenge to enhancing competitiveness. Public investment is essential to maintain and expand Ireland's capital stock; it is also a significant driver of long term productivity growth and plays a crucial role in driving competitiveness – after all, the gains from public investment accrue not just to those undertaking the investment, but to a wide range of people and enterprises. There was a significant reduction in public capital expenditure over the course of the recession although weaker demand for infrastructural services (e.g. reduced road traffic, declines in energy demand), partially mitigated the impact of this reduction. Absolute levels of Irish investment are recovering. Over the medium term, capital investment as a percentage of GDP is projected to increase but will remain low relative to pre-crisis levels. However, as noted by the Council and other bodies such as the Irish Fiscal Advisory Council, the provision for investment in the Capital Investment Plan 2016-2021 will focus largely on maintenance and upgrading of existing stock and will only facilitate a limited increase in the stock of public capital over the medium term. The Council welcomes the commitment set out in the Summer Economic Statement that the Government is prioritising investment – to address the infrastructural gaps that have emerged in areas such as housing – this year and over the coming years.

In 2015 the Houses of the Oireachtas Service commissioned the OECD to conduct a review of budget oversight by the Houses of the Oireachtas. In its November 2015 review, the OECD recommended the introduction of a Parliamentary Budget Office (PBO) to equip parliamentarians to engage more effectively on budgetary matters, including through analysis of information on taxation, expenditure and performance, as well as policy costings[26]. The process of establishing the PBO began in August 2017 and is a key strategic priority for the Houses of the Oireachtas in the context of the current Parliamentary Reform Agenda. The establishment of the Parliamentary Budget Office represents an important step in the development of Ireland's overall economic and fiscal governance framework, and

25 Parliamentary Budget Office, Post-Budget 2018 Commentary for the Committee on Budgetary Oversight, October 2017
26 OECD, Review of Budget Oversight by Parliament: Ireland, Preliminary Draft, Public Governance and Territorial Development Directorate - Budgeting and Public Expenditures, Autumn 2015

builds on other key institutional initiatives such as the establishment of the Independent Fiscal Advisory Council (IFAC). The PBO will support the Houses of the Oireachtas and its committees in relation to fiscal issues and the management of the public finances and advise Oireachtas Members in relation to:

- EU fiscal rules including the Stability and Growth Pact (SGP), the Expenditure Benchmark (EB), the Medium-Term Objective (MTO), and the EU Semester process;
- Irish and international macro-economic developments;
- National budgetary process and rules including the Medium-Term Expenditure Framework (MTEF);
- The composition and sustainability of the revenue base; and,
- The efficiency, effectiveness and value for money of public services especially in the context of voted expenditure.

The PBO has stated that its staff complement will rise from four at present to 15 by the end 2018. The Council believes the key now is to ensure the Office is resourced at an appropriate level.

Recommendation: Ensure the Parliamentary Budget Office is resourced appropriately to fulfil its mandate to provide strategic vision and leadership to enable the Houses of the Oireachtas and its Committees become central players in the scrutiny and examination of public expenditure and taxation.

Responsibility: Department of Public Expenditure and Reform

The Council also welcomes the publication of the Mid-Year Expenditure Report (MYER) which presents the baseline for Departmental expenditure and provides the starting point for examination of budgetary priorities by the Oireachtas. The MYER sets out an analysis of the fiscal consolidation that was required over the period 2008 to 2014 to return stability to the public finances. Considering the lessons of the past, the focus of public expenditure policy is to provide for ongoing sustainable increases in expenditure for the delivery of public services. A key consideration is that the level of resources allocated is affordable, both now and in the future, to guard against the risk of a return to the type of inflated spending, followed by severe consolidation that was required subsequently. The MYER provides a summary of the rationale and methodology behind the Spending Review.

Budget 2017 provided for a Spending Review of current expenditure which was intended to assist in preparations for Budget 2018 both in the consideration of existing expenditure policy and the consideration of new policy proposals thus improving efficiency and effectiveness of public spending. The Spending Review commenced in January 2017. In contrast to the Comprehensive Reviews of Expenditure undertaken in 2011 and 2014, this year's Review is the first round of a three-year cycle that will take place annually up to 2019. The totality of day-to-day Departmental expenditure will be examined over this three-year Review cycle with the findings and analysis reported in a suite of published Spending Review papers. The PBO highlight the importance of a sound evidence base to support the value for money of these policy changes in budgetary changes.[27]

The Public Spending Code (PSC) was introduced in 2012 and applies both to the general government sector and to semi-state commercial enterprises and requires all major projects to be subject to economic analysis[28]. A review of the

27 The Expenditure Report 2018 notes that in the absence of achieving greater efficiency in Government expenditure being sought, the increasing annual costs of demographics [i.e. a larger population in the post-retirement cohorts] will diminish the available fiscal space and adversely impact on the deficit position." This underlines the importance of the Spending Review. For more see Parliamentary Budget Office, Post-Budget 2018 Commentary for the Committee on Budgetary Oversight, October 2017.

28 The standard appraisal steps laid down in the PSC include analysis of options using several methods, which vary with project scale but make CBA compulsory for projects with a total capital value exceeding €20 million. For those projects where it is not feasible to monetize benefits, CEA is allowable. The PSC also requires the CBA to be rerun during planning using detailed design cost estimates and tender prices. For projects below the €20 million threshold, qualitative appraisal techniques are employed.

PSC will be completed by the end of 2017 to streamline the presentation and procedures, and to refine the methodologies. The review of the PSC is an opportunity for updating appraisal methodologies and parameters, as well as ensuring their consistency.

Recommendation: Publish the review of the Public Spending Code. Use the Review to harmonise and update appraisal methodologies to make the Code more accessible to users and to incorporate complementary guidance.

Responsibility: Department of Public Expenditure and Reform

The number of public sector employees increased by 2.7 per cent a year from 2000 to 2008 and then decreased by 10 per cent from 2008-2013. It has steadily increased since then in most public-sector areas (by 1.9% per annum over the period 2014-2016). The gross public service pay bill net of Pension Related Deductions had decreased by 9 per cent from €16.6 billion in 2007 to €15.6 billion in 2016[29]. Budget 2018 has set out proposed increases in staff numbers in specific sectors based on both policy changes and demographics. It acknowledges that since the end of the moratorium, public service numbers have grown by more than 3 per cent per year on average, equating to an additional 8,000 FTEs per year and an additional €1.8 billion in pay expenditure between 2014 and 2017. This means that at the end of 2017 overall public sector employee numbers will be approaching peak levels[30].

The exchequer pay bill is expected to increase sharply over the next few years. If the rate of increase in staff numbers continues to be in the region of 2 per cent per annum, and pay increases are implemented as set out in the public service agreements, the overall pay bill could increase by 4-6 per cent per annum over the period 2018 to 2020. The Gross Exchequer Pay Bill is expected to rise by 5.6 per cent in 2018 or €650 million to €1 billion per annum. Should this upward trend in public sector recruitment continue it will inevitably present challenges to the Exchequer and the Council's view is that the method for sustainably financing further increases in public sector staff numbers, pay and pensions needs to be clearly outlined.

29 Department of Public Expenditure and Reform, Expenditure Report 2018, October 2018
30 Ibid

Theme 1: Chapter 2-Delivering Productivity Enhancing Infrastructure

Introduction

The quality of Ireland's economic infrastructure and related networks have a strong bearing on the competitiveness of indigenous enterprises and as a driver of inward investment. Public investment is essential to maintain and expand Ireland's capital stock; it is also a significant driver of long term productivity growth and plays a crucial role in driving competitiveness – after all, the gains from public investment accrue not just to those undertaking the investment, but to a wide range of people and enterprises. There was a significant reduction in public capital expenditure over the course of the recession from approximately €9 billion in 2008 to €3.4 billion in 2013, although weaker demand for infrastructural services (e.g. reduced road traffic, declines in energy demand), partially mitigated the impact of this reduction. As the economy returned to growth, and the public finances recovered, the level of capital expenditure is increasing. In terms of the impact of infrastructure investment, a range of international benchmarks, mostly qualitative in nature is available comparing the stock and quality of infrastructure in Ireland with our competitors. Ireland's diminished investment is evident in declining and low scores in relation to the perception of overall infrastructure quality. Reflecting a period of sustained capital investment, there was a strong improvement in perceptions up until 2010. Ireland's score fell over the five years to 2016.

The Capital Plan 'Building on Recovery: Infrastructure and Capital Investment 2016-2021' committed total state-backed capital investment of €42 billion. An additional €5 billion was allocated in the 2016 Summer Economic Statement. The 2017 Summer Economic Statement committed to increasing capital investment by an additional €500 million in each of the years 2019-2021 to further develop our economic and social infrastructure so that we can better meet the needs of our people as our economy, and society grows. Absolute levels of Irish investment are recovering. Over the medium term, Budget 2018 commits capital expenditure in 2021 to being double the 2015 level.

Boosting investment would help address competitiveness bottlenecks, and would increase potential growth in the medium term, while also increasing aggregate demand in the short term. Investment can also contribute towards unlocking the potential of the regions to grow.

Ireland's likely demographic profile also necessitates an increase in investment[31]. Based on CSO projections, Ireland's population is expected to increase from 4.57 million in 2011 to between 4.85 and 5.31 million by 2026, and to between 5.0 and 6.7 million by 2046. Additional infrastructure will be essential to meet the demand generated by this growing population. Developing our infrastructure base, while complying with the EU's fiscal rules, is a fundamental challenge to enhancing competitiveness relative to countries such as the UK.

Gross fixed capital formation which includes spending on land public infrastructure investment raises output in the short term by boosting demand and in the long term by raising the economy's productive capacity. The IMF estimates an increase of 1 percentage point of GDP in investment spending can increase output by about 0.4 per cent in the same year and by 1.5 per cent four years after the increase in investment. The IMF projects that Ireland will have a public spending-to-GDP ratio of 25.8 per cent in 2021 compared to 46.6 per cent in the Euro area and even 36 per cent in the 'low-spending' United States. Such a low level of spending will have consequences for the future provision and quality of public services and infrastructure. Because investment projects tend to be large-scale and costly, these investments can have a long lead-in time efficiency and effectiveness in terms of project selection and appraisal is essential. From a

31 The Irish Government Economic and Evaluation Service forecasted additional costs over the next decade due to increased demands for expenditure in relation to health, education and social protection. The annual increased costs forecast is €440m, €428m and €435m in 2018, 2019 and 2020 respectively, i.e. a cumulative increase of €1.3 billion over the next three years. For more see IGEES, Budgetary Impact of Changing demographics 2017-2027, September 2016.

policy perspective, effective planning, delivery and financing is critical to reap the dividends from investment in the longer term.

Ireland at present has a somewhat fragmented institutional framework when it comes to urban policy and infrastructure planning. The National Planning Framework, in conjunction with the new Capital Investment Plan can build on the Regional Action Plans for Jobs to provide an effective forward planning framework for Ireland over the longer term. It needs to explicitly set out an urban and regional investment policy for Ireland with progressive urban design and place-making investment priorities to facilitate both business and lifestyle opportunities. Rolling capital investment strategies will be required to implement the NPF and this aspect of the Framework will be a crucial implementation mechanism. The new NPF should provide the context for mandatory rigorous ex ante cost/benefit analysis of the delivery of additional publicly-funded infrastructure, mindful of the wider public good, and agreed regional development objectives.

Policy Challenges and Recommendations

National Planning Framework (Ireland 2040)

Population growth, density and settlement patterns are important considerations for infrastructure networks and service delivery costs, particularly in areas such as health, education and housing. Urban areas are increasingly becoming the driving forces of national economies, and are increasingly the preferred destinations for firms to locate their facilities. The Council has previously highlighted the importance of our cities for driving competitiveness, and this analysis remains just as relevant today.

There is a strong interdependency between planning, development and creation of an attractive environment, enterprise growth and talent attraction. The development of acceptable models of higher density housing choice is also dependent on ensuring the 'liveability' of urban areas, which extends to amenities and services. Such place-making factors are also important for a vibrant and competitive tourism sector. Residential, commercial and infrastructural development must be coordinated and complementary. Coherence and coordination between all bodies with responsibilities in this broad area is essential to ensure efficient and timely delivery of infrastructure at regional level.

Over the past twenty years, the trend in Ireland has been that employment has concentrated in and around cities and larger towns, whilst the overall pattern of settlement has become more dispersed over wider hinterlands. As a result, more people are travelling longer distances by car, resulting in traffic congestion and demands for the provision of local employment, infrastructure and services that are increasingly difficult to satisfy. Indeed, the fiscal realities and competing demands for finite resources necessitate a rigorous process of prioritisation and sequencing of public expenditure to position Ireland to take advantage of growth opportunities. Continuation of current trends into the medium-long term would have significant implications for national competitiveness.

The Council welcomes the publication of Ireland 2040, the Draft National Planning Framework (NPF) for public consultation. Ireland 2040, once adopted, will be a Framework that will be delivered in line with the policies, programmes and day to day activities of government departments and agencies, state bodies, the regional assemblies, local authorities, and infrastructure providers, working in conjunction with communities, civic society, the private sector and neighbouring administrations.

Both the consultation draft of the NPF and the 2015 Planning Policy Statement set out a range of principles for planning authorities, other public bodies and those that engage with the planning process. It also outlines a range of priorities for the enhancement of the planning system (e.g. the establishment of the Office of the Planning Regulator to improve oversight of the policy making and service delivery aspects of the planning system and roll-out of expanded online planning services).

The NPF must also be viewed against the backdrop of the significant streamlining of local and regional government structures which has already occurred – 88 planning authorities have been reduced to 31; 10 regional bodies have been reduced to 3 regional assemblies.

The NPF, in seeking to influence more sustainable patterns of settlement and employment and related infrastructure over the medium-long term, has the potential to help Ireland meet a range of efficiency, emissions and renewables targets. Implementation of the NPF, therefore, is fundamentally linked to the climate change agenda. It must also be viewed in the context of ongoing reviews of Ireland's approaches to overall co-ordination and strategic appraisal of capital investment proposals such as in the recent IMF PIMA exercise, which, inter alia, concluded that while Ireland has a very highly developed set of sectoral plans, mechanisms should be put in place to co-ordinate these plans, including in a spatial context, now helpfully shaped by the NPF. The preparation and finalisation of Ireland 2040 is therefore a very significant step, reflecting a welcome start in planning for the long-term after a decade of turning around our previous economic crash.

Once in place, it will be very important that the policies and proposals contained within the NPF are aligned with and supported by new and improved policy co-ordination, national investment and oversight arrangements right across all levels of government. Such arrangements should include:

- Measures to ensure horizontal alignment between the NPF and sectoral policies of relevant government departments and agencies, particularly so in areas such as housing, infrastructure, economic development, education and community and rural development;
- Mechanisms to ensure vertical alignment with national level capital spending appraisal and approval processes such as in the forthcoming National Investment Plan; and
- Further development of our planning and local government processes to ensure that metropolitan and strategic urban development issues are properly focused on and addressed.

The forthcoming National Investment Plan (see below) will represent a key opportunity to demonstrate an effective alignment in territorial planning and capital investment terms and to encourage a joined-up approach across sectoral budget lines. The Council endorses the National Planning Framework's outline proposals for a "Smart Growth" investment measure that would incentivise national and local arms of Government to work together in implementing Ireland 2040 and especially as regards measures to consolidate and regenerate key parts of our urban fabric in cities and towns.

Recommendation: Adopt the National Planning Framework and prioritise the recommendations and actions arising. Devise a time bound plan for implementation and set out how the Framework will be progressed, monitored and evaluated.

Responsibility: Department of Housing, Planning & Local Government, Department of Public Expenditure and Reform, All relevant Government Departments

It is important that the NPF differ from its predecessor, the National Spatial Strategy (NSS), in that it (as planned) will have legislative backing and be placed on a statutory footing. Implementation of the NPF through the planning system will be overseen by the new Office of the Planning Regulator. The Regulator will be responsible for monitoring implementation of Ireland 2040. This new Office will have an independent monitoring role, advising the Minister, Government and the Oireachtas on the implementation of the Framework under the statutory planning process through Regional Spatial and Economic Strategies, local authority statutory planning processes and the decisions of An Bord Pleanala utilising a new set of indicators to be developed to assist effective monitoring.

Recommendation: Establish the independent Office of the Planning Regulator staffed with the requisite expertise to deliver upon its mandate to monitor the implementation of Ireland 2040.

Responsibility: Government

Recommendation: Publish progress reports monitoring the National Planning Framework delivery against objectives.

Responsibility: Department of Housing, Planning & Local Government, Department of Transport, Tourism and Sport, Regional Assemblies, Local Authorities

The NPF requires further support and implementation at regional level. The three Regional Assemblies have already been tasked to prepare and adopt their Regional Spatial and Economic Strategies (RSES[32]) subsequent to, and in accordance with, the Ireland 2040 Framework and by end 2018, which in turn will co-ordinate local authority planning, community and economic development functions. Once the regional strategies are adopted, each regional assembly will be required to put in place effective implementation and monitoring arrangements including through the Office of the Planning Regulator.

Recommendation: Complete the preparation of the Regional Spatial and Economic Strategies in line with Ireland 2040 by the end of 2018.

Responsibility: Local authorities, Department of Housing, Planning and Local Government

State Lands

A review of the overall management of the development potential of State lands to support implementation of Ireland 2040 will be undertaken. This should consider the merits of developing new structures, such as a national land development agency to work with local authorities, public bodies and the business community and harnessing strategically located public lands, particularly in our city and town cores as catalysts to stimulate regeneration and wider investment[33].

To support and aid the implementation of Ireland 2040 at Government, departmental, local authority and state agency levels, an examination of the potential to more effectively and centrally manage the overall portfolio of state owned and/or influenced lands in the five main cities and potentially other major urban areas will be undertaken as a priority. More effective and central management would offer major benefits in enabling effective portfolio based management of the overall publicly owned lands in and around our main cities and other urban areas both working with local authorities, local communities and the private sector.

Recommendation: Advance the review of the management of strategically located state and publicly controlled lands by mid-2018. Recommend an optimum model for their management and strategic development in support of Ireland 2040.

Responsibility: Department of Public Expenditure and Reform, Department of Finance, Department of Housing, Planning & Local Government

32 The RSESs must accord with the National Planning Framework and in turn, local authority development plans which address further detailed local matters, such as the zoning of land, must be in accordance with the RSESs.

33 This aspect of the Ireland 2040 proposals builds on preparatory work to better map the portfolio of major publicly owned sites in and around the main cities and urban areas in place under the Rebuilding Ireland process and which is publicly available on www.rebuildingireland.ie.

Capital Investment

Review of the Capital Plan

The Capital Plan Building on Recovery: Infrastructure and Capital Investment 2016-2021 was published in September 2015. The framework sets out the Government's commitment to an investment plan of some €42 billion, of which €27 billion, was from direct Exchequer investment with additional investment of €15 billion from the wider State Owned Enterprise (SOE) sector, non-commercial State bodies and PPPs. However, the context for public capital investment has changed dramatically in the relatively short period since the Capital Plan - Building on Recovery was published in 2015. The significant progress made in restoring the public finances and the transformation in economic performance has enabled Government to supplement the €20.9 billion already committed to public investment between 2018 and 2021 by a further €6 billion.

The Council welcomed the early Mid-Term Review of the Capital Plan, with immediate effect following Budget 2017, to take stock of progress and to reassess the scope and scale of investment, taking economic growth and fiscal commitments into account. The Council considered it vitally important that the priorities identified in the Mid-Term Review are informed by the objectives set out in the National Planning Framework. The Review assesses how enhancing public capital infrastructure can strengthen the economy's resilience to risks related to Brexit, climate change and overheating. It reinforces the Government commitment to public capital investment that:

- Focuses on infrastructural priorities which are properly appraised;
- Yields a high economic and social rate of return; and,
- Makes best use of construction sector resources given the level of private investment demand.

The Council also welcomes the Review's commitment to not focussing solely on expenditure on new infrastructure, and that issues such as steady state funding for our existing infrastructure stock (e.g. local and regional roads, public transport, schools, Institutes of Technology, hospitals, etc.) and demand management are incorporated into capital plans, given their potential for higher returns. In this regard, it is essential to ensure that public infrastructure continues to be able to support the provision of the public service it is intended for, rather than simply investing in new projects. The Council also welcomes the evidence base which formed the basis of the Mid-Term Review. The Irish Government Economic and Evaluation Service (IGEES) in DPER completed a comprehensive report which examined in detail the available data and information from key sectors to assist in informing the priority requirements for increased investment across key sectors of the economy.

In light of the Review, there is now a total envelope of additional Exchequer gross voted capital resources amounting to €4.1 billion to be allocated for public investment over the remaining four years of the Capital Plan 2018-2021. On a positive note using GNI*, which adjusts for the distortion of Ireland's recorded statistical GNP, public investment is projected to meet the internationally recommended 3 per cent baseline level from 2019 onwards. This confirms that the increase in public investment now planned bridges the perceived shortfall in public capital investment relative to the size of the economy indicated by international comparisons.

Strategic Infrastructure Delivery

Identifying and prioritising capital investment is a complex process involving short, medium and long term considerations. In ascertaining the scale and configuration of infrastructural requirements, a wide range of factors such as the existing level and composition of capital stock; the social and economic returns from investment; demographic and economic growth projections and the scale of the deficit need to be assessed. The scale of public investment in infrastructure is also reliant on several critical factors, including the broader context of the total level of investment in the economy, the condition of the public finances, borrowing costs and Ireland's commitments under the Stability and Growth pact.

The impact of investment depends on its efficiency. Assessing the efficiency of investment requires methodologies to identify projects and programmes with the most favourable cost-benefit ratios. In terms of infrastructure planning, Ireland has a somewhat fragmented institutional framework. IMF research comparing the value of public capital (input) and measures of infrastructure coverage and quality (output) suggests improvements in public investment management (PIM) could significantly enhance the efficiency and productivity of public investment[34]. Following the publication of the Mid-Term Review of the Capital Plan there is scope to review how best to facilitate the efficient roll-out of essential infrastructures by ensuring that a more coherent and comprehensive approach across government departments, agencies and local authorities is adopted. At present responsibility for planning, delivery and maintaining infrastructure is shared between government departments, regulators, local and regional authorities, state agencies and state-owned providers of infrastructure. Public-Private Partnerships (PPP) also continue to play a role in infrastructure planning, investment, and delivery, as do private sector firms (e.g. in the waste and telecoms sectors). Deficiencies in co-ordination and fragmented planning can contribute to cost overruns and delays, duplication of resources and weaken the ability to prioritise projects and locations for capital investment. Ensuring an effective, integrated and coherent approach to State led infrastructure planning and delivery could facilitate improved efficiency and enhance the effectiveness of capital investment at minimum cost.

Recommendation: Review how other advanced economies coordinate and deliver capital investment. Identify best practice in terms of the institutional framework for managing capital infrastructure investment.

Responsibility: Department of Public Expenditure and Reform, Irish Government Economic and Evaluation Service

The National Investment Plan will be informed by the Public Investment Management Assessment (PIMA) undertaken by the IMF in July 2017 which emphasises the need for rigorous project appraisal. The Review of the Capital Plan outlined that the IMF's Public Investment Management Assessment of Ireland suggests that there is an opportunity to achieve greater value for money from our public capital investment. The PIMA analysis has shown that there is a lack of horizontal coordination in the infrastructure delivery in Ireland. The NPF and the 10-year National Investment Plan should be the conduit of long-term planning in Ireland.

National Investment Plan

The NPF will be published alongside a 10-year National Investment Plan, covering the period from 2018-27, thereby ensuring that implementation of the Framework will be fully supported by the Government's investment strategy for public capital investment and investment by the State sector in general. The 10-year National Investment Plan will also include proposals for structural reform of public investment in terms of the planning, selection and delivery of capital projects. The 10-year National Investment Plan will be integrated with the new National Planning Framework. Developing a long-term approach to capital investment, such as this, should allow for improved project planning by Departments and agencies. It will also provide clarity, confidence, stability and certainty for the construction sector, thereby allowing the sector to plan for providing the capacity and capability required over the coming years. This plan will assess and report on the framework required to underpin a longer term 10-year analysis of Ireland's infrastructure planning needs into the future. It takes full account of the high-level framework for future development and investment in Ireland contained in the new National Planning Framework - Ireland 2040 to be published by the Department of Housing, Planning & Local Government. The National Investment Plan will also play a central role, alongside the ongoing development of the National Climate Mitigation and Adaption Plans, in transitioning to a low carbon economy.

34 IMF, Make Public Investment More Efficient, Staff Working Paper, 2015

This strategic investment plan ensures alignment across government and establishes firm links between the Planning Framework and long-term capital investment. The National Investment Plan builds on the review of the existing Capital Plan reflecting sectoral gaps identified. Considering the spatial development outcomes sought by Ireland 2040, the new National Investment Plan aims to:

- Deliver a stable profile of public investment yielding greater certainty to the infrastructure delivery and investment sector;
- Strengthen the economy's resilience in terms of key risks, and in particular, Brexit;
- Address existing critical infrastructure deficits;
- Invest to maintain the quality and performance of existing public infrastructure;
- Support the achievement of critical climate change goals including the recently published National Climate Mitigation Plan; and,
- Secure more effective regional development on an on-going basis.

The Council supports these objectives and considers it essential that the National Investment Plan will also, in support of Ireland 2040, seek to improve the coordination and governance of public investment by initiating processes that:

- Update and reduce the number of standalone sectoral plans;
- Establish a central database of proposed projects that have been appraised by sectoral Departments, from which funded projects can be selected by Government;
- Implement systems in each sector to track asset quality and identify maintenance needs; and,
- More explicitly align the investment plans of State Owned Enterprises with Government objectives.

Recommendation: Prioritise the commitments and requirements in the National Investment Plan. Ensure the Plan and Ireland 2040 mutually reinforce each other. Put in place measures such as Smart Growth Initiatives to sponsor and encourage the implementation of Ireland 2040 outcomes in specific locations.

Responsibility: Department of Public Expenditure and Reform, Department of Housing Planning and Local Government, all relevant Departments

The Government has committed to a long-term climate policy based on the adoption of a series of national plans over the period to 2050, informed by UN and EU policy. This is being progressed primarily through the National Mitigation Plan (see theme 1: Chapter 3). The National Climate Policy Position establishes the national objective of achieving transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050. This objective will shape investment choices over the coming decades. Therefore, developing coherent linkages between the NPF, the National Investment Plan and the National Mitigation Plan is essential.

Recommendation: Ensure that coherent and clear linkages exist between the National Investment Plan, the National Planning Framework and the National Mitigation Plan.

Responsibility: Department of Public Expenditure and Reform, Department of Housing, Planning and Local Government, Department of Communications, Climate Action and Environment

The Public Investment Management Assessment of Ireland found shortcomings in the effectiveness of past investment spending with sizeable efficiency gaps compared with other advanced countries. Ireland manages its

public infrastructure relatively well but again falls short when compared to advanced G20 countries. Overall, the PIMA review highlights the fact there are opportunities to achieve greater value for money in Ireland's public capital investment.

Recommendation Implement the recommendations arising from the International Monetary Fund's Public Investment Management Assessment t pertaining to budgetary decision making and investment project selection, monitoring, appraisal and evaluation to achieve greater value for money in public capital investment.

Responsibility: Department of Public Expenditure and Reform, Department of Finance, Department of Transport, Tourism and Sport, Department of Housing, Planning and Local Government, Irish Government Economic and Evaluation Service, State Agencies

Leveraging Non-Exchequer Investment Instruments

The State has a critically important role to play in encouraging or incentivising private-service providers to improve infrastructure capacity and to deliver more cost-effective, high quality services to business users. There is also a vital private sector dimension to consider as many economic infrastructure areas receive limited or no Exchequer funding – these include energy, telecoms, waste and air and sea ports infrastructure. Policymakers need to ensure that the right policy framework is put in place to stimulate investor confidence in long-term projects (e.g. regulatory and planning certainty), and to ensure the supply chain has the certainty and tools to deliver effectively.

Ireland must also ensure it makes use of European funding for infrastructure investment, particularly the European Fund for Strategic Investments (EFSI). The EFSI is an initiative launched jointly by the EIB Group (comprising the European Investment Bank and European Investment Fund) and the European Commission to help overcome the current investment gap in the EU by mobilising private financing for strategic investments. There is potential to receive EFSI funding in areas such as: broadband; transport and energy infrastructure; and support for SMEs/commercial enterprises. It is vital therefore that the private and public sector in Ireland maximises the drawdown of funding which may be available under the EFSI.

Over the last decade, the EIB has provided more than €6.8 billion for long-term investment across Ireland, including education, energy, transport, social housing healthcare, agriculture and water projects, as well as investment by small business and corporate research and development. Continuing this close cooperation between the Irish authorities and the EIB, and seeking to identify opportunities for new and innovative financing solutions and products, offers the potential to produce significant results. This cooperation can contribute towards lower financing costs and access to the EIB's technical expertise in project design and delivery, to the benefit of Irish infrastructure projects and in support of SMEs and the agriculture sector.

The Council welcomes the Mid-Term Review's commitment to further exploring EIB-supported options, within the fiscal rules, and not requiring increased funding resources from the Exchequer, to increase public investment in infrastructure and secure higher levels of capital expenditure in priority areas. Budget 2018 committed to increasing the availability of debt funding to developers willing to build viable residential development projects and thus establish of a new dedicated fund entitled Home Building Finance Ireland (HBFI). Up to €750 million of Irish Strategic Investment Fund (ISIF) funds will be allocated to HBFI to provide funding on market terms to viable residential development projects whose owners are having trouble in obtaining funding. The commitment to increase spending on housing infrastructure and the establishment of HBFI should stimulate some additional supply. The Council views this as a positive step in leveraging non-exchequer investment instruments in the residential property market.

The outcome of the current review of the proposed future role of PPPs will be included as part of the National Investment Plan. In the past, Ireland has successfully utilised public-private partnership (PPP) approaches to fund

infrastructure delivery, and such models will continue to be an important source of funding. While the Infrastructure and Capital Investment Plan announced the development of a new third phase of the Government's PPP plan (to include about €500 million of PPP projects in addition to those already in existence), there may be scope to further expand private investment. It is important, however, to ensure that approaches such as PPPs are structured to maximise value for money for the Exchequer in terms of return on investment and strategic infrastructure asset ownership, in both the short term and over the longer term.

The further utilisation of PPP option is currently being considered as part of the ongoing review of PPPs. The Review conducted by the Department of Public Expenditure and Reform in parallel with the review of the Capital Plan, seeks to help inform the new 10-year long-term capital plan to be produced alongside the National Planning Framework later in 2017. This review will also provide the opportunity to assess the potential role of user charges in supporting the delivery of public capital infrastructure through PPPs.

Recommendation: Continue to develop and source non-exchequer investment to support the delivery of economic infrastructure. Options include (i) Public-private partnerships; (ii) funding channels such as the European Strategic Investment Fund; and (iii) special purpose vehicles.

Responsibility: Department of Public Expenditure and Reform, European Investment Bank and various public and private sector bodies

Recommendation: Avail of the provisions within the expenditure benchmark pillar of the EU fiscal rules to fund capital investment. Use of these provisions should be in a manner compatible with and in adherence to the rules of the Stability and Growth Pact.

Responsibility: Department of Finance

Recommendation: Prioritise the recommendations and actions arising from the review of Public Private Partnerships. Devise a time bound plan for implementation.

Responsibility: Department of Public Expenditure and Reform

Physical Capital Infrastructure Priorities

Land Transport

An efficient and integrated national transport system with adequate capacity and levels of service is vital to move goods and people efficiently, safely, and in environmentally sustainable ways. In the years preceding the crisis significant investment in Ireland's road network was undertaken: over the period 2007-2010, Ireland's motorway network increased from 269km to 900km and has remained at this level since. Because of the deterioration in Ireland's public finances, the Exchequer funding available for roads expenditure has declined significantly. Continued, focused investment in transport is required to maintain and improve Ireland's internal connectivity, social progress and enable the effective and efficient movement of people and goods in and out of the country.

While remaining a little below pre-recessionary levels, CSO data shows the numbers of private and commercial vehicles on Irish roads and kilometres travelled continues to grow on an annual basis and targeted, prioritised and cost

effective investment is now urgently required at national and local authority level[35] to minimise congestion and associated costs in the short to medium term, and to ensure that Ireland's road infrastructure provides a safe and reliable system for the movement of people and goods.

The land transport network is particularly important in terms of freight traffic to and from Ireland's airports and ports. CSO data shows that in 2016, the quantity of goods transported by road increased by 20 per cent to 141.7 million tonnes. The volume of goods handled by Irish ports increased in 2016 compared to the previous year. Improving connectivity and access to the main air and sea ports is critical for enterprise cost competitiveness.

The capital plan provides €6 billion for investment in the roads network in the period to 2022, with €4.4 billion earmarked for the maintenance and strengthening of the existing extensive network throughout the country and €1.6 billion for new projects. Despite this welcome uplift in investment it has been estimated that the planned level of expenditure will not be sufficient to maintain the existing land transport network. It is crucial that this allocation is reviewed as part of the Mid-Term Review of the Capital Plan.

The 2015 Strategic Investment Framework for Land Transport confirms that maintenance and renewal of Ireland's land transport network will be the main priority in the coming years. Accordingly, the bulk of the capital budget for transport is reserved for this purpose. However, several bottlenecks in the road network at regional and inter urban levels should be addressed to capture the full benefits of the significant investment in road and other infrastructures already made.

Recommendation: Continue to invest in ongoing maintenance of the motorway and national road network to facilitate access to major urban areas, and to optimise the substantial investment already made while reducing the need for significant remedial work in the future. Examine the adequacy of the allocation for road infrastructure (in terms of the balance between expenditure on maintenance and upgrading, and new works) in the context of the National Investment Plan.

Responsibility: Department of Transport, Tourism and Sport, Department of Public Expenditure and Reform

The Council considers planned investment in the road network should be cost-efficient, address safety concerns, relieve existing bottlenecks and congestion and compliment public transport. Investment priorities should be selected in line with the National Planning Framework. Infrastructure which supports the productive economy and is informed by enterprise needs should be prioritised. Improving road access between and around the main regional urban centres in the near term - those identified by the Enterprise Agencies (Enterprise Ireland and IDA Ireland) - N21 Limerick-Tralee upgrade, sections of the N25 Cork-Waterford road and completing the Galway city Outer Bypass to enhance access in and around the city and the hinterland remain priorities. The Council welcomes the recent announcement that construction of an 80-kilometer motorway between Cork and Limerick will begin in 2021.

Recommendation: Progress without delay the four identified priority projects in the Capital Plan (the M7 Naas-Newbridge widening project, the Sallins Bypass, the N59 Moycullen bypass outside Galway, and the Grange Castle Business Park works in west Dublin). Prioritise those projects referenced as essential by the Development Agencies (N21 Limerick-Tralee upgrade, sections of the N25 Cork-Waterford road and completing the Galway city Outer Bypass).

Responsibility: Department of Transport, Tourism and Sport, Transport Infrastructure Ireland

35 The improvement and maintenance of regional and local roads in its area is a statutory function of local authorities in accordance with the provisions of Section 13 of the Roads Act, 1993. Works on such roads are a matter for the relevant local authority to be funded from its own resources supplemented by State road grants. The planning, design and implementation of individual road projects is a matter for Transport Infrastructure Ireland.

Given Ireland's dispersed population the need for a private passenger car fleet and a well maintained, efficient and safe road network is clear. CSO data shows the strong prevalence of car usage as the primary mode of transport in Ireland[36]. At the same time, promoting alternative reliable and affordable public travel modes, particularly public transport in urban areas and between major towns and cities and their hinterlands, is essential in terms of reducing congestion, cost savings and meeting our environmental commitments.

High quality public transport, particularly in urban areas, facilitates labour market flexibility, productivity and enhances quality of life. To promote greater use of public transport Ireland needs high quality, frequent, reliable and competitively priced access to, from and within the main urban centres. This should be delivered via competitive or regulated markets. The planned allocation of capital funding for public transport under the Capital Plan is €3.6 billion and further allocation was conformed in the 2018 estimates for the period to 2021. The Department of Transport, Tourism and Sport estimates that the funding allocations for public transport under the Capital Plan will reach "steady state" funding levels by 2020.

Profound changes are required to the public transport system if we are to meet the significance increase in travel demand, enable growth and change while also contributing to our national policy vision of a low carbon economy. The National Planning Framework's National Strategic Outcomes provides a clear framework for the articulation of key sectoral infrastructural priorities for the ten-year period to 2028. In the context of public transport, it is necessary to prioritise investment to ensure that Ireland:

- Protects investment already made in our public transport network through providing an appropriate level of maintenance funding;
- Enhances the capacity and quality of public transport in the Greater Dublin Area and Regions; and,
- Maximises the contribution of public transport to our national development generally through, for example, securing an early transition to zero/low emission vehicles in the private and public fleets.

Regarding public transport, investment must in the first instance meet existing and emerging demand constraints particularly enhancing urban mobility in Dublin and other city regions. As set out in this year's *Scorecard,* the relative size of Dublin is an important consideration from a planning and development perspective, with 28 per cent of the total population resident in Dublin. The publication of the Greater Dublin Area Transport Strategy 2016 – 2035 is a very positive development in terms of transport infrastructure planning and the focus now must be on well planned and executed implementation. The core elements of the Greater Dublin Area Transport Strategy comprise a wide range of actions regarding demand management measures and specific actions in terms of developing the bus network, light and heavy rail, road, cycling and park and ride. Providing adequate, frequent and competitively priced services, particularly at peak times, to concentrations of employment is key. Completion of LUAS Cross City, increasing LUAS capacity, park and ride provision, and designing a revamp of all aspects of the bus system; from ticketing technology to road and fares infrastructure and to vehicle emissions are welcome. These initiatives underway should reduce bottlenecks and commuting times. It is vital that design and planning work on vital new projects such as Metro North and the DART to Balbriggan progress on schedule. The Council welcomes the recent announcement that the construction of Metro North will begin in 2021 and be completed by 2027. Furthermore, the South West Regional Action Plan for Jobs 2015-2017 commits both Local Authorities in Cork to engaging with the NTA to upgrade public transport links in the city. The Draft National Planning Framework (NPF) commits to reviewing the current non-statutory role of the National Transport Authority in relation to the regional cities. The Council views this as a positive development in relation to delivering regional infrastructure and the strategic outcomes of the NPF.

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36 In 2014, 75 per cent of all journeys were by car. CSO data also shows that those living in Dublin were significantly less likely to drive than those in the rest of the country. Journeys by public transport for Dubliners (12.5%) were more than four times greater than in the rest of the country.

Recommendation: Identify key priority actions and timeframes for delivery under the National Transport Authority's Transport Strategy and Implementation Plan for the Greater Dublin Area 2016 – 2035.

Responsibility: National Transport Authority

Recommendation: Ensure that the public transport component of the forthcoming 10-year National Investment Plan, and the development of the new National Planning Framework prioritises investment in a manner that is evidence-based and responds to strategic challenges and opportunities for all regions.

Responsibility: Department of Transport, Tourism and Sport, National Transport Authority

Energy

Energy competitiveness is of critical importance for enterprise development and can directly affect the ability of enterprise to retain and grow output and employment, particularly in energy intensive sectors. A reliable and competitively priced supply of energy is vital for business and its ability to compete successfully in international markets. From a competitiveness perspective, the primary challenge facing Ireland is to reduce energy costs while delivering on our security of supply and environmental sustainability objectives. The energy implications for Ireland of Brexit could be significant given our dependence on energy imports from the UK. While maintaining the trade in secure supplies of energy with the UK must remain a priority, Brexit means diversifying energy sources and supplies is critical to ensure security of supply. Ireland continues to have a very high dependence on imported fossil fuels, particularly oil on which approximately 48 per cent of our energy consumption is based.

As a small peripheral EU economy, with limited resources, factors outside of our control such as international oil prices exert a significant influence on energy prices. The energy implications for Ireland of Brexit could be significant given our dependence on energy imports from the UK, the source of 76 per cent of our oil imports. In terms of our electricity generation, 42.2 per cent is generated using natural gas[37], and 40 per cent of our gas is imported from the UK. The availability of competitively priced world-class energy infrastructure (including energy generation, supply, transmission, distribution, and interconnection) and related services is critical to support competitiveness.

The Council has consistently advocated that Ireland's energy policy should emphasise the importance of cost competitiveness alongside the other pillars of security of supply and sustainability. The publication of the Energy White Paper: Ireland's Transition to a Low Carbon Energy Future 2015-2030, addresses three core objectives– the 'three energy pillars' – of sustainability, security of supply and price competitiveness and it is vital that its recommendations are prioritised and progressed.

Recommendation: Develop a target led, time bound implementation plan around the priorities identified in the Energy White Paper.

Responsibility: Department of Communications, Climate Action and Environment

Electricity interconnection and reinforcement of internal lines are identified in EU policy as necessary to reinforce the single energy market. In this context, the integration of Ireland's electricity system into that of Northern Ireland, Great Britain and mainland Europe through enhanced interconnection can facilitate increased variable renewable generation on the Irish system, as well as increasing security of supply. This is backed up by the Energy White Paper, published in December 2015. One of the key requirements identified in the White Paper is the need for appropriate infrastructure, including energy networks and interconnection with other countries energy systems.

37 SEAI, Energy in Ireland 1990-2015, November 2016

The EU has agreed a non-binding 10 per cent interconnection target to be met by 2020, with a 15 per cent non-binding target for 2030. Ireland's level of interconnection currently sits at 6 per cent. Ireland has one electricity interconnector to Wales known as the East West Interconnector, and Northern Ireland has one interconnector to Scotland known as the Moyle Interconnector. The electricity systems of Ireland and Northern Ireland are joined by one electricity interconnector of scale. A second interconnector (the North- South 400kV Interconnector project) has planning consent in Ireland although this consent is currently under legal challenge. The interconnector is also currently in the planning process in Northern Ireland. In addition, the Greenlink interconnector from Ireland to Wales and the Celtic Interconnector from Ireland to France have both been approved as Projects of Common Interest in the latest PCI list. These are still at the early stages of project development and, if progressed will lay the foundations for further interconnection post-2020.

The Commission for Regulation of Utilities have commenced a process for the development of a regulatory policy for electricity interconnectors. This process began in August 2016 with a public consultation seeking initial comments on an interconnection information paper. Separately, the Department of Communications, Climate Action and Environment plans to further develop the wider national policy on interconnection to provide policy certainty for potential developers and to best serve the Irish public. This process will be informed by a consultancy report, the procurement of which will commence in November 2017.

The Council welcomes the planned North South Interconnector which received planning permission for the Irish section on 19 December 2016, although that consent is under legal challenge currently. The Northern section of the project is still subject to planning approval with a decision expected later this year. This project will provide a second interconnector of scale between the two jurisdictions, one that will increase efficiencies in the All-Island Single Electricity Market. Delays to the North-South electricity interconnector (which is not expected to be operational before 2021) are estimated to be costing consumers on the island of Ireland approximately €20 million per annum as a result of higher production costs and a reduced ability to share generation capacity across the island. Completion of the North-South Interconnector remains of critical importance[38].

Recommendation: Complete the construction of the north-south interconnector to bolster security of supply and reduce energy costs.

Responsibility: Eirgrid

Recommendation: Undertake economic and technical research on the merits of further interconnection for Ireland as outlined in the National Mitigation Plan.

Responsibility: Department of Communications, Climate Action and Environment

Telecommunications

The widespread provision of high speed broadband services is critically important to support regional economic growth and job creation. It is particularly important for many small and micro businesses located in the regions, and to support home-working. Enhancing Ireland's international and national connectivity is critically important to support the future needs of existing and new firms in ICT, digital media and other data intensive sectors across all regions. Ireland has improved its telecommunications infrastructure and broadband is now an integral resource for enterprise. The Council welcomes the commitment in the Programme for Partnership Government to deliver the NBP as a priority. It appreciates the need to comply with EU State Aid rules.

38 It will in particular support sustainability; the ESRI in 2014 estimated that the interconnector will facilitate a 2.6% reduction in carbon emissions

The Council appreciates the significant challenges (e.g. small and dispersed population) in delivering high speed broadband services in Ireland and acknowledges the substantial investment made by the private and public sector to date, which has significantly improved Ireland's broadband offering, particularly in urban centres. National and international connectivity has improved in recent years. Comreg[39] estimates that fixed broadband household penetration rate was 70.4 per cent. The corresponding broadband per capita penetration rate, including mobile broadband, was 36.5 per cent. Average fixed broadband speeds continue to increase. In Q1 2017 approximately 79.2per cent of all fixed broadband subscriptions were equal to or greater than 10Mbps up from 74.1 per cent in Q1 2016. Some 67 per cent of all fixed broadband subscriptions were equal to or greater than 30Mbps, up from 58.1 per cent in Q1 2016.

Continued investment by the commercial sector will be required to ensure that Ireland's connectivity continues to improve. The telecommunications sector has invested over €2 billion in recent years, in modernising networks including significant upgrades to 3G and 4G services. Fibre-to-the-home is currently being rolled out by both SIRO and eir and this is a welcome initiative in the market. In April 2017, eir signed an agreement with the Department of Communications, Climate Action and Environment committing them to following through on their commercial plans to provide new high speed broadband infrastructure to 500,000 premises in rural areas. As of Q2 2017 eir's roll-out is in line with the Commitment Agreement. However, prices for fixed broadband in Ireland are high relative to those levied in comparator countries. Comreg reports that business fixed broadband charges were 42 per cent higher in Ireland than in Denmark in Q1 of 2017. Ireland was the second most expensive country for fixed broadband charges of the six countries benchmarked. Access to high speed reliable telecommunications is still more concentrated and reliable in areas of high population density and its extension to other areas is badly needed. The Programme for Partnership Government committed to establishing a mobile phone and broadband Taskforce to consider immediate measures to address telecommunications deficits in rural Ireland. The Taskforce was established in July 2016 arising from a commitment in the Action Plan for Rural Development. The Task Force is working with individual Departments, local authorities, Comreg, State agencies, the telecoms industry and other key stakeholders and published a report in December 2016 which contained 40 actions to alleviate some of the telecommunications deficits across Ireland[40]. The Council had previously called for the identification of specific barriers to rolling out the NBP and therefore welcomes the Report[41]. To maintain momentum, an Implementation Group was established to drive progress on implementing the measures recommended by the Taskforce and is publishing quarterly progress reports.

Recommendation: Remove specific barriers identified in the Mobile Phone and Broadband Taskforce Report thereby alleviating telecommunications deficits in Ireland and assisting the rollout of the National Broadband Plan.

Responsibility: Department of Communications, Climate Action and Environment, Local Authorities, Comreg, State Agencies

The updated High Speed Broadband Map shows the areas targeted by commercial operators to provide high speed broadband services and the areas that will be included in the State Intervention Area. There has also been a sustained level of engagement between telecommunications operators and local authorities through the Broadband Officers appointed in each local authority as a single point of contact for local communities. The appointment of these officers has ensured a much greater degree of consistency in engagement with operators and clearing obstacles to

39 Comreg, Q1 Quarterly Key Data Report, June 2017

40 DCCAE, Report of the Mobile Phone and Broadband Taskforce, December 2016.

41 Some of the key measures among the 40 actions contained in the Taskforce Report included measures to streamline and prioritise planning procedures for telecoms infrastructure, a licensing regime to allow people to boost their home signals using repeaters, the build out of new ducting along the M7 / M8, measures to help stakeholders make informed choices in relation to their network provider and handsets, and general network improvements.

infrastructure. The significant commercial investment by mobile operators has resulted in improved services, However, further efforts are required to deliver the national broadband targets.

The National Broadband Plan (NBP) aims to deliver high speed broadband to every citizen and business in Ireland, i.e to achieve 100 per cent coverage across Ireland within 3 to 5 years of starting large scale roll out. This is being achieved through private investment by commercial telecommunications firms and through a State intervention in areas where commercial investment is not forthcoming. The formal procurement process for the State Intervention commenced in December 2015, and in July 2016 the Government chose the Commercial Stimulus Model (by which the private sector will finance, design, build, own and operate the network, with contractual obligations to the Department) as the optimum ownership model for the network that will be part-funded by the Exchequer under the procurement process. Under the National Broadband Plan, there is a requirement for the successful bidder(s) to rollout 60 per cent of the network by 2019 and 100 per cent by 2020, and that 85 per cent of premises in Ireland have access to high speed services by 2018.

The availability of high speed symmetric services (same upload and download speeds) throughout the country is required as a matter of urgency and is increasingly important for enterprise. The Council recommends, therefore, that the network built under the intervention strategy must be future proofed to effectively meet future increases in demand for significantly higher download speeds (in excess of 100 Mbps) and higher upload speeds from businesses, homeworkers and other residential users. The Council notes that the targets of rolling out a minimum of 30 Mbps broadband to homes and businesses, but that this is a minimum standard, rather than a ceiling[42].

Recommendation: Award the National Broadband Plan intervention to a contractor(s) and confirm the revised deployment schedule to ensure the timely rollout of the Plan. Ensure that the network is scalable and proofed to meet future demand for significantly higher download speeds (in excess of 100 Mbps) and higher upload speeds.

Responsibility: Department of Communications, Climate Action and Environment

Ports

Ireland's port and shipping services play an important role as enablers of economic growth. Irish ports are critical infrastructure for international trade, with a significant share of our international trade in goods moving by sea. As an island nation, Ireland depends on the quality and efficiency of its ports to a far greater extent than many of our trading partners.

The port companies operate as private limited companies and must fund their own development through their own resources, private partners, financing or EU funding as they do not receive Exchequer funding.

The Government published a National Ports Policy (NPP) in March 2013. Its core objective is to facilitate a competitive and effective market for maritime transport services. An efficient and effective competitive ports sector can foster broader job creation through general trade facilitation, the construction of capital infrastructure and promote opportunities in other areas such as offshore energy, cruise and marine leisure/recreation.

To maintain economic growth, the Draft NPF recognises that Ireland must be capable of delivering additional port capacity in a timely and predictable manner. National Ports Policy requires Tier 1 and Tier 2 ports of national significance, to lead the response in meeting Ireland's future port capacity requirements. There are major redevelopment projects taking place at our Tier 1 ports (Dublin, Cork and Shannon-Foynes) at present and the three

42 The NBP's predecessor, begun in 2009, delivered a basic download speed of 1.2 Mbps to 250,000 homes but was obsolete even before its completion. The European Commission have announced a new target of achieving internet connection speeds of 100 megabits per second (Mbps) for all homes, which is significantly faster than the 30 Mbps minimum laid down in the Government's National Broadband Plan (NBP). See European Commission, Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society, COM (2016) 587 final, September 2016

ports have been successful in securing EU funding in recent years towards the cost of these infrastructure improvements and developments. These developments will result in a greater concentration of traffic through these ports, with implications for shore-based and marine-based infrastructure.

Tier 1 ports are located within close proximity to Dublin, Cork and Limerick respectively and the role of these ports will be considered and addressed in tandem with long-term infrastructural requirements as part of the relevant Regional Spatial and Economic Strategy (RSES) and any concurrent or subsequent metropolitan area or city/county development plan processes.

Recommendation: Consider and address the strategic development requirements and capacity needs of Tier 1 and Tier 2 ports as part of the Regional Spatial and Economic Strategies (RSES).

Responsibility: Department of Transport, Tourism and Sport, Department of Housing, Planning and Local Government

Brexit may have a significant impact on the demands placed on Irish ports in the future. Ports continue to monitor developments to plan and respond to changing circumstances as they impact on the Port's operations. The Department of Transport, Tourism and Sport, has also initiated a study, in conjunction with the Irish Maritime Development Office (IMDO), into the use of the UK Landbridge by Irish importers and exporters. The purpose of this research is to establish the volume of traffic using the UK Landbridge at present, the likely consequences that Brexit will have on Landbridge usage and the various options that may be viable. It is expected that this piece of research will be completed in Q1 of 2018. In keeping with NPP 2013, the Department in conjunction with the Irish Maritime Development Office (IMDO) will be commencing a port capacity study in Q1 2018 which also considers the implications of Brexit. The EU has recently published a ports regulation EU 2017/352 aiming to make European ports more competitive and increase financial transparency. The regulation establishes a framework for the provision of port services and common rules on the financial transparency of ports and on port service and port infrastructure charges. It applies to all maritime ports of the trans-European transport network. The TEN-T ports are required to comply with the Regulation by 24 March 2019. The regulation will make it easier for new providers of certain port services to enter the market. It will create a more level playing field and reduce legal uncertainties for ports, port service providers and investors. This should encourage investment in ports; improve the quality of services provided to port users, and enhanced competition by helping to reduce prices.

Recommendation: Implement in full the ports services regulation by 2019.

Responsibility: Department of Transport, Tourism and Sport

A Landbridge study, commissioned by the Department of Transport, Tourism and Sport with terms of reference covering both imports and exports and the proportion which travel through the United Kingdom, is currently underway. The study which the Council views as having very significant strategic importance, is due to be completed in 2018.

Recommendation: Publish and prioritise the recommendations arising from the Landbridge study.

Responsibility: Department of Transport, Tourism and Sport

Theme 1: Chapter 3- Environmental Sustainability and Transitioning to a low carbon economy

Introduction

Climate change presents very significant challenges for Ireland, both in terms of mitigating our greenhouse gas emissions and achieving national and international binding targets, as well as adapting to the effects of a changing climate which we are already starting to witness. According to the EPA:

- Ireland's average annual surface air temperature has increased by almost one degree Celsius over the past century;
- Rainfall levels have increased by over 5 per cent in the past 30 years; and
- The number of frost days annually has decreased, while the number of warm days has risen over the past 30 years.

The sustainability of the natural environment and a commitment to environmentally friendly policies is a key determinant of long-term quality of life as well as being an important resource for economic growth. In general, Ireland's environment is in a good state. Air quality is amongst the best in Europe, soils have not suffered significant degradation (except for peatlands). In addition, a significant afforestation programme is in place, bathing and drinking water quality is generally relatively high, and emissions of acidification precursors (sulphur dioxide, nitrogen dioxide, ozone) and particulate matter are below EU limits. However, emissions of climate change-related greenhouse gases (i.e. carbon dioxide, methane and nitrous oxide), which are highly correlated with economic activity, remain high on a per-capita basis and are not falling in line with requirements under EU targets.

Successful greenhouse mitigation policies offer potentially significant rewards. Meeting our targets will create economic, enterprise and environmental benefits for Ireland. It is estimated that were EU 2020 targets to be achieved without the requirement to part-purchase compliance, not only would this reduce emissions levels – providing a boost in quality of life for all - it would also be accompanied by significant financial benefits[43]. A range of sectoral opportunities related to the creation of a low-carbon economy also exist. For instance, the 'green' economy is one of the most dynamic and rapidly growing markets in the world economy, driven by factors such as climate change, diminishing natural resources and consumer preference. For Ireland, the green economy presents an opportunity for employment creation, the development of indigenous enterprise and the export of innovative products and services. To date, several policy developments have occurred designed to facilitate progress towards achieving Ireland's energy efficiency and renewable energy targets. These include:

- **A National Policy Position on Climate Change** in April 2014, setting out clearly our vision and considerations in transitioning to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050[44].

43 Sustainable Energy Authority Ireland, Ireland's Energy Targets Progress, Ambition & Impacts, 2016

44 The National Position identifies the long-term objective of achieving this transition based on an aggregate reduction in carbon dioxide (CO_2) emissions of at least 80 per cent (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and in parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production.

- The **Climate Action and Low-Carbon Development Act 2015** providing a statutory underpinning to the National Policy Position[45].
- The **White Paper on Energy, Ireland's Transition to a low carbon energy future 2015-2030,** setting out a framework, strategic principles and steps to guide policy and outlining the actions that Government intends to take in the energy sector from now up to 2030, taking account of European and international climate change objectives and agreements[46].
- Ireland's **National Renewable Energy Action Plan** (NREAP) outlining our national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020. The Plan demonstrates how Ireland will meet its overall national target to achieve 16 per cent of energy from renewable sources by 2020.
- Following the 2009 **National Energy Efficiency Action Plan**, the Government, in 2011 launched several initiatives in relation to energy efficiency including Better Energy Homes: The National Upgrade Programme. In 2013, Ireland submitted its third National Energy Efficiency Action Plan (to 2020), and a Public-Sector Energy Efficiency Strategy which details how a 21 per cent saving has already been achieved (saving 548,000 tonnes of CO_2).
- Perhaps the most significant national policy development in recent years has been the launch of the first **National Mitigation Plan** (July 2017) which represents an initial step on Ireland's pathway to achieve the level of decarbonisation required to 2050. It is a whole-of-Government Plan, reflecting the central roles of the key Ministers responsible for the sectors covered by the Plan – Electricity Generation, the Built Environment, Transport and Agriculture, Forest and Land Use sectors, as well as drawing on the perspectives and responsibilities of a range of other Government Departments.

Despite these and other initiatives, Ireland is currently expected to miss its existing 2020 carbon emission reduction targets and will be required to purchase compliance credits so that it remains in legal compliance with the EU's Effort Sharing Decision. GHG emissions in Ireland increased by 6.7 per cent between 1990 and 2015, while GDP rose by some 135.6 per cent over the same period. Emissions in sectors such as industrial processes (-38.4%), residential (-19.7%), public services (-30.6%), commercial services (-13.7%), agriculture (-5.5%) and waste (-37.8%) declined and are now below 1990 levels. Transport emissions, however, have increased by 130.3 per cent. The latest projections of greenhouse gas emissions by the Environmental Protection Agency indicate that Ireland is likely to fall short of our 2020 target to reduce emissions by 20 per cent below 2005 levels. Emissions from those sectors of the economy covered by Ireland's 2020 targets could be between 4 and 6 per cent below 2005 levels by 2020. The projected shortfall to our targets in 2020 reflects both the constrained investment capacity over the past decade due to the economic crisis and the extremely challenging nature of the target itself.

Ireland has made progress in decoupling its emission levels from economic growth. This is a result of changes in the structure of the economy, particularly the growth of the less energy-intensive services sector, greater use of gas and renewables, and improved energy efficiency. The share of renewable energy production in Ireland continues to grow (albeit from a low base) with 9.1 per cent of gross final consumption derived from renewables in 2015 and over a quarter of electricity being produced from renewable sources (2015). Although it is declining, Ireland continues to have a very high dependence on imported fossil fuels (88% in 2015), particularly oil: 48 per cent of Ireland's energy consumption is based on oil.

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45 The Act provides for the preparation of five-yearly National Adaptation Frameworks and sectoral plans drawing together the adaptation efforts of Government and the wider public sector in Ireland to address the impacts of climate change in Ireland, and for the establishment of a National Climate Change Advisory Council to advise and make recommendations to Government on actions required to significantly decarbonise the Irish economy.

46 Department of Energy, Communications and Natural Resources, Ireland's Transition to a Low Carbon Energy Future 2015-2030, December 2015

At the very least, accelerated effort is required, above and beyond that which has occurred to date. Any shortfalls in meeting the 2020 targets will result in the purchase of carbon credits to bridge the gap and/or fines at EU level and lead to a more arduous trajectory in the context of post-2020 targets – both in terms of future deployment and potential future compliance costs. Meeting our current and future internationally binding renewable energy and greenhouse gas emissions targets is a significant challenge for Ireland. Of importance is the allocation of "fair and achievable" targets for Ireland as part of the EU's increasingly ambitious 2030 climate targets. In simplified terms, Ireland will require an increase in capital investment to achieve lower emissions, and increased current expenditure to purchase carbon allowances from other Member States or to pay resultant EU fines which could amount to several hundred million euro annually. Achieving as much of our climate change targets as possible through encouraging behavioural change through appropriate carbon pricing, information provision and other incentives, alongside appropriate capital investment, is more desirable than the cost of ongoing accumulated credit purchases or fines. Most importantly, a plan is required that sets out the least cost combination of policies and other measures to achieve our international obligations and care should be taken not to exempt any particular sectors without careful consideration of the overall economic impact of such a decision. Such an approach will minimise any negative effects on the competitiveness of the Irish economy.

While the focus in this chapter is on meeting Ireland's international emissions targets, a range of other environmental challenges persist. While drinking water quality in Ireland is considered generally safe (99.9 per cent of public water samples comply with microbiological parameters) a continued focus on ensuring it remains so is required as contamination of water supplies can have a major impact not only on health and wellbeing but also on enterprise, particularly in the food and biopharma sectors. This requires significant capital investment and a resolution of the current domestic charging impasse.

Ireland's waste management practices, infrastructure and regulation have matured significantly over the last 20 years. This change has been driven by EU and national legislation, national policy and economic initiatives. Since 2012, there has been a clear government policy focus on waste as a resource and very few landfills now remain in use.

The current and future focus is on waste prevention, reuse, maximising recycling and using waste as a fuel in replacement of fossil fuels and on all elements of the circular economy strategy to boost competitiveness, foster sustainable economic growth and generate new jobs. Challenges remain in relation to waste management. Although EPA data shows Ireland has made significant progress in meeting many of its EU waste recycling, recovery and diversion targets, Ireland still generates more waste per capita than the Euro area average and is in the upper range in the OECD.

Policy Challenges and Recommendations

Meeting Climate Change Targets

Climate change represents an urgent and potentially irreversible threat to society and requires the widest possible cooperation by all countries with a view to accelerating the reduction of global greenhouse gas emissions. The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) represents a global effort to limit global temperature increases to less than 2 degrees and to pursue efforts to limit the temperature increase to 1.5 degrees above pre-industrial levels and aims to share the benefits and burdens of the agreement fairly across developed and developing economies. The commitment also sets out how increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, is in a manner that does not threaten food production.

Within Europe, the existing EU 2020 Climate and Energy Package (referred to as "20-20-20") targets a reduction in greenhouse gas emissions (GHG) of 20 per cent from 1990 levels, an increase in the share of renewable energy to 20 per cent of consumption, and improvements in energy efficiency of 20 per cent. One of the main EU instruments to reduce greenhouse gas emissions is the EU **Emissions Trading Scheme** (ETS). ETS which currently covers about 45 per cent of EU emissions, and 28 per cent of total emissions in Ireland, has an objective to reduce emissions in heavy industry covered by the Scheme by 21 per cent relative to 2005 levels by 2020 and 43 per cent by 2030. Sectors not covered in the ETS (the "non-ETS sector") include agriculture, transport, the built environment (i.e. domestic and non-ETS industry) and waste. 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. This target is partially calculated based on GDP per capita and is one of the most demanding 2020 reduction target allocated under the ESD - one shared only by Denmark and Luxembourg[47]. This is of relevance to Ireland because of the very high proportion of these emissions arising from agriculture. Ireland has also committed to increasing the share of renewables in final energy consumption to 16 per cent by 2020 and to move towards a 20 per cent increase in energy efficiency.

Based on existing policy measures, Ireland will miss its national emission reduction targets[48], and its targets in relation to renewables. The Environmental Protection Agency (EPA) estimates non-ETS emissions will, at best, be 4-6 per cent below 2005 levels, and Ireland could breach its emissions target by 13-15 per cent[49]. Failure to comply may incur significant costs to the Irish Exchequer: it has been estimated that up to €610m could be required to pay for failure to meet emissions and renewable targets in 2020 and as much as an additional €5.5 billion to 2030[50]. Such expenditure, would obviously adversely impact the State's ability to increase capital expenditure or expenditure on social services. Furthermore, by falling short of the pre-2020 targets, this makes the post-2020 targets even more challenging. Looking forward, the EU's 2030 climate and energy framework sets even more ambitious key targets for emissions reduction, renewables and energy efficiency:

- To reduce GHG emissions by at least 40 per cent compared to 1990 – to achieve the overall 40 per cent target, the sectors covered by the EU ETS would have to reduce their emissions by 43 per cent compared with 2005 levels, while sectors outside of the ETS would need a reduction of 30 per cent compared with 2005;
- To increase the share of renewable energy to at least 27 per cent of total energy used; and,
- To improve energy efficiency by at least 27 per cent.

The European Commission, in its Effort Sharing Regulation proposals indicates Ireland would have to reduce its greenhouse gas emissions by up to 30 per cent compared to 2005 by 2030[51]. These binding new targets were announced by the EU Commission in July 2016, and as before are based on Ireland's relative share of GDP per capita in the EU with recognition of the cost-effectiveness of Ireland's potential mitigation effort. Further detail on how the non-ETS burden will be shared amongst Member States between 2021 and 2030 remains the subject of ongoing negotiations. It should be noted that one-off flexibility allowed under the Emissions Trading System, and flexibility for land use, land use change and the forestry (LULUCF) sector could reduce the headline 30 per cent target although not without accruing significant exchequer costs[52].

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47 Department of the Environment, Community and Local Government, Invitation to Submit Views on the Development of Ireland's First National Low Carbon Transition and Mitigation Plan, 2015

48 According to Ireland's own projections, based on existing policy measures, the country is expected to miss its national emission reduction targets by 12 per cent. See European Commission, Country Report for Ireland, 2017

49 EPA, Ireland's Greenhouse Gas Emission Projections, 2016-2035, April 2017

50 IIEA, Joseph Curtin, How much of Ireland's "fiscal space" will climate inaction consume?, 2016

51 The national targets established in the proposal are not just for the year 2030. The proposal sets a limit for each year in the 10 year period up to 2030. The limit for each year is set according to a decreasing linear trajectory. This ensures year on year reductions.

52 Teagasc have estimated that forestry costs the exchequer between €26 and €42 per tonne of carbon sequestered. See Teagasc, A Marginal Abatement Cost Curve for Irish Agriculture: Teagasc submission to the National Climate Policy Development Consultation, April 2012

Recommendation: Ensure that Ireland's 2030 Effort Sharing Decision emissions target is based on the optimal baseline. Ensure that Ireland retains other one-off flexibilities granted.

Responsibility: Department of Communications, Climate Action and Environment and Department of Agriculture, Food and the Marine

EU ETS

At present, the ETS system may be disadvantaging Irish based firms. An anomaly exists whereby a provision allows the indirect costs associated with the scheme (i.e. ETS participants who purchase electricity in which the carbon price is already internalised) to be reimbursed to participants. Ireland does not currently allow for any indirect cost reimbursement, while several other Member States (including France, Germany and the UK) allow for this. This creates an uneven playing field for ETS participants located in different Member States and allows for competitor plants (within the same sector) in different EU countries to have unfair advantages over each other. Amendments to the Scheme for Phase IV from 2020 have been tabled by the EU Parliament and Council which would create a centralised EU scheme for indirect costs compensation. However, any move to rectify this anomaly could have significant implications for the Irish exchequer. It would be preferable, therefore, to continue with the current state aid model and for Ireland to consider permitting indirect cost compensation for EU ETS firms, the costs of which haves been quantified as modest given the small number of Irish installations that would be eligible for indirect cost recoupment in ETS.

In addition, the currently low carbon price has not sufficiently incentivised the electricity sector to invest in decarbonised power generation. In Ireland, the ongoing use of Moneypoint means that electricity generated from this plant is highly carbon-intensive. It is acknowledged that the future of Moneypoint is multifaceted and requires consideration of issues such as security of supply, system stability, competitiveness and sustainability. The Department of Communications, Climate Action and Environment is currently examining the key considerations in relation to the future of Moneypoint.

Recommendation: Consider the implications of allowing the indirect costs associated with the emissions trading system (ETS) to be reimbursed to participants. Clearly outline the opportunity cost of permitting reimbursement and highlight any implications for other aspects of carbon mitigation policy.

Responsibility: Department of Public Expenditure and Reform, Department of Communications, Climate Action and Environment

Recommendation: Carry out a study to identify the most suitable replacement low carbon technology for the Moneypoint generation plant.

Responsibility: Department of Communications, Climate Action and Environment

Business could be facing higher energy bills if the Commission for Regulation of Utilities increases the public service obligation (PSO) levy. The proposed PSO Levy for the period from 1st October 2017 to 30th September 2018 is €496.5m. This is approximately €104.1m or 27 per cent higher than the current PSO levy. The proposed levy increase of €104.1m (27%) for 2017/18 is attributable to lower market prices from electricity, more renewable energy sources being added to the grid and price corrections for the PSO period of 2015/16. The proposed levy for 2017/18 would see annual charges on small commercial businesses increase by 39 per cent or €110. The levy is mainly used to cover the cost of subsidy schemes to support the generation of electricity from renewable sources, such as wind farms. Some of

the levy goes to ensure there are power stations on stand-by when demand for electricity goes up, and it is partly used to subsidise peat-generated power.

Electricity support schemes are funded through the PSO levy on all electricity consumers. Accurately projecting future PSO costs can be challenging due to a range of factors such as fluctuating electricity prices, varying capacity prices, the future share of renewables, and the termination of PSO contracts. Subject to approval, a new renewable electricity support scheme (Measure RE6) funded through the PSO will result in increased costs of electricity for all consumers. In designing the new scheme, the cost implications for households and businesses is therefore a matter of high priority.

Recommendation: Adhere to the proposed plan and timeline attached to the phasing out of fossil-fuel subsidies in electricity generation.

Responsibility: Department of Communications, Climate Action and Environment

National Mitigation Plan

The publication of the National Mitigation Plan (NMP) is a milestone for Irish climate change policy as it represents the first stage in what will be a series of stages towards a deeply decarbonised Ireland in which all sectors will demonstrate a close-to-zero carbon footprint by 2050. The measures that are implemented through this first Plan will lay the foundations for transitioning Ireland to a low carbon, climate resilient and environmentally sustainable economy by 2050. To support this ongoing work, the Plan includes over 100 individual actions for various Ministers and public bodies to take forward as Ireland moves to implementation of what will be a living document.

The Council recognises that this first Plan does not provide a complete roadmap to achieve the 2050 objective, but begins the process of development of medium- to long-term mitigation choices for the next and future decades. Ireland is not on track towards decarbonising the economy in the long term. While the first National Mitigation Plan represents a welcome first step towards decarbonisation, the measures contained in the Plan are not sufficient to achieve the steep challenges post-2020 unless further policies and measures are put in place over and above those envisaged between now and 2050. There is therefore an urgent need to identify the funding required to address the mitigation initiatives identified with most impact that will deliver the required level of decarbonisation across the economy. In addition, cost benefit / Least cost analyses and comparisons should underpin decision making in relation to the NMP. The need for the National Investment Plan to reflect investment required based on meeting our targets and initiatives in the NMP is more critical than ever.

Recommendation: Identify the additional mitigation measures with most impact and associated funding necessary to deliver the required level of decarbonisation across the economy in the period to 2030.

Responsibility: Government, Department of Communications, Climate Action and Environment

Due to the lack of traditional heavy industry, agriculture is Ireland's largest contributor to carbon emissions by economic sector, responsible for 47 per cent of total non-ETS emissions. The next largest emitting sector is transport, at 29 per cent of non-ETS emissions. Emissions from both sectors are projected to increase in the period to 2020. Ireland faces significant challenges in meeting emission reduction targets for 2020 and beyond. The potential Exchequer exposure to additional compliance costs and possible EU fines, should we fail to meet our emissions targets, should inform our thinking about capital budgets. Sectors such as transport and agriculture have relatively limited scope for emissions reductions unless a major capital investment programme is implemented in the case of transport, or agri-food output is curbed in the case of agriculture. It is generally believed that there are limited cost-effective opportunities for reductions in agricultural emissions without negatively impacting production.

The vision for the agriculture and land-use sector is an approach to carbon neutrality. The Climate Change Advisory Council recognise that achievement of neutrality for the agriculture and land-use sector is complex and challenging. In the case of transport, the dispersed nature of the Irish population makes the provision of improved regional public transport options problematic from a cost-effectiveness criterion. It will be difficult to realise reduced emissions from this sector without major modal shift towards public transport, dramatic improvements in vehicle emissions standards (i.e. an accelerated move to close-to-zero emissions), dramatically increased penetration of electric vehicles, and significant shifts away from current commuting patterns. The Council welcomes the Government's recent statement in the National Mitigation Plan that all new vehicles sold from 2030 must be zero emissions capable.

Recommendation: Take account of the environmental impact of individual projects specifically on greenhouse gas emissions when prioritising investment as part of the National Investment Plan. Recognition should be accorded to investments which simultaneously support competitiveness and contribute to Ireland meeting its greenhouse gas reduction targets.

Responsibility: Department of Public Expenditure and Reform, Department of Communications, Climate Action and Environment

Recommendation: Outline a pathway for the transport sector to contribute to the 2030 and 2050 national mitigation objectives.

Responsibility: Department of Transport, Tourism and Sport

Recommendation: Outline a pathway for carbon neutrality to enable the agriculture sector to contribute to the 2030 and 2050 national mitigation objectives.

Responsibility: Department of Agriculture, Food and the Marine

Transitioning to a Low Carbon Economy

Public Transport Policy Statement

The National Mitigation Plan has several key transport-related mitigation measures. In terms of public transport, the most significant measure relates to the LUAS Cross City line which increases capacity on the LUAS network by adding 10m additional journeys annually. Biofuels are to be utilised in higher quantities, and clearly there are opportunities for buses and diesel-fuelled trains to be powered by such renewable fuels. The Council considers that there are more opportunities which could be pursued in this domain. Policy consideration of the transport network should facilitate the prioritisation of public transport as well as walking and cycling.

In the context of the National Mitigation Plan's ambitions and climate change targets to 2020, 2030 and beyond, it would be prudent for Government to set out a policy statement on public transport. This would seem especially beneficial and feasible considering the improving macroeconomic environment in Ireland and the increased fiscal envelope for infrastructural investment. The Statement could affirm Government's commitment to Metro North, the DART Expansion Programme, as well as a plan to fuel all buses and diesel-fuelled trains by alternative fuels, and to ensure that all electric trains and trams use as much renewable electricity as possible, in line with the Dutch example where all public transport vehicles are carbon neutral.

Recommendation: Publish a policy statement on public transport considering policy drivers (such as climate change targets from the Paris Agreement and the EU's Effort-Sharing Decision on 2030 emissions targets), and the improving domestic economic context and associated pressure this places on transport-related emissions.

Responsibility: Department of Transport, Tourism and Sport

Green Economy

The Council welcomes the focus in the National Mitigation Plan on the key emitting sectors, namely transport, agriculture, the built environment and power generation. Industry and the broader enterprise sector plays its part in the climate change challenge via participation in the EU Emissions Trading Scheme in which approximately 100 of Ireland's largest energy producers are currently engaged, representing 28 per cent of Ireland's total greenhouse gas emissions in 2016. Enterprises outside ETS are of course subject to the range of other measures contained in the NMP, pay carbon taxes, engage in voluntary agreements, invest in decarbonisation measures and participate in binding obligation schemes. There are significant enterprise opportunities as well as potential competitiveness impacts arising from the different measures contained in the NMP.

The term 'Green Economy' covers a wide range of sectors that have in common the objective of providing goods and services in a sustainable way that make more efficient use of natural resources and reduces impact on the environment. In Ireland, the Green Economy covers activities such as sustainable food production, tourism, green financial services, green products and services, resource management and waste management, water and waste water management, renewable energy, smart grids and energy efficiency. Likewise, the European Commission's 2015 Circular Economy Package, which includes revised legislative proposals on waste to stimulate Europe's transition towards a circular economy, offers opportunities to boost global competitiveness, foster sustainable economic growth and generate new jobs.

Furthermore, the recently announced consultation by the Department of the Taoiseach on the bio-economy is also notable. This will inform a National Policy Statement to drive developments in the area. The National Mitigation Plan, Action Plan for Jobs and Action Plan for Rural Development all contain commitments to the strategic development of Ireland's bio-economy. Ireland has numerous renewable biological resources (e.g. forestry, agriculture, and aquaculture) with the potential for the creation of high-value products. The bio-economy uses these resources to produce food, feed, biomaterials, chemicals, pulp and paper, energy and fuels. Developing Ireland's bio-economy will help reduce carbon emissions, create high-skilled engineering and science jobs and contribute to global food security. It also presents an opportunity for indigenous economic development, exports and job creation while reducing our dependency on natural resources and imported materials. It would be worthwhile to undertake a formal assessment of these and to identify those measures that have the greatest economic return in terms of employment and domestic enterprise activity. Such measures could then be prioritised, especially if they provide additional jobs in regions that demonstrate higher-than-average unemployment rates.

Recommendation: Undertake an assessment from an enterprise perspective of the National Mitigation Plan to evaluate green economy opportunities as well as potential negative impacts on the enterprise sector, particularly potential costs implications for enterprise.

Responsibility: Department of Business, Enterprise and Innovation

Fuel Taxation

Irish vehicles registration and motor taxation systems were changed in July 2008 to be based on CO_2 emissions rather than engine size. The tax changes had an immediate and substantial positive effect in changing buyer behaviour encouraging the take up of low CO_2 emission vehicles with a huge shift away from higher CO2-emitting petrol-fuelled vehicles. Although over 70 per cent of new cars registered in 2015 were in the lowest A emission band, approximately 70 per cent of new vehicles registered during the last six years have been diesel-powered, up from 10 per cent in 2000, while hybrid and electric vehicles (which are highly fiscally advantageous) are gaining market shares, albeit from a small base. While this has been successful from a climate change policy perspective in reducing point emissions of CO2 from the transport sector, a significant externality now exists regarding the emissions of NOx and fine particulate matter which diesel engines emit in far greater quantities than petrol. While it would be unfair to penalise motorists who have made the state-incentivised switch to diesel over the past nine years, a medium- to long-term signal is needed from Government to incentivise the purchase of electric and hybrid vehicles, especially as these become a more viable alternative to traditional petrol and diesel vehicles thanks to reduced purchase prices, longer life batteries and higher charge-cycle ranges. However, this should be done carefully given that industry is currently reliant on a predominantly diesel-based commercial fleet, and many sectors exposed to these costs are also exposed to the adverse competitiveness impacts of Brexit. Incentives for commercial fleet operators for low emissions vehicles could also be addressed through the tax system. The 0 per cent Benefit in Kind treatment of electric vehicles, in Budget 2018, is a positive step in this regard.

While the potential equalisation of petrol and diesel prices may require the increased incidence of carbon tax and/or excise duties, Government should set out its view on the long-term trajectory it envisages for carbon tax. Introduced in Ireland in 2009 at €10 per tonne, extended to solid fuels in 2013, and increased to €20 per tonne in 2014, Pigouvian carbon taxes attempt to internalise externalities associated with particular activities, and Ireland's carbon tax has yielded significant revenues since its introduction in 2013 as well as incentivised the consumption of lower-carbon fuels. The Council supports carbon tax as an important tool to encourage a shift to a lower carbon economy and society. Ireland needs to proceed carefully regarding changes in carbon tax given the already high cost of doing business and the likely long transition time to elimination of the use of fossil fuels. The Department of Finance and the ESRI have been tasked with carrying out a review of carbon tax with a view to bringing forward proposals in Budget 2019 around the role of the tax in driving changes to behaviour in households and business. The review will incorporate an examination of the role of the tax in driving changes to behaviour in households and business. Any scope for increasing the carbon tax should be carefully examined given the already high costs of doing business in Ireland. This needs to be done carefully to avoid adverse competitiveness impacts on enterprise (especially those exposed to Brexit impacts) and fuel poverty/ distributional impacts on low-income households.

Recommendation: Set out a medium- and long-term policy on fuel taxation. The Council recommends that, should Government decide on a policy of equalisation of diesel and petrol prices through alteration of excise duties or carbon tax rates, this should be done over successive Budgets.

Responsibility: Department of Finance

Recommendation: Continue to incentivise the take-up of EVs through 0 per cent VRT, low road tax and further infrastructural investment in charge points (through ESB Networks).

Responsibility: Department of Communications, Climate Action and Environment, ESB Networks, Department of Finance

Recommendation: Consideration to be given to provision of assistance to Brexit-exposed enterprise sectors currently reliant on diesel-fuelled vehicles (e.g. subsidies towards the purchase of lower-emitting or electric/ hybrid vehicles).

Responsibility: Department of Communications, Climate Action and Environment

Recommendation: In reviewing the carbon tax consider the impact of changes to the tax on business costs and enterprise competitiveness in addition to the contribution of the tax to the decarbonisation of the Irish economy.

Responsibility: Department of Finance

Renewable Energy

It is recognised by the Council that renewable energy will play a strategic role in ensuring that Ireland and enterprise specifically becomes increasingly cost competitive on energy prices, importing less fossil fuels and improving both security of supply and environmental sustainability. The development of a Bioenergy Pan is a key action in this regard. Emanating from the National Mitigation Plan and Energy White Paper, the Plan will underpin the development of the bioenergy sector and lay the foundations for its longer-term growth. The Draft Bioenergy Plan was published in 2014 and identifies that, while biomass will play a role in renewable electricity, it is likely to make a more significant contribution to the heating and transport sectors where fewer alternative technologies are available. The Bioenergy Plan is now currently being developed.

The principal demand-side measures that the Department of Communications, Climate Action and Environment (DCCAE) are focusing on including the introduction of a Renewable Heat Incentive (RHI) and the continued implementation of the Biofuels Obligation Scheme. On the RHI, it will be critical that the final scheme, to be launched before January 2018, will include only the most economically advantageous technologies to avoid deadweight or adverse selection. The Council is aware that a cost-benefit analysis has been undertaken to underpin the technology selection process behind the RHI, and the results of this analysis should be implemented.

Other demand-side actions include support for electricity generation from bioenergy, examining the potential for district heating in Ireland and examination of the potential for additional taxation policy measures, supporting the Forestry Programme 2014-2020, medium- to long-term access to, and mobilisation of, energy from forests, exploring opportunities for additional bioenergy funding and optimising the availability of waste for energy. These objectives are laudable, and some should improve cost competitiveness for enterprise in the medium- to long-term, while others will present significant enterprise opportunities in the bio economy.

Energy Efficiency

Energy efficiency is one of the most effective tools to jointly address cost competitiveness, security of supply and environmental sustainability objectives. While the last decade has seen an improvement in the energy efficiency of the Irish economy, scope exists for further improvement in this area.

Ireland has a legally binding target for renewable energy deployment as well as a national target for energy efficiency. The pathways to achieving these targets have been set out in the National Renewable Energy Action Plan (NREAP)[53] and the National Energy Efficiency Action Plan[54]. The overall renewable energy share (RES) target of 16 per cent of final energy use to be derived from renewable sources by 2020 (and a related target of 10 per cent for the transport

53 Department of Communications, Energy and Natural Resources, National Renewable Energy Action Plan, Submitted to the European Commission under Article 4 of Directive 2009/28/EC, 2010

54 Department of Communications, Energy and Natural Resources, Maximising Ireland's Energy Efficiency: The National Energy Efficiency Action Plan 2009-2020, 2014

sector) is binding at EU level. The targeted 20 per cent improvement in energy efficiency across the whole economy by 2020 is a nationally set target adopted in response to the EU Energy Efficiency Directive.

Achieving Ireland's energy targets will help us to meet our binding EU GHG emissions targets. The more energy demand is reduced through efficiency measures, the lower the effort required to achieve the renewable energy targets, and in parallel a reduction in emissions can also be achieved. For example, the electrification of the heat and transport sectors could also assist Ireland in complying with its non-ETS emissions reduction target by shifting emissions into the Emissions Trading Scheme (ETS) sector and away from the non-ETS sector. From the perspective of the firm, one of the most effective ways for firms to reduce their energy costs is to invest in energy efficiency technologies, and thus reduce energy consumption.

SEAI has previously noted that achieving these targets will require an "acceleration of deployment of renewable energy and energy efficiency technologies over the period to 2020"[55].The Government has facilitated the creation of a €70m Energy Efficiency Fund (the "Fund") by committing €35m to finance energy efficiency projects across Irish public and private sector buildings and urban infrastructure on a commercial basis. The €35m Government commitment is matched by private sector investment. The Fund aims to invest in projects that reduce energy consumption, recover useful energy from waste streams and distributed renewable energy generation. Following the initial funding allocation, a second round of capital funding was secured at the end of 2014, with a third round in 2016.

Considering the interactions between the various environmental targets discussed above, the costs and benefits of all investment in sustainable energy must be analysed and evaluated to ensure that the most efficient and effective investments are prioritised.

Recommendation: Assess whether Ireland's current energy infrastructure is fit for purpose in the context of the climate and renewable energy targets and what further needs to be done.

Responsibility: Department of Communications, Climate Action and Environment

[55] SEAI, Ireland's Energy Targets: Progress, Ambition and Impacts, 2016

Theme 1: Chapter 4- Building and Sustaining Talent

Introduction

The availability of well-educated, skilled talent is a fundamental driver of national competitiveness. The development of talent and skills occurs at all ages, and through a variety of interventions encompassing pre-primary, primary, and post-primary education, further education, higher education and lifelong learning (both formal and informal). Ireland has set itself the target of having the best education and training service in Europe within a decade. The Council strongly supports this ambitious target and considers the policy framework and associated action plans for implementation published in recent years provide a strong platform on which to ensure that Ireland's talent base remains a fundamental source of competitive advantage.

Ireland already has a strong base on which to grow. The attainment profile of those exiting the formal Irish education and training system has been improving steadily. As set out in Ireland's Competitiveness Scorecard 2017, Irish PISA scores in maths, reading and science have improved since 2012 and on average Irish students score above the OECD in all 3 categories, with Irish students ranked 3rd on literacy. Ireland has made significant progress in reducing the proportion of early school leavers. 91 per cent of 25-34-year olds in Ireland have completed upper-secondary education. Attainment at tertiary education level is above the OECD and EU average. The proportion of Science, Maths and Technology graduates is second highest in the EU. However, the number of Engineering, Manufacturing and Construction graduates is significantly below the EU28 average[56]. Ireland has scope to improve participation levels in apprenticeship programmes and lifelong learning.

Nonetheless, despite our strong attainment levels and ambitions to go further, it is recognised that there are considerable challenges across the education and training system which will take time to address. The talent agenda is an especially broad topic and this year's Competitiveness Challenge focuses on several specific issues. As has been previously noted by the Council a demographic bulge is working its way through the education and training system. Demographic trends mean Ireland will require additional investment in schools, staff and related facilities. The demands on the Higher Education system in particular are increasing in terms of capacity as ever more people complete post-primary education and seek to progress into higher education. The adequacy of and sustainability of education funding, particularly at third level, combined with demographic change remains a significant challenge. At the same time, the level of resourcing for higher education in Ireland is significantly lower than in most of our competitor countries. Failure to tackle the under-resourcing of higher education will place Ireland at a considerable disadvantage internationally.

Ireland must ensure that skills needs and labour market gaps which damage competitiveness do not emerge. Ongoing efforts to align education and training output with labour market needs remain critical to competitiveness. Attracting and retaining both specialist and elementary workers will become increasingly challenging as job opportunities increase across all sectors of the economy. The Council considers continued emphasis on developing ICT skills and foreign languages competency is appropriate. In addition to formal qualifications, transversal skills are increasingly seen as important to enterprise competitiveness, in particular, digital skills, languages and entrepreneurial ability. Lifelong learning facilitates structural adjustment, productivity growth, innovation and effective career progression. Ireland's workforce lags several EU countries to the extent to which it engages in Eurostat's measure of engagement in lifelong learning activities. In addition, the levels and distribution of digital skills among the Irish working-age population are relatively low compared with competitor countries. Upskilling the workforce, especially low skilled workers to improve productivity, digital literacy and those at risk of displacement by changing technology is vital from a competitiveness perspective. Staff retention difficulties, particularly in sectors such as hospitality, mean employers

56 Ireland's share of third level graduates in this discipline was lower than the EU average; at 10%, Ireland's share is less than half that of Austria, Finland and Germany, each at 20% or higher. Expert Group on Future Skills Needs/Solas Monitoring Ireland's Skills Supply, 2016

also have a key role in developing career progression opportunities. The issue of skills needs arising in the context of Brexit must also be considered, particularly, our ability to respond to potential occupational and sectoral changes in employment which may result. Over the course of the recession, Ireland's education and training system has proven itself to be adaptive, and must continue to provide people with the skills that businesses need and with the ability and opportunity to contribute, particularity in an increasingly digital world. The supply of well-educated and skilled labour depends on all elements of the education and training system being adequately resourced, working to the highest quality standards, efficiently, effectively and in harmony with each other. Realising the potential of apprenticeships and opportunities for traineeships as a valued option within education remains a vital challenge as does achieving a cultural shift in how such qualifications are perceived. Almost all occupations are becoming more knowledge-based, requiring an increasing breath of basic and domain specific knowledge, complemented by continual learning. The development of appropriate skills for the workplace has implications for curricula, programme design and teaching methodologies at all levels of the education and training system. While this year's Challenge considers ICT and digital in some detail, the challenge of sustainable talent is not confined to these sectors.

Realising the potential of those excluded from the Labour Market also remains a challenge. The significant fall in unemployment should facilitate a shift in activation policy away from 'activation in a time of recession' dealing with mass unemployment, to 'activation in a time of recovery and growth', more focused on the needs of vulnerable groups or cohorts more distant from the labour market. Despite the significant upturn in the labour market, addressing labour market needs and reducing involuntary unemployment will require continued evolution and innovation in relation to labour market policies.

Policy Challenges and Recommendations

Ensuring Education Funding is Sustainable

Data from the Department of Education and Skills shows that the numbers of enrolments of full-time students at all levels increased by 11 per cent to over 1.1 million in the period 2011-2016. In proportionate terms, enrolment is highest in primary (50% of all enrolments), post primary (31%) and third level (17%). The number of students in Irish primary and post primary schools increased by 8 per cent respectively and third level numbers have increased by 11 per cent. The CSO has projected the post primary school aged population of 13-18 year olds could increase by between 105,700 and 116,800 by 2026. This represents increases of between 31 and 34 per cent on the 2011 figure of 342,400. In terms of demographics and development patterns, Ireland had the third highest percentage increase in population (14%) between 2004 and 2014 in the EU. Demographic change has clear implications for the future funding and sustainability of Ireland's education and training systems and on future labour forces participation rates. The Department of Education and Skills[57] projects that primary enrolments, which increased substantially in recent years will continue to rise to a peak of over 574,000 in 2018 before beginning to reduce. Similarly, post-primary enrolments are projected to increase until 2025 to peak at over 400,000 enrolments. At third level, full time enrolments which increased by over 25 per cent in the decade to 2015 are projected to rise every year over the period 2015-2029, reaching 207,544 by 2029, an increase of over 38,000 on 2014 enrolment levels[58].

Relative to the OECD average Ireland is investing significantly less per student than many of our peers and countries against whom we compete for trade and investment. In the last two decades, public expenditure on education as a

57 Projections for Full Time Enrolment primary and post primary level 2015 – 2033, Department of Education and Skills, 2015
58 Projections of Demand for Full Time Education 2015 – 2029, Department of Education and Skills, 2015

proportion of total Government expenditure has been relatively constant peaking at 16.9 per cent in 1998 and dropping to a low of 14.8 per cent in 2009[59]. During the recession, reductions in public expenditure on education were less than reductions of total government expenditure. From 2014 to 2017 expenditure in education has grown broadly in line with total government expenditure. In an international context, public expenditure per student at secondary level is above the OECD average[60]. Expenditure per student has fallen by 15 per cent since 2010 from primary to post primary non-tertiary education and by 24 per cent at tertiary level. This is due to both a decrease in funds for education (-10% for below tertiary education and -18% for tertiary) and an increase in the number of students (by 6% from primary to post-secondary non-tertiary and by 8% in tertiary education). Annual expenditure per student in Ireland is lower than the OECD average for pre-primary and primary education. It is also lower at tertiary level, where it is over USD 14 100 per student, or USD 10 500 if research and development activities are excluded. Spending per student is higher than the OECD average at secondary and post-secondary non-tertiary levels.

While educational quality and talent outcomes are not simply a function of the level of expenditure, national expenditure levels are core components in international measures of talent competitiveness. Demographic trends mean Ireland will require additional investment in schools, staff and related facilities. Expenditure per student at all levels should at least mirror levels in competitor countries that are at a similar stage of economic development. While appreciating that in the context of annual Budgets and the Capital Plan limited funds are available to meet a wide range of competing needs across all areas of Government, the Council considers educating and developing talent is vital to underpin Ireland's long term competitiveness.

Recommendation: Ensure support to the education system increases so that public expenditure per student at all levels is at the same level as EU competitor countries. This is against the backdrop of increasing student numbers and the ambition to have the best education and training system in Europe by 2026.

Responsibility: Department of Education and Skills, Department of Public Expenditure and Reform

Higher Education Funding

So much of our economic success – our strong track record in winning foreign direct investment and the growth of a cohort of internationally trading indigenous firms – is a result of our skilled workforce. Our Higher-Education Institutions have been a vital channel through which the skills needed by enterprise are developed. The demands that we place on the Higher Education system are increasing – both in terms of capacity, as ever more people complete post-primary education and seek to progress into higher education, increased demand from international students and because of the increasing demands for higher skill levels by employers.

There is a general recognition that given Ireland's ambition to increase our capacity and performance in higher education, the third level sector can no longer depend to the same extent on Exchequer funding[61]. As set out in the Competitiveness Scorecard, Ireland spent 4 per cent less than the OECD average on tertiary education, with the gap between Ireland and the UK and the US particularly pronounced. Irish pupil/teacher ratios also compare unfavourably. Countries with better student/academic staff ratios in Higher Education tend to be amongst the more competitive internationally. For example, highly competitive Scandinavian countries such as Sweden and Finland had ratios of 11:1 and 14:1 respectively in 2013 whereas the OECD average was 16:1. Ireland, by contrast, had a ratio of 20:1.[62] However,

59 Spending Review 2017 – Tracking Trends in Public Spending, Department of Public Expenditure and Reform, 2017
60 Education at a Glance, OECD, 2017
61 While the National Plan for Equity of Access to Higher Education 2015-2019 does not propose what the level of participation in higher education should be, the Plan is underpinned by the principle that everyone should have the opportunity to participate in post-primary education and that the population of new entrants to higher education should be broadly representative of the general population. The Department of Education, however, has a target that by 2020, 60 per cent of Irish 30-34 year olds should have completed tertiary or equivalent education. See HEA, National Plan for Equity of Access to Higher Education 2015-2019, 2016
62 Department of Education and Skills, Consultation Paper, Exchequer-Employer Investment Mechanism for HE and FET, 2017

despite increased student numbers the Exchequer grant to the Higher Education Authority (HEA) decreased from €1.3 billion in 2008 to €978 million in 2017 (25% decrease).

The Report of the Expert Group on Future Funding for Higher Education, notes that while expected demographic changes could be funded through incremental year-on-year increases in the State's contribution, this would not be sufficient to address issues of performance and quality. While improved efficiency and additional commercial activity should be pursued, ultimately additional and reformed funding streams are necessary. A decision on the overall approach to funding is required before any changes can be made to the current model. As set out in the Programme for a Partnership Government, the report on Future Funding has been referred to the Oireachtas Education Committee as part of the process for formulating a plan for the future of the sector. In determining the model to be applied, there are several principles, outlined in the Report of the Expert Group, which the Council considers should be adhered to. The funding model should:

- Take a systems wide perspective that provides certainty and consistency to all higher education stakeholders, and should be attuned to all the various incentives and factors that shape demand for higher education. It should also be administratively simple and easy to explain;
- Align and support Ireland's national ambitions to provide high quality experiences and outcomes (as outlined in various strategies including the National Skills Strategy and Innovation 2020). It should also facilitate an increase in resources and adjust in response to changing conditions and outcomes;
- Support an increase in quality of the undergraduate learning experience, competences, and qualifications, across a broad range of disciplines, yielding knowledge of economic, social and cultural value;
- Enhance access, participation and progression across all socioeconomic groups. It should also result in a system that is open to all learners, not just traditional full-time, post leaving certificate students; and,
- Provide fairness and balance with a sharing of costs which reflects, to the greatest degree possible, the benefits accruing from access to higher education.

As detailed in last year's Competitiveness Challenge the Council restates its view that the funding model for higher education should combine increased State funding alongside deferred payment of fees through income contingent loans. The Council acknowledges that such an approach will require careful design to minimise any regressive effects which may arise, and to ensure that an appropriate and effective model of student support is in place to assist those most in need.

Recommendation: Develop and implement a long-term funding model that allows for increased participation and quality in higher education. The funding model should reflect the principles outlined by the Expert Group on Future Funding for Higher Education in relation to certainty and consistency; meeting national ambitions; supporting an increase in quality; enhancing access and participation; and ensuring fairness and balance.

Responsibility: Department of Education and Skills

Regardless of the funding approach taken, from an equity and efficiency perspective it is vital that adequate and targeted supports are in place to facilitate participation in higher education from all sections of society. As well as a robust and timely system of student supports, it is vital that supports are targeted at those who are most in need. Changes to existing funding approaches or student supports would need to be carefully monitored to ensure that impact upon participation is positive.

Recommendation: Review the current model of student support to ensure that it is appropriately targeted to assist those most in need, taking account of higher education fee structures, living costs and other maintenance costs, particularly accommodation costs.

Responsibility: Department of Education and Skills, Higher Education Authority

International benchmarks show that Ireland continues to be a leading European country in overall educational attainment at tertiary level, particularly for younger cohorts of the population. The Higher Education System Performance Framework, and the individual compacts that are agreed by each Higher Education Institution with the HEA, provide the strategic framework for evaluating the effectiveness of the system in meeting its key objectives. As part of the development of a new Systems Performance Framework for the period 2017 – 2021, the Council considers there is merit in making a larger proportion of public funding contingent on meeting identified skills needs, at both national and regional level.

Recommendation: Reform the funding model for Higher Education to support long term growth ambitions and the capacity to meet specific targets on identified skill gaps in areas such as ICT, data analytics, sales and foreign language skills, in the context of the Higher Education System Performance Framework 2017-2019.

Responsibility: Higher Education Authority

National Training Fund

The National Training Fund (NTF) is used to raise the skills of those in employment, to provide training to those who wish to acquire skills for the purposes of taking up employment and to provide information relating to existing or future requirements for skills in the economy. The NTF is funded by a levy on employers of 0.7 per cent of reckonable earnings in respect of employees in classes A and H employments, which represents approximately 75 per cent of all insured employees. The NTF levy generated €390 million in 2016. The amount collected through the levy has varied over the last number of years due to changes in the labour market. Over the period 2011 the proportion allocated to in employment training declined from 24 per cent to 17 per cent in 2013 as an increased proportion was allocated to supporting the unemployed. There has been a shift recently in the focus of investment with more funding allocated to training those in employment and less allocated to training jobseekers, due to the upturn in our economy and growing numbers of people in employment. 23 per cent of NTF expenditure in 2016 is on training for those in employment with 77 per cent dedicated to training for the unemployed. As the labour market improves there would appear to be clear scope to reallocate a larger proportion of the NTF to upskill people in employment as unemployment declines and to meet skills challenges being faced by employers. There is a strong case to be made to rebalance this expenditure over time and to provide additional support to in-employment training whilst recognising the additional demands that are likely to arise on the fund from the planned expansion of the apprenticeship system. Any reallocation of NTF funding should be used to address identified skills gaps. The Department of Education and Skills is reviewing the allocation of funding to programmes in the Further Education and Training and Higher Education sectors as between NTF and Exchequer sources in terms both emphasis required on training for employment and training persons in employment and of satisfying the needs of enterprise to meet strategic skills requirements.

As part of Budget 2018, from 1st January 2018 there will be a 0.1 per cent increase (from 0.7% to 0.8%) in the National Training Fund Levy payable by employers with respect of reckonable earnings of employees in Class A and Class H employments. The Council considers the benefits of the additional contribution made through the National Training Fund (NTF) must be clearly weighed against the cost competitiveness impact on enterprise, particularly small employers. From an enterprise competitiveness perspective, a key challenge is to ensure that drawdown of NTF

funding is aligned with employer contributions and their skills needs. It has been suggested[63] that the most effective way of achieving greater employer buy-in upskilling is to involve them more closely in the governance of levy schemes, including in decisions on training priorities and funding allocation. Given an increased levy is being imposed on employers it is imperative that there is a well-defined link between the NTF and meeting the specific educational and training needs of enterprise. The input of enterprise is important regarding optimising the operation and governance of the NTF, particularly. training programme development, roll-out and evaluation. The Council welcomes the commitment from the Department of Education and Skills that there will be greater employer input into the NTF including through the utilisation of new structures such as the National Skills Council[64]. It is important that programmes are demand driven and augmented by training needs analysis services to firms who require help in identifying their specific skills requirements. For example, there would appear to be scope to focus on competitiveness, particularly delivering on the innovation and productivity agenda for Irish exporters.

Recommendation: Evaluate the use of and assess the effectiveness of the NTF in achieving the Fund's objectives. Ensure the NTF has a clear mandate and objectives regarding in-company training. Consider reorienting the expenditure profile of the NTF to provide greater support to effective in-employment training programmes.

Responsibility: Department of Education and Skills

Recommendation: Facilitate greater alignment between the NTF and enterprise skills needs, particularly SMEs. Ensure that the governance framework for the NTF facilitates improved partnership between the education and enterprise sectors and ensures enterprise has a direct input to decisions on training and skills priorities.

Responsibility: Department of Education and Skills

Meeting Labour Market Skills Needs

For enterprise competitiveness, the ability of those coming out of the education and training system to meet the needs of a competitive economy is critical. As measured by to the IMD's 2017 Global Competitiveness Report Ireland performs relatively well in an international context. As measured by Executive perceptions that the educational system and university education meets the needs of a competitive economy, Ireland is ranked 8th and 5th in the world respectively. Ireland is ranked 1st in perceptions regarding attracting and retaining talent being a priority for firms. Ireland is ranked 10th with regard to management education meeting the needs of the business community. On perceptions that apprenticeships are sufficiently implemented, Ireland's performance has improved significantly in the last year but there is scope to improve our ranking which increased from 41st to 26th in the world in 2017.

Almost all occupations are becoming more knowledge-based, requiring an increasing breath of basic and domain specific knowledge, complemented by continual learning. The development of appropriate skills for the workplace has implications for curricula, programme design and teaching methodologies at all levels of the education and training system. Ireland must ensure that skills and labour market mismatches do not increase, and so, ongoing efforts to align education and training output with labour market needs remain critical to competitiveness. Ireland has set itself the ambitious target of having the best education and training service in Europe within a decade. To achieve this vision, the National Skills Strategy 2016-2025 sets out the policy framework for the period to 2025 of how Ireland can continue to develop and enhance relevant skills across key sectors to ensure that our supply of skills is activated and effectively used to help drive Ireland's growth both economically and societally over the next decade.

63 IBEC, Response to proposed Exchequer-Employer Investment Mechanism for HE and FET, 2017
64 https://www.education.ie/en/Press-Events/Press-Releases/2017-Press-Releases/EEIM_12July2017.pdf

The education and training system at all levels has several strategies in place to ensure that the existing and future skills demands in the workplace are identified and addressed. Among those strategies is the National Skills Strategy 2025. The Implementation of the Strategy is ongoing with over 125 measures and over 50 different stakeholders involved. One of the key elements of the Strategy has been the development of a new skills architecture. This new architecture includes the recent establishment of the National Skills Council and the Regional Skills Fora. The new architecture builds on the strengths of the existing arrangements for identification of skills needs, provides a mechanism for mediating demands in a manner that facilitates prioritisation within the identified needs, while at the same time enhancing the education and training provider responses to identified skills needs and ensuring delivery on priorities. The National Skills Council will oversee research, advise on prioritisation of identified skills needs, how to secure delivery of identified needs and will have a key role in promoting and reporting on the delivery of responses by education and training providers to those priorities. The work of the National Skills Council will also be informed by the work of the Expert Group on Future Skills Needs the Skills and Labour Market Research Unit in Solas and the Regional Skills Fora. As relatively new structures it is important that the work of the Regional Skills Fora is adequately supported. As set out in the National Skills Strategy, the active participation of employers in the development of skills is also a prerequisite for success. For the Fora to work effectively it is important that there are clear mechanisms which facilitate the Enterprise Agencies, Fora secretariat, HEA and the ETBs/Solas work together in collaboration.

As the economy has grown, job vacancy levels are increasing and certain skills needs are becoming more pronounced, particularly in professional, associate professional and certain craft and operative categories. Tightening labour market conditions have the potential to lead to skills gaps which could stymy growth and feed wage inflation which would undermine competitiveness. Recent analysis by the Central Bank[65] highlights how four sectors account for nearly half of total vacancies – the professional and scientific services, health and social work, financial, insurance and real estate and the accommodation and food activities sectors[66]. In Q1 2017, the professional, scientific and technical activities sector is notable in that it recorded a vacancy rate of 2.5 per cent. The European Commission's CEDFOP Skills Panorama[67] reports occupational skills gaps in ICT, Engineering, Financial, Healthcare, and Science professionals. Other shortages in Ireland identified by national stakeholders such as the Expert Group on Future Skills Needs include Multi-lingual occupations, skilled tradespersons particularly in construction, Sales and Transport Operatives.

The skills supply agenda is an especially broad topic. From a competitiveness perspective, several important pressure points need to be addressed, notably the need to:

- Ensure an ongoing supply and monitoring of skills in major employment sectors and occupations of high demand due to high replacement and/or expansion demand or economic recovery, for example, in sectors such as construction, freight transport, distribution & logistics, retail & wholesale and hospitality and ICT;
- Address skills gaps across a range of professional and elementary occupations e.g. ICT, engineering, sales, logistics, finance, hospitality, and agri-food) and the forecasted skills demand in the Biopharma sector;
- Boost the supply of ICT professional skills through implementation of the actions in the updated ICT Skills Action Plan;
- Augment domestic skills resources with talent from abroad (Irish diaspora and foreign nationals) in areas where global demand is intense;
- Ensure skills development is attuned to meet the challenges of Brexit and trading internationally – international business, customs and logistics, supply chain management, marketing and foreign languages;

65 Central Bank, Quarterly Bulletin, Q3, 2017

66 It is acknowledged that vacancy levels may relate to job churn rather than exclusively related to skills gaps

67 European Commission, Cedefop, Skills Panorama, Skill shortage and surplus occupations in Europe, 2016 Expert Group on Future Skills Needs, National Skills Bulletin 2016

- Continue to improve the level of mathematical proficiency at all levels and increase the supply of deep analytical skills talent (i.e. maths, statistics, analytical skills);
- Increase the STEM skills pipeline at all educational levels, with a focus on increasing uptake by females, and raising awareness around STEM; and,
- Continue to improve participation in continuing training and lifelong learning especially the alignment of provision between FET and Higher education to provide progression pathways for individuals at successive NFQ levels; engage enterprise in shaping the delivery of education and training skills provision; and ensure the continuing professional development of teaching staff in schools to ensure what is taught is up-to-date and remains relevant.

ICT Skills

Over the last twenty years Ireland has cultivated a successful ICT enterprise base in both software and hardware comprised of both indigenous and multinational enterprises. ICT is an enabler of productivity growth in terms of logistics and supply chain management; building customer and supplier relations; optimising business processes; enhancing production processes and efficiencies. As well as being an important economic sector the pervasive nature of ICTs means that it has an impact upon all business and sectors. While recent trends in terms of ICT employment and investment flows are encouraging, it is vital that Ireland strives to gain a long term competitive advantage in the supply of ICT skills which can meet demand across all sectors. We must ensure we are well placed to take advantage of emerging and new trends. Investment in Ireland's research and innovation infrastructure, a strong existing base of ICT enterprise and talent are vital to take advantage of the growth in demand for digital technology globally. Changes in ICT and the pace of digitalisation are likely to be the fundamental influence on the future of work and talent. Advances in Big Data, robotics, Artificial Intelligence, the Internet-of-Things and online platforms are among the technology developments which have potential to drive shifts in employment between sectors and occupations in the medium/long term. Several types of ICT skills are likely to be needed to further enhance Ireland's competitiveness: technical and professional skills, including ICT specialist skills; ICT generic skills; and ICT complementary "soft" skills, such as leadership, communication and teamwork skills for ICT-enabled collaborative work.

CSO QNHS data shows that over the period 2011 to 2016, ICT practitioner employment increased by 25 per cent to 81,600. At occupational level, the scale of increase was greater for certain ICT occupations, particularly Programmers and Software Development where employment expanded from 13,240 to 20,113 – by 6,870 and for IT specialist managers which increased from 7,827 to 10,661 – by 2,830. IT User support technicians increased from 4,309 to 5,477 – by 1,168. Data from the DBEI Annual Employment Survey shows Information, Communication & Computer Services employment accounts for 26 per cent of total agency supported employment and growth in the sector has been very strong in the last decade[68]. Over the period 2011-2016, employment grew by 45 per cent to 25,090 in Irish-owned enterprises and by 40 per cent to 68,012 in foreign owned enterprises. Within the sector, the Computer Programming Activities sector had the largest employment growth in 2016, recording a 7.7 per cent increase. ICT skills demand is being driven by several factors including company expansion, new investment and start-ups and opportunities through technological convergence. With ICT skills in strong demand in Ireland, CSO data shows significant labour cost growth. Average hourly total labour costs increased by 2.5 per cent over the five years to Q2 2017, however labour costs in the ICT sector grew by 13.5 per cent. The challenge of ensuring an adequate supply of skilled ICT workers is not

68 It is acknowledged that not all employees categorised in the Survey as employed in the ICT sector are ICT professionals/specialists.

confined to Ireland. Competition is intense across Europe. In relative terms, the highest shares of ICT specialists in total employment were recorded in Finland (6.6%) and Sweden (6.3%), ahead of the United Kingdom (5.1%). The comparable share in Ireland was 3.9 per cent[69]. The European Commission's New Skills Agenda Factsheet on Digital Skills, notes that 39 per cent of firms report difficulties in finding suitably skilled ICT professionals and estimates 578,000 unfilled vacancies for ICT professionals in the EU in 2017. In the EU in 2016, 41 per cent of enterprises which recruited or tried to recruit ICT specialists reported hard-to-fill vacancies. The highest percentages were recorded in the Czech Republic (66% of enterprises which recruited or tried to recruit ICT specialists. In Ireland, the rate was 53 per cent, above the EU average of 41 per cent. In the UK 34 per cent of enterprises reported hard-to-fill vacancies.

Ireland's capability in STEM (Science Technology Engineering and Mathematics) education is vital to secure and sustain a sufficient pipeline of ICT specialists, as well as scientists, engineers, technologists and mathematicians. It is positive that the OECD reports that a significantly higher proportion of Irish students choose certain STEM related courses of study, compared to the OECD average. 18 per cents of third level entrants chose natural sciences, mathematics, statistics, and information and ICT compares to the OECD average (11%). Recognising that building our STEM capacity is vital to economic competitiveness it is reflected in multiple strategy documents, such as the Action Plan for Education, the National Skills Strategy and the Digital Strategy for Schools. In recent years, the Department of Education and Skills has been updating existing STEM curricula and working with stakeholders to promote STEM among all learners. At primary level, the National Council for Curriculum and Assessment (NCCA) is currently in the process of developing a new primary mathematics curriculum to include computational thinking (and creative thinking skills. The Council welcomes this and supports the programme of curriculum reforms which will see ICT embedded in the phased introduction of Computer Science as a Leaving Certificate subject option from 2018. In addition, at Junior Cycle and Senior Cycle there are new maths specifications, new science specification for Senior Cycle and a short course in coding for Junior Cycle. The 2016 STEM Education in the Irish School System report has highlighted a range of recommendations. Building on this work, the Council welcomes that a STEM Policy Statement and Implementation Plan has been prioritised and is being progressed by the Department of Education and Skills.

The Government's ICT Skills Action Plan 2014-2018 is key to ensuring ICT skills demand is met and focuses on meeting ICT skills needs by:

- Increasing the output of high-level graduatesl
- Enhancing ICT capacity and awareness in the education system; and,
- Ensuring Ireland maintains a strong ICT talent pool and promoting Ireland as a centre for high-level ICT Skills.

The Plan aims to meet 74 per cent of industry demands domestically for ICT professionals by 2018 – up from 60 per cent in 2014. ICT graduate output from the higher education sector has increased since the first action plan was published. The Department of Education and Skills reports[70] that over the period 2014-2017, the total Irish-based Level 8+ graduate supply is estimated to have increased by 8 per cent to 4, 351. The number of graduates from ICT-related programmes at levels 8 to 10 has increased from 2,362 in 2012 to 3,341 in 2014. Through Springboard+ and ICT conversion courses, more than 3,500 graduates achieved ICT qualifications at levels 6 to 9 in 2014 and 2015. However, notwithstanding the range of actions implemented under the ICT Action Plan this improvement in graduate supply as a percentage of job openings is 62 per cent. These indicators point to demand for ICT skills in Ireland growing stronger. While it is recognised that students ultimately decide on which courses they wish to undertake, if skills supply constraints are not addressed this may lead to the higher growth rate not being sustained. Given the increasing demand for ICT professionals, the Council welcomes the ongoing review of the ICT Action Plan and the proposed development of a new ICT Action Plan. Against this background, it is essential that a new forecast for ICT skills demand in Ireland is completed, so that it informs the implementation of an updated ICT Skills Action.

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69 Eurostat News Release 114/2017
70 Oireachtas PQ 29914/29915/16

Recommendation: Continue to prioritise STEM education. Identify priority goals and actions in relation to STEM, and progress a STEM Education Policy Statement and Implementation Plan.

Responsibility: Department of Education and Skills

Recommendation: Update the forecasts to identify the high-level ICT Skills demand at occupational level in the broad ICT sector and across other sectors of the economy to 2022.

Responsibility: Expert Group on Future Skills Needs

Recommendation: Continue to progress the actions set out in the 2014-2018 ICT Action Plan. Work with enterprise and the education sector to introduce an updated ICT Action Plan with a range of targeted actions over the next five years related to the development of Ireland's ICT skills supply, particularly high level ICT skills deficits. Ensure that implementation of the new Action Plan reflects the updated occupational forecasts by the EGFSN.

Responsibility: Department of Education and Skills

Digital Skills

Increased digitalisation brings with it the need for ICT specialist skills but also affects the skill-competence requirements across all sectors. More generally, digital skills and competences cannot function in isolation; the prevalence of ICT requires that individuals have greater proficiency in digital technology. Increasing digital skills can facilitate greater levels of productivity and greater participation in society. Irish adults rank above the Euro area average in terms of possessing low digital skills and conversely the proportion with good digital skills is below our UK and European counterparts. Ireland ranks very high when it comes to the integration of digital technologies by businesses, mostly because many SMEs embraced e-commerce. Internet users increasingly take advantage of high-speed infrastructures and make good use of online public services. Ireland's main challenge is to equip more than half of the population with at least basic digital skills. 44 per cent of persons aged 16-74 in Ireland report as having advanced (25%) or basic (19%) digital skills. This is below the Euro area average (57%) and considerably below the best performing EU country Denmark where 78 per cent of the population report as having advanced (53%) or basic (25%) digital skills. The proportion of the population in Ireland who report having low overall digital skills (37%) is the highest in the EU and above the Euro area average (24%)[71]. Furthermore, survey data from the OECD's Programme for the International Assessment of Adult Competencies (PIAAC) shows the levels and distribution of digital skills among the Irish working-age population are relatively low compared with competitor countries in terms of literacy, numeracy and digital skills.

It is likely that policies that facilitate skills adaptation and adaptability as well as labour mobility will be needed to prevent polarisation of the labour market. From a long-term competitiveness perspective, it is important that Ireland is ambitious and sets targets to increase the level of digital skills in Irish society.

Recommendation: Identify and quantify how the increased demand for digital skills in the labour market will affect different sectors and job roles.

Responsibility: Expert Group on Future Skills Needs

71 European Commission, Europe's Digital Progress Report 2016

In addition to digital related training being progressed via employment and training supports, initiatives such as the new Digital Skills for Citizens Scheme which aims to support digital literacy and digital adoption are welcome. Under the scheme Digital literacy training is targeted at people over 45, farming communities, small business owners, the unemployed, persons with disabilities and disadvantaged groups.

It is acknowledged that supporting a cultural shift in Ireland's digital competencies will take time. However, it is vital that the development of digital skills is progressed, particularly in Ireland's education training system. A key theme in the 2017 Action Plan for Education is enhanced use of digital technologies in teaching, learning and assessment at all levels. The Council welcomes the range of actions which are being progressed across the education and training system to support the acquisition and enhancement of digital skills. Actions include the implementation of the Digital Strategy for Schools 2015-2020 and supporting Solas on the implementation of the Strategy for Technology Enhanced Learning in FET 2016-2019. Within the Higher Education sector, it is important that the Roadmap for Enhancement in a Digital World 2015-2017 is implemented which aims at supporting the development and embedding of digital capacity in teaching and learning activities and developing consistent digital experiences for learners. The Council considers the following actions should be progressed by the Department of Education and Skills:

- Continue to embed digital learning objectives within education policy and curriculum reform initiatives;
- Deliver on the commitments in Digital Learning Framework to allow schools evaluate their progress and measure how they stand against benchmarks of highly effective practice of using digital technologies in teaching and learning. Develop an evaluation methodology for the implementation of the Framework and its future development;
- Continue to rollout the capital investment programme backed by the dissemination of research on best practice in equipment selection, collaboration and technical support, continuing to improve the availability of high-speed broadband connectivity in schools; and,
- Work with stakeholders to develop new ways of business and industry supporting schools in embedding digital technologies in all aspects of their activities.

Foreign Languages

Foreign language capability and cultural awareness are essential for enterprises to compete in international markets and are skills competencies likely to be increasingly important in the context of Brexit and the need for export market diversification. It is also important in the tourism and hospitality sector where language skills facilitate everyday contact between industry staff and visitors but also enhance the capability of industry to do business with buyers in overseas markets where English is not the first language. An improved supply of foreign languages capability (numbers, range and proficiency) could help support enterprises internationalise and enhance Ireland's attractiveness as a location for inward investment. In the context of diversified export strategies, it is important that a step change in language learning in Ireland is achieved in the medium term. Language skills can enable firms gain a competitive advantage in terms of understanding client needs and garnering market intelligence. Most our students are studying three languages (Irish, English and a foreign language). Ireland appears to be like other English-speaking countries, in that the learning of foreign languages is not accorded the same priority as those countries who regard English as a common international language of communication and business. In the IMD's 2017 Global Competitiveness Report Ireland ranks 44th in terms of perceptions that language skills meet the needs of business. In relation to this ranking, all the major English-speaking countries rate relatively poorly since 2015 (Australia 27th to 34th, New Zealand 35th to 36th, USA 42nd, UK 49th to 51st). The EGFSN has previously noted that an improved supply of domestic foreign languages capability (numbers, range and proficiency) would act as a major boost to the enterprise sector achieving its growth potential. The HEA's 2015 National Employer Survey also indicated the importance of enhancing the supply of

foreign language skills – 25 per cent of employers indicated that they had a specific requirement for foreign language proficiency skills in their organisation[72].

The Council strongly supports the ambition set out in the Department of Education and Skills ten-year strategy for foreign languages. The Strategy which is currently being finalised sets out a range of actions to deliver its ambitious targets including that all Junior Cycle students will have an opportunity to study a foreign language by 2020; an increase in the number of Leaving Certificate students taking foreign language subjects and to support the entire higher education cohort to study a foreign language, as part of their course. The Strategy for Foreign Languages will also put an emphasis on increasing the uptake of those studying courses relevant to international business and ICT. Delivering on the ambitions set out in the Strategy will require resources and will take time to succeed. It will necessitate changes in teaching culture and learning across all levels of the education and training system. There is also an important role for enterprises that trade internationally, representative bodies and education and training providers in communicating to students, parents and teachers the significance of foreign language proficiency and cultural awareness in shaping employment and career prospects. A commitment to implementation, benchmarking performance and adopting a coherent multi stakeholder approach would also seem critical.

Recommendation: Prioritise the recommendations and actions arising from the Foreign Languages Strategy and devise a time bound plan for implementation.

Responsibility: Department of Education and Skills

Recommendation: Establish a languages advisory group to oversee implementation and promotion of the Foreign Languages Strategy. Membership should include representatives from the enterprise sector.

Responsibility: Department of Education and Skills

Recommendation: Benchmark Ireland's relative performance in languages at all levels. The assessment of foreign language learning proficiency outcomes at further and higher education should be benchmarked in a manner that facilitates comparison of linguistic competence with international competitors.

Responsibility: Department of Education and Skills

Apprenticeships

The National Skills Strategy 2025 includes a target of 50,000 apprenticeship and traineeship places to be provided over the period 2016-2020. The number of new apprentices declined significantly with the onset of the economic crisis in 2007 (falling from a peak of 8,300 in 2006 to 1,200 in 2010). Reflecting improvements in the labour market, intake into apprenticeship programmes has begun to recover, with over 3,800 new registrations in 2016. The Council considers increasing the availability of technical, craft and professional skilled workers, particularly apprentices, is critical for growth, employment and competitiveness. In Ireland, apprenticeship training is currently concentrated in the broad field of engineering manufacturing, construction and the motor sector with currently 27 apprenticeship programmes.

The Action Plan to Expand Apprenticeship and Traineeship in Ireland 2016-2020 is a positive development in terms of an action led roadmap to increase participation. It sets out a series of detailed actions and annual targets for developing new apprenticeships, a development timeline of 12-15 months; clear annual targets for apprenticeship

72 Languages of particular strategic importance included German, French, Spanish, Italian, and emerging languages such as Mandarin Chinese, Japanese, Russian and Arabic (at relatively lower numbers).

registrations as well as targets for the development of new programmes. It is important the Plan is regularly reviewed to ensure its ambitions and the actions on which to deliver them remain appropriate. As set out in the 2016 Action Plan for Education, a process of significant structural reform is being undertaken to facilitate expansion both in the range of apprenticeships available and annual intake. The Plan seeks to work with employers to expand the range of apprenticeships significantly across all major economic sectors, and double enrolments. In terms of expanding the range of apprenticeships offered, several new apprenticeship programmes in Insurance, Financial Services, Electrical Engineering, Medical Devices and Polymer Processing have been launched. Additional apprenticeships are scheduled to be launched in tourism and hospitality. New apprenticeships are also expected to get underway in the coming in months is various sectors such as Engineering and Haulage. A key commitment set out in the Action Plan to Expand Apprenticeships and Traineeships in Ireland 2016-2020 was the issuing of a second call for apprenticeship proposals. The second call closed on the 1st September with 77 proposals received across a range of sectors, occupations and at various levels on the NFQ.

A steering group, chaired by Solas with representatives from all key stakeholders, has recently been established to examine ways of relaunching existing traineeships and developing new career traineeships. Solas and the Education and Training Boards are also developing and rolling out Career Traineeships, which are sector specific programmes, in areas such as Hospitality, Engineering, Visual Effects for Animation and Post Production and Digital Sales and Marketing for small businesses. These developments are very welcome. In addition to the roll out of new schemes it is imperative that existing apprenticeships continue to be monitored to ensure syllabi, equipment and course duration and teaching structures remain fit for purpose and attuned to labour market needs. The publication of annual targets for both apprenticeship registrations and new programmes is also welcome.

As the apprenticeship model is employer led it is vital that the State continues to engage with enterprise and employer led networks in developing curricula and to support capability within employers who participate in apprenticeship programmes. In seeking to significantly enhance the range of apprenticeships and intake it is important that consideration is given as to how forecasting occupational demand and intake can be effectively aligned so the apprenticeship system can be made robust to changes in the economic cycle. It remains vital that the State actors continue to work closely with employers and consortia to develop proposals into sustainable apprenticeships and to strengthen partnerships between education and training providers and employers, particularly at local level. The Enterprise Agencies and representative bodies could be best placed to advise on the challenges for enterprise wanting to take on apprentices and trainees and to consider appropriate engagement strategies with SMEs, micro enterprises and MNCs. Experience in the UK suggests that encouraging smaller and micro enterprises to engage with apprenticeships may pose challenges, particularly regarding perceptions regarding quality and the time and resource constraints involved in taking on apprentices. Apprenticeship growth in small firms could be supported through greater communication of the benefits of employing an apprentice, innovation in selling the benefits (for example an online calculator help small businesses work out the cost of training an apprentice and assess the return on their investment) and responsive and flexible local employment engagement strategies. In this regard, the regional skills fora could be considered as one available vehicle to facilitate uplift in SME and micro enterprise participation.

An important ongoing element of apprenticeship reform is the need to change mind-sets towards apprenticeships and ensure they are not considered a second-best alternative to third level education. Historically, there has been a low level of female participation in apprenticeships. An improved gender balance may be achieved as the scope of apprenticeships is widened. However, it remains important that this issue is monitored closely and any specific barriers to female participation are identified and addressed. Young people, employers, parents and teachers are aware of the benefits and opportunities of apprenticeships. During 2017, a promotional campaign got underway on apprenticeship nationally, with the Apprenticeship Council, Solas, the HEA and consortia and other key stakeholders working in partnership. A campaign to promote apprenticeship must be sustained to have impact. Consideration should be given also as to how best to ensure that enterprise, representative bodies, and career guidance practitioners are enabled to

increase interest and demand from employers in running apprenticeship programmes. The 2013 Review of Apprenticeship Training in Ireland concluded that a shift in perceptions regarding the value of apprenticeships and vocational education and training would not occur without a change in how apprenticeships can function as a progression route into higher education. It recommended that apprenticeship programmes be assessed to establish streamlined progression pathways, ensuring appropriate mechanisms for recognition of prior learning and for exemptions, where relevant.

Recommendation: Continue to implement a range of actions to strengthen the apprenticeship system, particularly through enhancing the range of courses and increasing intake.

Responsibility: Department of Education and Skills, Solas, Apprenticeship Council

Recommendation: Strengthen partnerships between education and training providers and employers, particularly at local level to meet identified skills requirements.

Responsibility: Regional Skills Fora

Recommendation: Continue to identify, and work to address, barriers to participation in apprenticeships and particularly, SME engagement. Review barriers to female participation in apprenticeships as set out in the National Skills Strategy.

Responsibility: Department of Education and Skills, Solas, Apprenticeship Council

Recommendation: Continue to implement and sustain a targeted and tailored information and awareness campaign to highlight the value of participation in apprenticeships to participants and employers.

Responsibility: Solas

Recommendation: Ensure that the design of each new apprenticeship examines progression pathways for apprentices into higher education.

Responsibility: HEA, Solas, Apprenticeship Council

Lifelong Learning

Lifelong learning is important to competitiveness as it facilitates structural adjustment, productivity growth, innovation and effective career progression. Brexit will impact on the skills requirements of enterprise, particularly small and medium-sized enterprises (SMEs) and on the upskilling/ reskilling needs of individuals. In striving to improve Ireland's performance, the engagement of both education and training providers and employers is required. The Irish workforce has historically lagged several EU countries to the extent to which it engages in lifelong learning activities, ranking 20th for participation. Based on Eurostat data, in 2015, the proportion of persons in Ireland receiving some form of education or training in the four weeks preceding the labour force survey was 6.5 per cent, compared with the EU28 average of 10.7 per cent and 15.7 per cent in the UK. CSO QNHS data for 2015 shows much of lifelong learning in Ireland is in formal learning activities (i.e. education and training in the regular system of schools, universities, colleges and other formal educational institutions). The remainder participated in non-formal learning activities (i.e. other organised and sustained educational activities which may or may not take place in educational institutions). Lifelong learning participation rates tend to decline with age, but participation is greater amongst those with higher

educational attainment levels. Participation rates were above the national average for the economically inactive and the unemployed, while the rate was below the national average for those in employment. Ireland's participation rate in non-formal learning is particularly low, although its rate of formal learning is amongst one of the highest in the EU.

One of the key targets set out by the Action Plan for Education 2016-2019 is to increase Ireland's lifelong learning participation rate to 10 per cent by 2020 and to 15 per cent by 2025[73]. The Council acknowledges recent policies including the National Skills Strategy 2025, the Further Education and Training (FET) Strategy and the Action Plan for Education 2016-2019 all acknowledge through a range of actions, that the development of the skills of those at work will play a key role in the context of lifelong learning, and confirm the need to work with employers and employees. Work is nearing completion on the development of a policy framework for the FET sector to support employee development which along with an implementation plan will be published this year and will contribute to meeting the targets set in the National Skills Strategy 2025 to increase participation in lifelong learning.

It is important to ensure a provision gap does not prevent participation in lifelong learning. The forthcoming 2017 Further Education and Training Service Plan Solas will include information on the range of flexible and part time programmes provided. To increase participation, particularly among persons in employment, it is likely that there is a need for enhanced flexibility in the modes and methods of programme design and development, especially when recognising the needs of adult learners who are already in employment. Traditional full or part time third level programmes may not be accessible due to work life balance issues. The Council welcomes the commitment in the Programme for Government to support an increase in the number of flexible courses available, particularly part time courses and during evenings, the summer and weekends. The Council considers the scope of lifelong learning goes beyond the responsibility of a single Government Department. Improving Ireland's lifelong learning participation rate will require policy co-ordination and implementation involving many partners, particularly employers.

Where informal learning is required – particularly for low skilled workers, the Recognition of Prior Learning (RPL) is an important supporting mechanism to boost participation in lifelong learning. RPL supports access, transfer and progression across all levels of the education and training system. RPL is also an important vehicle in encouraging participation in on-the-job or in-company training.

Best practice also suggests that RPL can be used for broader purposes, including social inclusion and equality of opportunity. Despite improvements, there remains a deficit in relation to the development of system-wide capacity for RPL. While there is established good practice in RPL across the Higher Education system, and through programmes such as Springboard+, it is likely there remains a need to build on the progress already made. The Action Plan for Education 2016-2019 commits to the development of a national policy on RPL by 2018. To achieve this, mechanisms are required to be progressed to:

- Increase learner choice in qualifications;
- Provide greater flexibility in course provision where feasible – for example, delivery of courses through innovative and blended channels should become more commonplace, and the current emphasis on having learners present in class should be reviewed;
- Create new routes to attaining qualifications;
- Enhance quality assurance/recognition of qualifications; and,
- Optimise stakeholder involvement in curricula delivery and design.

73 The EU has also set a lifelong learning target of 15 per cent by 2020. Eurostat data shows at 6.4 per cent in 2016, Ireland's lifelong learning participation rate was below the EU 28 average of 9.1 per cent and well behind the top performers, Denmark (32%) and the UK (16.3%) Overall, Ireland ranked 20th out of 28 EU countries; a fall of four places when compared to 2011.

Recommendation: Identify and address the barriers to participation in lifelong learning (formal and informal) to meet the targets for an uplift in lifelong learning as set out in the National Skills Strategy. Continue to work with stakeholders in this regard.

Responsibility: Department of Education and Skills

Recommendation: Develop a policy for the Recognition of Prior Learning,

Responsibility: Department of Education and Skills, Quality and Qualifications Ireland

Recommendation: Improve accessibility in the modes and methods of education and training programme design and delivery and provide greater flexibility in delivery modes.

Responsibility: Department of Education and Skills

Recommendation: Continue to deliver enterprise-led training and develop effective diagnostic and measurement tools to measure the impact of participation in terms of productivity, sales, and employment.

Responsibility: Skillnets

Realising the Potential of Those Excluded from the Labour Market

Irish labour market indicators provide clear evidence of well-established labour market growth. The most recent CSO data shows 2.06 million people in employment in Q2 2017 representing a 2.4 per cent annual increase (48,100). In seasonally-adjusted terms employment increased by 0.2 per cent (3,300) over the previous quarter. However, it is notable that the QNHS shows a relative deceleration in employment growth in 2017 compared to 2016. The level of unemployment decreased by 46,300 in the year to Q2 2017 (-24.7%) and the seasonally adjusted unemployment rate in Q2 fell to 6.2 per cent from 6.8 in Q1 2017. The long-term unemployment rate and youth unemployment rates have also decreased. Amidst the positive developments in both the economy and labour market, the risk of embedded structural unemployment persists, particularly in relation to very long term unemployment and youth unemployment. Long term unemployment and youth unemployment levels are declining, yet they remain high. Eurostat data shows youth unemployment (unemployment amongst those aged 15-24 years) declined in 2016 to 17.2 per cent and is now below the Euro area average (20. 9%).Targeted activation policies that help unemployed people gain employment and to maintain and update their skills, are vital.

The importance of effective activation policies and programmes is recognised in the latest National Skills Strategy. Acknowledging the shift from an economy in crisis to an economy experiencing strong employment growth, several of the Strategy's key objectives reference the labour market. In this regard, the Strategy states that "education and training providers will place a stronger focus on providing skills development opportunities that are relevant to the needs of learners, society and the economy"; that there will be a "specific focus on active inclusion to support participation in education and training and the labour market"; and that the Strategy "will support an increase in the supply of skills to the labour market".

Pathways to Work

Given that the economy is approaching full capacity, measures to increase labour market participation remain of crucial importance for increasing labour supply. Pathways to Work remains the basis of reforms to increase labour market participation and make work pay. The Pathways to Work Strategy prioritises the activation of the long-term

and young unemployed. It also plans to extend services and supports to other cohorts currently not registered as unemployed but interested in playing a more active role in the labour force. Pathways to Work also reflects a shift in focus from 'activation in a time of recession' to 'activation in a time of recovery and growth'. The strategy has been successful in contributing to a reduction of circa 38 per cent in the number of people unemployed during that period. As the economy continues its path to recovery, the Government, in consultation with stakeholders, developed a new Pathways Strategy which reflects the need to ensure that the workforce is not only fully employed but it is also equipped to respond to the demands of a growing economy. Pathways to Work 2016-2020 has two main objectives:

1. To continue and consolidate the progress made to date with an initial focus on working with unemployed jobseekers, in particular, people who are long-term unemployed; and
2. To extend the approach of activation to other people who, although not classified as unemployed jobseekers, have the potential and the desire to play a more active role in the labour force.

Recommendation: Conduct an annual review of Pathways to Work to track progress and evaluate the impact of the strategy.

Responsibility: Department of Employment Affairs and Social Protection

A key challenge is not just to work with jobseekers to prepare them for employment, but also to sell their capabilities to employers, or at least convince employers to give jobseekers the opportunity to sell themselves. Employers provide the "Work" element of the Pathways to Work Strategy. The Council acknowledges the significant investment that has been made in enhancing employer relationship capability in recent years with the Department of Employment and Social Protection. A wide range of supports to assist employers in relation to their recruitment and employment support needs exist including:

- www.jobsireland.ie, a free online job vacancy handling service;
- Tailored recruitment services provided by dedicated employer relations personnel and Intreo case officers to identify suitable candidates for recruitment;
- Financial incentives to recruit from the Live Register, e.g. JobsPlus; and
- First Steps, a youth developmental work experience programme.

The Department also works closely with the Education and Training Sector to equip jobseekers with the skills necessary to meet current and future needs. The Employment and Youth Activation Charter is an initiative co-sponsored by the Labour Market Council whereby signatories commit to consider suitable candidates from the Live Register as part of their recruitment processes and to provide employability supports for those that are further removed from the labour market.

Recommendation: Continue to develop and implement an integrated and consistent approach to engagement with employers to position the Department as a partner of choice regarding recruitment services.

Responsibility: Department of Employment Affairs and Social Protection

Although youth unemployment levels in Ireland are declining, they remain high. First Steps is a programme, specifically designed to provide young persons aged 18 to 24, who have had little or no experience of working, with the opportunity to learn basic work and social skills while on a placement in a real work environment. The programme targets long-term unemployed, those with lower education levels and persons who face barriers to entering

employment. The participants receive a payment of a €52.50 top-up each week in addition to their social welfare payment. The duration of placements varies between 3 and 9 months. The Department of Employment Affairs and Social Protection has designed a dedicated JobsPlus Youth strand for young people. Under this strand, the qualifying period for employing young people has been reduced from twelve to four months. Take up of the programme is low.

Other policy initiatives targeting youth unemployment include:

- Enhanced INTREO process for under 25s - jobseekers under 25 years of age who have been unemployed for 12 months or more will be offered a referral to a training course, or programme that leads to a job or to job interview within four months of the engagement process commencing;
- Community Employment - These places are targeted at long-term unemployed youth who are very distant from the Labour Market e.g. youth in drug rehabilitation, early school leavers who need special report;
- Tús - a community work placement scheme providing short-term working opportunities for unemployed people. The scheme reserves placements for long-term unemployed youth.

The large number of employment activation initiatives designed and implemented by various Government Departments and organisations makes it difficult to assess the cost of these programmes and evaluate the impact of each programme in terms of improving the labour market.

Recommendation: Introduce a new work experience programme targeted at young jobseekers who face barriers to entry into the labour market and provide them with the opportunity to acquire skills in a supportive environment.

Responsibility: Department of Employment Affairs and Social Protection

Recommendation: Continue to evaluate labour market activation programmes and to use the findings from such evaluations to reform and align programmes to better match the needs of participants and employers.
Responsibility: Department of Employment Affairs and Social Protection

JobPath

Launched in 2015, JobPath is an employment activation service initiative which caters mainly for people who are long-term unemployed (over 12 months) to assist them to prepare for, secure and sustain full-time paid employment or self-employment. The JobPath service works closely with employers to secure vacancies for jobseekers and provides the jobseeker with advice and support for at least the first three months, and up to twelve months of employment.

In 2017 the Department of Employment Affairs and Social Protection published a Report[74] analysing the outcomes for jobseekers referred to the JobPath until March 2016. The data indicates that JobPath participants demonstrate a higher rate of job starts compared to non-participants. The job start impact appears to be greater for people who have a longer duration of unemployment. However, due to the low number of people who have completed the service to date, and the potential impact of other factors such as jobseeker age, educational qualifications and prior employment history, the data should be treated with caution. A rigorous assessment of performance based on econometric evaluation will be commissioned in Q4 2017 when sufficient data is available to effectively assess outcomes.

74 JobPath Performance Data, 2017, Jobseekers Referred to JobPath July 2015 – March 2016

Recommendation: Conduct a full evaluation of JobPath to ensure that the service is fully aligned with the needs of the unemployed and employers.

Responsibility: Department of Employment Affairs and Social Protection

JobsPlus

JobsPlus is an incentive which encourages and rewards businesses who offer full-time employment opportunities to the long-term unemployed. The incentive provides monthly cash payments to businesses to offset their wage costs.

As part of the overall review of JobsPlus, in 2017 a Focused Policy Assessment[75] reviewed the operation of the JobsPlus employment incentive scheme from the commencement of the scheme in July 2013 up until the end of 2016. The Assessment found that JobsPlus has proven effective at getting people who were long-term unemployed off the Live Register. Over the lifetime of JobsPlus, more than 12,000 people who were long-term unemployed have gained employment through the scheme and over 8,000 employers have benefitted from JobsPlus grants. However, the Report also found that JobsPlus is currently not closely aligned to the age profile of people who are long-term unemployed. Due to the economic recovery, the deadweight on the scheme for under 25s may be increasing as more of this cohort would find work without the assistance of JobsPlus. At the same time placing older, longer-term unemployed jobseekers remains a challenge. Unemployed people over the age of 50 are under-represented on JobsPlus. The evaluation also suggests that the only category of long-term unemployment duration that has grown proportionally during the lifetime of the scheme is the category of those who are unemployed for more than three years. The Focus Policy Assessment will be complemented by a counter-factual impact evaluation, incorporating econometric modelling to assess and measure the impact of the programme on labour market outcomes for participants. The Council recommends that the impact report explore the scope of adjusting the programme to focus on those who are unemployed for three years or longer and particularly, the recruitment of older people who are long-term unemployed. It is envisaged that the final report is completed in 2018.

Recommendation: Adjust JobPlus to the needs of the long-term unemployed and particularly the category of older people who are long-term unemployed, while considering the impact of other job activation policies.

Responsibility: Department of Employment Affairs and Social Protection

Attracting Talent from Abroad

EURES – European Employment Services

To meet skills and foreign language needs, particularly in highly specialised areas such as ICT, Ireland will continue to have a requirement to attract talent from abroad. The Department of Employment Affairs and Social Protection is responsible for coordination and delivery of EURES services in Ireland. The purpose of EURES is to facilitate mobility in the European labour market by providing services to jobseekers and employers wishing to take advantage of the right of free movement for workers in the EU/ EEA.

EURES Ireland coordinates and implements several mobility schemes including the 'Co- Sponsored Placement Programme' which offers jobseekers an opportunity to upskill and gain experience through a work placement in another European country and supports Irish based firms who are having difficulty recruiting workers with specific skills. Under 'Co-Sponsored Placement Programme' unemployed jobseekers aged 18- 30 can take up a work placement in Europe for up to 12 months. During this time the jobseeker is Co-Sponsored by EURES Ireland and the Employer offering the work placement. On completion of the placement the jobseeker will be upskilled and meet the

75 Focused Policy Assessment, Department of Employment Affairs and Social Protection, 2017

requirements to take up employment in Ireland. Participation on these programmes has been found to enhance the development and skills of those taking part and assists them in realising their full potential.

Recommendation: Raise awareness with employers of the benefits of using EURES for sourcing candidates from within EU/EEA countries. Utilise the Co-Sponsored Placement Programme to upskill jobseekers so they meet sector specific skills requirements of employers in Ireland.

Responsibility: Department of Employment Affairs and Social Protection

Employment Permits Policy

Policy in relation to applications for employment permits remains focused on facilitating the recruitment from outside the EEA of highly skilled personnel, where the requisite skills cannot be met. The system is ordered through the Highly Skilled Eligible Occupations List, which lists occupations in high demand in the Irish labour market and which is reviewed twice a year to keep the orientation of economic migration in line with the labour market. In 2011, 23 per cent (1194/5182) of employment permits were granted for occupations in the information technology sector. In 2016, 34 per cent (3180/9369) of employment permits were granted for IT occupations (in all sectors)[76].

Over the past number of years, several initiatives have been taken to introduce efficiencies into the processing system including the introduction of the Trusted Partner Initiative, and the introduction of the Employment Permit Online System (EPOS) in September 2016 which has reduced processing times for employment permits, with the average waiting time decreasing from 27 days in the first half of 2016 to 14 days in the equivalent period in 2017. This is among the lower processing times in the OECD. Improvements in the labour market have, however, seen increases in employment permits demand (in excess of 30% per annum in recent years) with a 13 per cent increase in the number of applications received in 2016 compared with 2015. Throughout this time, the demand for employment permits has risen by one third year-on-year.

Brexit may also see additional demand placed on the system. It is important that Ireland continues to optimise the employment permits system by making further use of ICT in employment permits processes and reviewing the effectiveness of the Trusted Partners initiative. It is important that Ireland's employment permits regime continues to be administratively effective and efficient, has a clear legislative basis, and is sufficiently flexible to respond to changes in the labour market. Good progress has been made in recent years in reducing the administrative burden through initiatives such as the Trusted Partner Initiative and a shift to online applications.

It is also crucial that Ireland continues to attract non-EU students into Master's and PhD (Level 9 and 10) degrees as such students are an important source of funding for Irish HEIs and to address acute skills gaps. In 2015 the OECD recommended that Ireland could make better use of international students as a channel for high-skill immigration by increasing post-graduation job search periods and exempting graduates from employment permit fees in highly demanded areas where there are significant skills gaps. It is acknowledged that the system already makes concessions for graduates to ease their entry into the Irish labour force in terms of minimum annual remuneration levels. These concessions should be monitored on a regular basis to ensure their continued effectiveness at meeting skills needs.

Recommendation: Continue to optimise the employment permits system by making further use of ICT in employment permits processes and review the effectiveness of online permits and the Trusted Partners initiative.

Responsibility: Department of Business, Enterprise and Innovation

76 It should be noted that the data measured in 2011 was entirely sectoral, and subsequently the data was collated at occupation level, so any comparison should be viewed as indicative rather than exact.

Recommendation: Consider making better use of international students as a channel for high-skill immigration by reviewing post-graduation job search periods and exempting graduates from employment permit fees in highly demanded areas where there are significant skills gaps.

Responsibility: Department of Justice and Equality/ Department of Business, Enterprise and Innovation

Special Assignee Relief (SARP)

The Special Assignee Relief (SARP) programme has an important role in attracting specialised, experienced senior executives to Ireland and ensures that high skilled talent is attracted to firms based in Ireland. The SARP is designed to secure and embed investment which is sustainable in the longer term. Budget 2017 contained an extension of the Special Assignee Relief Programme to assist businesses to relocate key staff to Ireland to provide certainty for foreign direct investment in Ireland. Many sectors in Ireland that are exposed to the UK have a high percentage of small and Irish owned enterprises. It is vital that SARP remains internationally competitive, particularly as regards attractiveness to SMEs, as several other jurisdictions with which Ireland competes for FDI operate specialist regimes to attract mobile inbound employees.

Recommendation: Evaluate the effectiveness of SARP to ensure the scheme is meeting objectives and remains internationally competitive and accessible to enterprises based in Ireland including SMEs

Responsibility: Department of Finance / Department of Business, Enterprise and Innovation

TechLife Portal

Ireland is in intense competition with other countries, both to retain domestic talent and to attract ICT Practitioners from abroad- including expatriate talent. Improving quality of life is particularly important in ensuring Ireland is an attractive location for talent. Improvements in the planning, development and creation of an attractive environment to live and work and addressing issues such as infrastructure, built and natural environment are dealt with through out the report.) The ICT Skills Action Plan 2014 – 2018 sets out a collaborative, system-wide response aimed at building the domestic supply of graduates from the education system and ensuring Ireland maintains a strong ICT talent pool and promoting Ireland internationally as a centre for high-level ICT skills. Ireland established the TechLife Portal in June 2016 to attract more ICT talent from abroad. The Portal provides information about the tech environment and careers in Ireland, as well as practical advice about moving to Ireland.

Recommendation: Review the effectiveness of the TechLife Portal.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Ireland

Theme 2: Generating an uplift in enterprise competitiveness

Introduction

Sustainable improvements in quality of life are dependent on competitiveness as this sustains economic growth. Growth is dependent on the performance of firms in international markets, which is a function of the competitiveness of the operating environment for them in the country and the range of inputs to the production process. The success of the enterprise sector affects overall prosperity and steps towards this prosperity also indicate progress in national competitiveness. The Council is particularly concerned about the Brexit related challenges confronting our enterprise sector at this time, specifically; the cost-competitiveness implications caused by the volatility in exchange rates, and uncertainty regarding trade. These pose real threats to continued enterprise growth. Brexit requires Ireland to place an increased emphasis on enhancing the factors that drive and enhance competitiveness performance at firm level.

The Competitiveness Challenge is focused on the medium term. However, many of the policy challenges recommendations throughout this theme address enterprise competitiveness in both the short and medium term. This year's report considers the theme of generating an uplift in enterprise competitiveness throughout four chapters.

1. **Maintaining Cost Competitiveness:** Cost competitiveness makes Ireland a more attractive location in which foreign investors can base and develop their operations, and allows Irish firms to compete more effectively in foreign and domestically traded markets. As a small open economy, dependent on exports and foreign investment as major drivers of growth, any deterioration in our cost competitiveness will have a major negative impact upon economic growth, employment and our standard of living. More broadly, a competitive cost base can help to create a virtuous circle between inflation, wage expectations and productivity. Ireland's current price profile could be described as 'high cost, rising slowly'. Strong economic growth and the UK's decision to leave the EU bring the importance of enterprise cost competitiveness into sharp focus.
2. **Fostering Productivity Growth:** Productivity is a key driver of national competitiveness. Improving levels of labour and capital productivity enables enterprises to improve their efficiency and profitability, and enhances the ability of countries to maintain international competitive advantage and sustainably improve living standards. The narrow base of sectors driving productivity performance leaves Ireland vulnerable to shocks and serves to highlight the scope to enhance productivity at sector and firm levels. The productivity challenge for Ireland is to broaden the enterprise productivity base and ensure that economic and employment growth is accompanied by productivity growth.
3. **Building Innovation Capacity:** Innovation is a key driver of competitiveness, productivity and economic growth. There are many benefits for firms undertaking innovation including greater responsiveness and understanding of customer demands; faster turnaround times; reduced waste; cost improvements; and efficiencies arising from organisational improvements in product design and quality. To remain globally competitive, Irish enterprise requires continuous, sufficient and effective investment in R&D not only by the State but especially by the private sector; the presence of high-quality scientific research institutions; extensive collaboration in research between universities and industry and sophisticated business practices.
4. **Enhancing and Diversifying Ireland's Export Base:** While our trade performance will always be conditional on the ebb and flow of global markets, a more diverse export base can reduce exposure to external demand shocks, exchange rate fluctuations and instability in export earnings, upgrade value-added, and enhance growth and jobs. Irish-based exporters, particularly in exposed sectors such as traditional manufacturing and agri-food, must continue to be supported to scale and diversify sustainably and strategically to reduce the market exposure which Brexit has highlighted. There is a need to evolve into new products, markets and sectors, whilst maintaining the competitive advantages we enjoy in existing ones.

Theme 2: Chapter 1-Maintaining Cost Competitiveness

Introduction

Relative cost competitiveness makes Ireland a more attractive location in which foreign investors can base and develop their operations, and allows Irish firms to compete more effectively in foreign and domestically traded markets. The openness of the Irish economy means the competitiveness of the enterprise sector is particularly vulnerable to negative price and cost shocks which are outside the influence of domestic policymakers. These include unfavourable exchange rate movements, imported inflation from our major trading partners or higher international energy prices. The former two shocks have been particularly evident since Brexit. As set out in the Cost of Doing Business Report labour costs represent the largest category of location-sensitive cost factors for both manufacturing and services sectors. Facility or property costs represent the next significant cost factor, followed by transport (in the manufacturing sector) and utility costs.

The improved cost competitiveness of Ireland's exporting sector has been one of Ireland's greatest strengths in recent years and has been key to economic growth and job creation. It has been critical to the success of Irish based exporters, allowing them to maximise the opportunities arising from increases in global demand. Cost competitiveness is also essential in the tourism and hospitality sector, with the possibility of negative impacts on tourism numbers and revenue resulting from a deterioration in relative competitiveness. The Council is concerned that recent price falls in Ireland are driven by a combination of a cyclical response to the Irish and international recessions (i.e. reduced demand, spare capacity), and a range of external factors beyond the influence of domestic policy makers (exchange rates, fuel prices), rather than a response to structural changes in the economy.

The Council's 2017 Costs of Doing Business in Ireland report highlighted that Ireland remains a relatively expensive location in which to do business and warned that the return to economic growth has resulted in a series of upward cost pressures which undermine enterprise cost competitiveness.

These include:

- Overall, for the economy, labour cost growth has remained modest in recent years and below the growth experienced in both the UK and the EU28. However, this masks considerable divergence at sectoral level. Upward labour cost pressure is evident across the economy to varying degrees across all sectors. Relative labour Cost competitiveness in the indigenous economy remains a significant issue. The recent appreciation of the euro vis-à-vis sterling considering Brexit provides a timely warning about just how vulnerable Irish firms are to external shocks: given the importance of the UK as a destination for Irish exports, the appreciation of the euro has placed Irish exporters under increased cost competitiveness pressure;
- The availability and affordability of residential housing in Ireland is important from both a social and economic perspective. In terms of national competitiveness, it remains an impediment both to attracting mobile inward investment and the expansion of operations by enterprises and is a critical infrastructure impediment, particularly in urban areas. It matters not only from a costs perspective but also in terms of its impact on productivity. The last number of years has witnessed a sustained recovery in the Irish commercial property market. Commercial rents growth has been driven by an increase in demand, particularly in major cities reflecting the improving economy and a shortage of supply;
- While the cost of finance and the supply of credit have improved in recent years, Irish firms face higher interest rates on loans of up to and including €1 million than their competitors abroad. While most firms are understandably primarily concerned about accessing credit rather than the cost of that credit, the interest rate differential between Ireland and the Euro area places Irish based enterprises at a distinct disadvantage. The appreciation of the euro has placed Irish exporters under increased pressure regarding working capital;

- As a small peripheral EU economy, with limited resources, factors outside of our control such as international oil prices exert a significant influence on energy prices. The differential average price for electricity between Ireland and the UK has gone from a point where we are almost 12 per cent more expensive in 2012 to a situation where in the first half of 2016 electricity prices are 6 per cent cheaper in Ireland;
- Data for 2013 set out in the Costs of Doing Business report shows water and waste water costs for enterprise in Ireland compare favourably to those in competitor markets. Within Ireland, water costs vary significantly by local authority;
- Ireland is relatively cost competitive for telecoms, especially for business mobile broadband. However, concerns persist around the issues of quality (speed) and the regional availability of high speed services;
- Inflation has been low in Ireland and most advanced economies in recent years. In the Euro area, since 2013, inflation has been declining and remains well below the European Central Bank's target level. Ireland's price profile is described as "high cost, rising slowly" and Irish consumer prices remain over 25 per cent above the European Union average. Services prices remain the key driver of price inflation. In 2016 legal service prices were over 10 per cent higher than in 2013. By comparison in the three years to Q3 2016 the price of Accountancy Services grew by 2 per cent. Irish childcare costs as a percentage of income are amongst the highest in the OECD for couples and the second highest for persons on below the average wage;
- The Council is constrained by a lack of data in terms of its analysis of costs, their impact on enterprise and Ireland's relative international competitiveness across several important areas such as water, international freight, waste, insurance and Local Authority rates.

Policy Challenges and Recommendations

Inflationary Environment

Despite consumer prices being over 25 per cent higher in Ireland than the Euro area average, inflation remains subdued as domestic services price pressures are offset by price declines in imported goods which is at odds with the inflationary environments in both the UK and the Euro area. The Harmonised Index of Consumer Prices (HICP) registered an increase of just 0.2 per cent year-on-year in the January to June period. This followed a fall in HICP inflation by 0.2 per cent in 2016. Furthermore, the GDP deflator – a wider measure of inflationary pressures in the economy – fell by 1.2 per cent in 2016.

Weakness in sterling is likely contributing to downward pressure on consumer prices in Ireland as imports from the UK become less expensive[77]. Recent research from the Central Bank shows sterling having a disproportionate impact on Irish consumer goods price inflation. The weaknesses in the value of sterling explain why Irish inflation remained lower than all other Euro area countries throughout 2016. Understanding the importance of sterling in driving consumer goods inflation is imperative, as forthcoming negotiations surrounding British exit from the EU are likely to have major consequences for the euro-sterling exchange rate[78]. Exchange rate pass-through has important effects on the real economy. For instance, low consumer price inflation in 2016, largely due to weakness in the value of sterling, stimulated personal consumption expenditure through an increase in the real disposable incomes of Irish consumers. When a country, such as Ireland, has a large traded (relative to nontraded) sector, exchange rate pass-through to consumer prices tends to be large. Over the coming year, the negative price impetus coming from the goods side of consumer prices is expected to continue[79], although the rate of decline is likely to moderate. With improving labour

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77 Developments surrounding the British exit from the EU had substantial effects on the value of sterling, and these effects are likely to persist as the UK engages in deeper negotiations that are perceived as having direct consequences on the economies of both the UK and the European Union.
78 Reddin. P and Rice. J (2017) Exchange Rate Pass-Through to Domestic Prices
79 Central Bank, Quarterly Economic Commentary, July 2017

market conditions however, domestic cost pressures are likely to increase. The Council is concerned about the impacts of exchange rate pass through on overall costs and warns that if these effects dissipate inflation could spike. A return to the inflationary environment witnessed at the end of the boom period, where prices rose by almost 5 per cent in 2007, would eliminate the improvements in the cost base for enterprise witnessed since the start of this decade.

The persistent increase in services prices is also a concern for the Council. The experimental Services Producer Price Index (SPPI), devised by the CSO, measures changes in the average prices charged by domestic service producers to other businesses for a selected range of services. In most cases these services are provided to business customers only and so individual price indices should not be considered indicative of more general price trends in the economy. The index covers transaction costs from business to business and excludes consumers who are covered in the Consumer Price Index (CPI). As noted above the general inflationary environment in Ireland at present is low. Service price inflation, however, is currently running significantly higher than the CPI. Services prices in Quarter 1 2017, as measured by the experimental SPPI, were on average 2.5 per cent higher in the year when compared with the same period last year. Since 2010 services prices have risen by 25.5 per cent. The magnitude of these increases in business service costs has been higher than the Euro area 19 average during this period also which places Irish service users at a competitive disadvantage.

Costs of Doing Business

Labour Costs

In general, labour costs represent the largest category of location-sensitive cost factors for all industries. For services, labour costs typically range from 75 to 90 per cent of location-sensitive costs, while for manufacturing operations the typical range is from 45 to 60 per cent of total location-sensitive costs.

The relationship between labour costs and consumer prices is also a major determinant of Ireland's overall cost competitiveness. As real wages (nominal wages adjusted for inflation) determine living standards, the competitiveness challenge is to ensure that the interaction between wages, prices and productivity levels is sustainable and enhances both competitiveness and real living standards.

There is considerable heterogeneity across Europe regarding, average hourly labour costs in the whole economy. In Ireland, the hourly labour cost was €30.4 in 2016, compared to €26.7 in the UK and €29.8 for the Euro area 19. Overall, for the economy as a whole, labour cost growth has remained modest in recent years and below the growth experienced in both the UK and the EU28. However, this masks considerable divergence at sectoral level. In Ireland, the hourly labour cost was €30.4 in 2016, compared to €26.7 in the UK and €29.8 for the Euro area 19. While labour cost growth has been positive in Ireland, the growth has been below EU and Euro area averages in the 5-year period to 2016, representing a competitiveness gain for Ireland. Sectoral wage growth rates have been lower in Ireland than the Euro area over the corresponding period with the notable exception of Wholesale & Retail and ICT. In 2016, growth in labour costs in Ireland was strongest in Professional, scientific & technical activities (+3.4%, Euro Area+1.5%), Transportation & storage (+2.6%, Euro Area +1.1%) and Administrative and support service activities (+2.3%, Euro Area +0.8%).

As the economy continues to grow strongly, it can be expected that continued upward pressure on labour costs will intensify as the labour market tightens. To maintain competitiveness, it is vital that growth in our labour cost base is in line with productivity developments at sectoral level and not significantly out of line with our competitors across the OECD. Given the challenges faced by enterprise because of Brexit, relative competitiveness with the UK is particularly important. From a policy perspective, the State has a somewhat limited direct impact on labour costs (beyond its role in relation to the national minimum wage, public sector pay and the regulation of sectoral employment agreements). Ireland has a very progressive income tax regime and the 8th lowest rate of social security contributions in the OECD.

Employers' contributions are the 7th lowest, and employee contributions are the 11th lowest (although benefits are also correspondingly low in Ireland). The Government has accepted the recommendation of the Low Pay Commission and an increase in the national minimum wage of 30 cents to €9.55 per hour (3.2%) will take effect from January 1st 2018. This would work out as a €12 increase in a full 40-hour week. This is slightly ahead average increases in earnings (2-3%). Average weekly and hourly earnings generally increased across most economic sectors in 2016. Based on national gross minimum wages per month, Eurostat records Ireland as having the second highest NMW in the EU on €1,563.25 per month, Luxembourg records the highest rate (€1,998.59) while the UK has the seventh highest (€1,396.90). However, considering different price levels by applying purchasing power parities (PPP's) for household final consumption expenditure Ireland fell to sixth among EU nations. The report of the Low Pay Commission states that a moderate increase in the current Minimum Wage rate without an appropriate adjustment in employer PRSI would have a negative impact, particularly on small business costs. As set out in the chapter on macroeconomic stability it is important that this potential anomaly is addressed.

As a general principle, wage growth in both the public and private sectors should be underpinned by productivity growth. In this regard, there is a role for both the public and private sectors alike to proactively manage their cost base and drive efficiency, thus creating a virtuous circle between the costs of living, wage expectations and cost competitiveness. It is essential that we continue to monitor labour cost trends with a specific eye on relative international competitiveness, and ensure that Irish wage levels do not move in a manner that undermines enterprise competitiveness and threatens job sustainability. Government, enterprise and trade unions have a role in ensuring that Irish wage levels do not move in a manner that outstrips growth in productivity and labour cost growth in competitor economies.

Residential Property Supply

The stability of the housing market is vital from an economic and social perspective. The availability and affordability of residential property represents a significant threat to sustained competitiveness – specifically the rapid growth in residential rents and house prices. From a competitiveness perspective, the affordability of residential housing and rent levels impact upon the attractiveness of Ireland as a location for investment and indirectly impacts on enterprise costs. Rental costs can affect decisions around labour mobility and the attractiveness of entering employment. The cost of rent is also an important determinant of the level of consumer price inflation. Housing and rental costs also affect labour mobility within an economy. In addition to being an important element of Ireland's cost base, the affordability and availability of housing also has a bearing on productivity. A sustainable housing market enhances the competitive performance of our cities and towns, improves quality of life, maximises land use potential, attracts more overseas talent and reduces negative environmental and congestion costs caused by commuting. Poor planning decisions and a failure to properly coordinate private development with public infrastructure and service needs have affected the quality of life and competitiveness of our cities. This has also previously resulted in high house price inflation particularly in urban areas, severe traffic congestion, long commuting times, and increased pressure on local authority services such as water and waste. These issues have intensified as the labour market returned to growth in 2012.

By any measure, the collapse in the supply of new residential units in Ireland has been dramatic after unsustainable peak of 93,019 units completed in 2006; new housing supply fell to just 8,301 units in 2013, before recovering marginally to 12,666 in 2015. Against the backdrop of this collapse in supply, demand for housing is expected to continue to increase. Irish population growth is amongst the fastest in the EU, and our population is forecast to

increase from 4.6 million in 2016 to 5.2 million by 2031[80]. To address the impact of increasing demand - arising from a growing population, the trend towards smaller household size (thus requiring the supply of additional housing units), and the obsolescence of existing stock, the Housing Agency[81] estimates that, at a minimum, an additional 21,000 residential units would be required each year between 2015 and 2017 – a figure we are currently failing to meet, with obvious consequences for affordability. The CSO[82] reports that in the year to July 2017, national residential property prices increased by 12.3 per cent, with an increase of 7.1 per cent in the twelve months to July 2016. In Dublin, residential property prices increased by 12.7 percent in the year to July 2017 while residential property prices in the Rest of Ireland (i.e. excluding Dublin) were 11.7 per cent higher in the year to July 2017.

Continued strong demand means property price inflation is likely to continue in the short term without additional supply becoming available. The Council recognised the scale and urgency of the challenge faced but considers that while there is an immediate pressure for intervention but no obvious quick fix. Therefore, it is essential that a long-term approach be taken to ensuring a sustainable housing market. We must resist introducing policies which promise - but fail - to deliver a quick fix. In a situation where supply is constrained and demand is strong, rising housing prices are an inevitable consequence. Given the complexity of the rental market, it is important that interventions are not pursued in piecemeal fashion. Only an overarching and complementary series of interventions will deliver the desired outcome. This applies to both the rental and purchasing sectors and tinkering with the demand side simply favours one group over another and risks increasing prices further.

The State's involvement in the housing market ranges from setting standards, controlling planning and development, funding housing supply and related infrastructure, to regulating mortgages and rents, supporting affordable housing and taxation policy. Policy interventions can be designed to address supply across several fronts. Such interventions might include policies to encourage vacant dwellings to be brought on to the market; social housing policies; and policies to incentivise the expansion of the private rental market. Ultimately, however, additional construction is required. Rebuilding Ireland – An Action Plan for Housing and Homelessness was launched in July 2016 with the objective of ensuring that everyone can access a home either on their own or with appropriate State support. The plan comprises five pillars of concerted actions right across Government – addressing homelessness, accelerating social housing, building more homes, improving the rental sector and utilising existing housing. Supported by Exchequer funding of €5.35 billion over the period 2016-2021, measures under the plan are designed to facilitate an increase in the supply of housing to 25,000 houses or more annually to meet housing needs. From 12,666 units in 2015, the supply of housing reached just under 15,000 in 2016 and is forecast to increase around 18,500 this year and to between 20,000 and 21,000 units in 2018. Funding of €226 million under the Local Infrastructure Housing Activation Fund measure approved in March 2017 for 34 key projects will provide enabling public infrastructure works to facilitate the delivery of some 20,000 private housing units on these sites by 2021, with potential for up to 70,000 homes by 2027.

The Plan will deliver 50,000 social housing units over the period 2016 to 2021. It is estimated that over 33,500 units will be delivered via construction, while 11,000 will be acquired by local authorities and approved housing bodies directly from the market or the Housing Agency, with a portion of these being newly built units. The remaining units will be leased by local authorities and approved housing bodies. Social housing needs will be addressed through a combination of new builds, the return of vacant houses to the stock and measures such as the Housing Assistance Payment which enables households in need of housing to secure accommodation in the private rented market.

Through the range of actions currently being progressed through Rebuilding Ireland to increase the supply of homes across all tenures, the Council acknowledges that Government has made progress towards restoring a more sustainable and normally functioning housing market. Nevertheless, continued priority emphasis must be afforded to increasing housing supply issues. Particularly, delivering a sustained increase in the provision of social housing, is

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80 CSO, Population and Labour Force Projections 2016-2046, April 2013
81 The Housing Agency estimates that, by 2018, 75% of all households will be 3 people or less: 25% will be 1 person; 31% will be 2 person; 19% will be 3 person households.
82 CSO, Residential Property Price Index July 2017

required in the context of the targeted review of Rebuilding Ireland which is currently being concluded by the Department of Housing, Planning and Local Government.

Given the gravity of the housing challenge and its impact on the public finances and wider economy, it is essential that the official counts of housing stock and the flow of supply are accurate. The recording and reporting of statistics on housing activity is a complex matter that involves tracking a range of different indicators – including planning permissions, commencement notices, ESB connections and several others - from various sources, each of which measures different aspects of housing market activity. Connections of electricity services by the ESB have been used as a proxy for housing completions. When comparing this data with census data, nuances in the data can lead to a lack of clarity regarding the stock of housing and flow of new housing units. To inform effective policy development and implementation, the Department of Housing, Planning and Local Government should continue to work with the CSO and other relevant stakeholders to enhance and improve the data on housing stock and completions.

While appreciating the need for policy to support a significant uplift in housing supply, the Council considers it vital that short term needs do not compromise the need to ensure that the housing stock in Ireland must to the greatest extent possible be future proofed to consider long term change. It is important that units are constructed to the highest possible standards which cater to varying household sizes and needs and consider variations between urban and rural needs and lifestyles. Developments must be carefully located, well designed with social, educational and recreational facilities and transportation connections in mind. The Council recognises and supports the identified need for higher residential density in Irish cities.

Recommendation: Continue the periodic review of *Rebuilding Ireland: Action Plan for Housing and Homelessness*, focussing in more detail on various elements of the Plan's five constituent pillars.

Responsibility: Department of Housing, Planning and Local Government is warranted.

In 2015, the then Department of the Environment, Community and Local Government announced the introduction of a Vacant Site Levy. The Levy, which was formally introduced in Budget 2018, will impose a charge for unused land in 2018 on sites vacant in 2018 to combat land hoarding. The annual charge, which amounts to 3 per cent of the market price of the land in the first year and 7 per cent in the second and subsequent years, is designed to incentivise landowners and developers to utilise land for development in urban centres with a population greater than 3,000. A register of vacant sites will be drawn up in each local authority and will include sites that do not have a private dwelling and that have been vacant for the previous 12 months. The Council welcomes the introduction of the Levy and the adjoining commitment that the money raised from the levy is to be ring-fenced and used to support housing or urban regeneration improvements in the vicinity of the site.

Recommendation: Introduce the Vacant Site Levy and regularly update the register to which the Levy applies.

Responsibility: Department of Housing, Planning and Local Government

Evaluation of Existing Housing Supports

The Help to Buy (HTB) initiative was initially announced on 19 July 2016 as part of Rebuilding Ireland. Details were formally announced in Budget 2017. The initiative provides qualifying first time buyers who purchase/build a new house/apartment between the 19 July 2016 and 31 December 2019 with a refund of their income tax and DIRT paid over the previous four years, up to a maximum of 5 per cent of the purchase price/value of the house/apartment. To ensure that this initiative is targeted at first time buyers in need of assistance the rebate is only available for first time

buyers who drawdown a mortgage with a loan to value ratio (LTV) greater than 70 per cent, with the refund capped at €20,000. The Department of Finance commissioned an independent impact assessment of the Help-to-Buy initiative to determine its general impact in terms of uptake and its potential impact on house prices. The report[83] concluded the HTB measure has not impacted significantly on overall housing supply to date. The measure is likely to have encouraged some limited new supply in the first half of 2017 and incentivised builders to provide additional units over the next three years. However, further approaches to directly tackle the cause of undersupply will be critical to achieve an adequate supply of housing. The Council welcomes this assessment but urges the Government to continue to evaluate demand inducing State interventions to ensure they are appropriate, increase supply and do not further inflate costs in the construction sector.

Recommendation: Continue to evaluate the costs and benefits of demand inducing interventions in the residential property market.

Responsibility: Department of Finance, Irish Government Economic and Evaluation Service

Rent Affordability

From a competitiveness perspective, rent levels impact upon the attractiveness of Ireland as a location for mobile talent and on employer's costs. Rental costs can also affect decisions around entering employment and third level education. The cost of rent is also an important determinant of the level of consumer price inflation. Irish rents are now above the previous peak witnessed in 2008. There is a risk that immediate and continued increases in rental price will feed into increases in inflation and heightened wage demands. CSO Census data shows that rented accommodation has continued its upward trend in the last decade with 497,111 rented households in 2016, an increase of 55.9 per cent on 2006. This indicates that renting was the tenure status for almost 30 per cent of all occupied dwellings in the last census.

CSO Census 2016 data reports that weekly private rents increased by 17 per cent in the period 2011-2016. The highest growth between 2011 and 2016 occurred in Dublin City where there has been an average increase of 30 per cent in private rents. Rises in excess of 20 per cent were also recorded in Dún Laoghaire–Rathdown (26.2%), Fingal (22.8%), South Dublin (22.7%) and Kildare (20.3%). The CSO's CPI Private Rent inflation index shows national rents rose by approximately 1.9 per cent in the 12 months to June 2017. The Residential Tenancies Board Quarter 2 Rent Index shows that there is still some volatility in rental trends from quarter to quarter; while rent price, growth was relatively flat in Q1 2017, rent increases of close to 3 per cent were recorded between April and June. Rents in Dublin increased by 3.3 per cent in Quarter 2, compared to a decrease of 1.7 per cent recorded in the first three months of the year. Of concern, however, was that average national rents surpassed the €1,000 per month threshold for the first time since the index began in Q3 2007.

The most effective way to reduce and stabilise rents in the long term is to increase supply. This will require an acceleration of delivery of housing for the private and social rented sectors and will take time. Given the urgency and scale of the challenge and the complexity of the market, it is important that interventions by the State are not pursued in a piecemeal or hasty fashion. Only an overarching and complementary series of interventions is likely to deliver the desired outcome. In this regard, coherent pursuit and regular review of progress of the Strategy for the Rental Sector is essential. The Planning and Development (Housing) and Residential Tenancies Act 2016 makes provision for a new rent predictability measure, based on the concept of Rent Pressure Zones (RPZs). Within a RPZ the annual increase in rents is capped at 4 per cent per annum.

83 Indecon, Impact Assessment of the Help to Buy Tax Incentive, October 2017

A review of the RPZ measure has been carried out and several important improvements will be made to strengthen the effectiveness and impact of the measure and provide the RTB with the powers and resources to take on a regulatory responsibility in the rental sector. Legislative changes have been introduced making it an offence to implement rent increases that contravene the law and the RTB has been given the powers to investigate and prosecute landlords who implement such increases. There has been some concern about landlords using the "substantial refurbishment" exemption to avoid the RPZ legislation and to use minor, cosmetic works to change a tenancy or seek a rent increase outside of the 4 per cent cap. The Department of Housing, Planning and Local Government and the RTB will formulate a definition of what constitutes "Substantial Refurbishment" of a dwelling and issue guidance on the measure. The RTB will move towards annual registration and this should enable the RTB to move eventually to a self-financing model.

Given the policy changes, which have occurred in the rental sector since the end of 2016, there is a need of more regulatory governance in the sector and the Council welcomes the move to assign more powers and resources to the RTB for it to become the sectors regulator. Under such a regulatory regime, it will be an offence to implement rent increases that contravene the law. The Board's data capturing abilities will also improve under these provisions and the RTB will be mandated to undertake detailed analysis of the rent data they gather to provide benchmark rents for different property types. This provision will assist in further understanding trends and behaviours in the rental market, informing future policy decisions and assisting in evidence-based policy making.

Recommendation: Consider the mandate of the Residential Tenancies Board regarding regulation of the rental sector and allow it to refine Rent Pressure Zone's where necessary. Undertake detailed analyses of rental data to assist in evidence based policy making.

Responsibility: Department of Housing, Planning and Local Government, Residential Tenancies Board

The Programme for a Partnership Government contains a commitment to develop a "cost rental" option for lower income families[84]. *Rebuilding Ireland* committed to the establishment of an Expert Group, led by the Department of Housing, Planning and Local Government (DHP&LG), to explore the opportunities for developing a viable cost rental model for Ireland. The group will examine the experience of other countries and develop a roadmap to grow new capacity for delivering cost rental options. This Group is currently addressing issues such as funding mechanisms, the need to grow the necessary institutional capacity, particularly within the approved housing bodies (AHB's) and not-for-profit sector (whether through mergers, new entrants or strategic partnerships), rent levels, the households to be targeted and the appropriate regulation mechanisms. The Expert Group will assess the benefits that a larger and more developed not-for-profit segment would bring to the rental sector and the housing system, by increasing supply of rental accommodation for middle-income households and ensuring new capacity is developed and attracted into Ireland. The Expert Group will also consider various proposals, including the proposal to establish a semi-State company to progress the cost rental model, during its work.

84 Under a cost rental model, a housing provider raises the finance to provide accommodation and charges rents that are sufficient to cover current and capital costs, creating the potential to provide rental accommodation at below market rents, providing potential to address the affordability gap for certain households between the social housing sector and market rental. The term "cost rental" has a specific meaning and requires a considerable maturation process (often 20+ years) before the core dividend can be realised.

Recommendation: Publish the Report of the Expert Group on Cost Rental and grow the capacity for delivering cost rental options.

Responsibility: Department of Housing, Planning and Local Government, Local Authorities, Residential Tenancies Board, Housing Agency, National Economic and Social Council, Irish Council for Social Housing

The Department of Finance engaged a public consultation process around the tax treatment of the private rental sector. The Working Group on Tax and Fiscal treatment of rental accommodation providers chaired by the Department of Finance and including officials from the Department of Housing, Planning and Local Government, Revenue and the RTB was charged with assessing potential tax measures and changes is underway. Considering the Working Groups findings, to encourage owners of vacant residential property to bring that property into the rental market, Budget 2018 introduced a relief for pre-letting expenses on a property that has been vacant for a period of 12 months or more. A cap on allowable expenses of €5,000 per property will apply, and the relief will be subject to clawback if the property is withdrawn from the rental market within 4 years. The relief will be available for qualifying expenses incurred up to the end of 2021. The Council welcomes this relief that should increase the supply of rental properties in the market.

Commercial Property

The availability and affordability of commercial property solutions is a key requirement for the operation and expansion of enterprises based in Ireland and winning and maintaining mobile investment. During the downturn in the commercial property market, there was limited office construction activity in the Dublin market between 2011 and 2013. As a result, no new office space has been delivered to the Dublin market in the five years to 2015[85]. The resumption of commercial property development in 2015 ensured the delivery of new office space in 2016, the first to come on-stream since 2010. CBRE research provides details of a further c. 950,000 m2 that is either under construction, has had planning permission granted, or is currently in the pre-planning/planning application process. Concerns persist about the availability of prime office space for rent in large urban centres in the short term as the market tightens and vacancy rates decline. This could result in future rent increases and any shortage of supply in new commercial space could adversely impact our competitiveness. The Central Bank noted in its most recent Macro-Financial Review that a shortage of suitable units in well-situated locations continues to limit activity in the prime Dublin industrial commercial property sector.

The 2017 Q1 Dublin office vacancy rate was 7 per cent. This is the lowest vacancy rate on record and is well below that seen in several major European cities[86]. The shortage of Dublin office space is reflected in rising rental costs, with prime rents up from €619 per square metre in 2016Q1 to €673 per square metre in Q1 2017. Combined with low vacancy rates, total annual returns of 12.4 per cent in the Irish commercial real estate market in 2016 were high by international comparison. Economic growth and enterprise expansion has contributed to strong demand for commercial office space in Dublin and other urban locations. Given the rise in both commercial property rents and capital values, the Council welcomes the recent partnerships the Irish Strategic Investment Fund have entered with various property funds to increase the supply of commercial property solutions in Ireland. Irish banks remain constrained in their ability to lend, combined with the lack of the competition in the lending market, new funding models from alternative lenders are required to meet the current needs of the Irish commercial property market.

While accepting the limited direct role of the State in commercial property market transactions and prices, the Council notes that Budget 2018 announced that non-residential stamp duty will increase from 2 to 6

85 Duffy, D. and Dwyer, H., FDI and the Availability of Dublin Office Space, ESRI, 2015
86 CBRE, Dublin Office Supply Update, 2017

per cent. Stamp duty on non-residential property was lowered to 2 per cent in 2011 to facilitate growth in the commercial property market. While this new rate is still below the maximum rate of 9 per cent charged between 2002 and 2008, it is important that the Department of Finance monitor the effect of the change on developments in the commercial real estate market.

The availability of information and data is a powerful tool in encouraging efficient markets. In this regard, the Council welcomes the announcement that NAMA and the Central Bank are to co-fund the development of a commercial property statistical system to provide a comprehensive database of commercial sales and lease transactions. It will incorporate the existing commercial lease register, currently produced by the Property Services Regulatory Authority. The initiative will be developed and maintained by the Central Statistics Office (CSO). The Register is not due to become operational until 2018.

Recommendation: Expedite the development of a commercial property price register encompassing data on commercial sales and leases.

Responsibility: Department of Finance

In the year to June 2017, the CSO conducted a feasibility project on the development of a commercial property statistical system (CPSS). The work in the CSO was co-funded by NAMA and the Central Bank, and was overseen by a Steering Group which consisted of two members each from CSO, Central Bank and NAMA. Among the CSO's findings were a lack of data on commercial property leases due to non-compliance by tenants with Section 87 and 88 of the Property Services (Regulation) Act 2011 and the need to improve data quality (e.g. use of Eircodes) in other administrative sources, including Valuation Office data. The necessary improvements to these data sources for commercial property should be prioritised and the CSO should provide advice and support to the relevant agencies on realising the statistical potential of the administrative data sources on commercial property and should develop a system of commercial property statistics based on those sources.

Recommendation: Improve compliance by tenants with Sections 87 and 88 of the Property Services (Regulation) Act 2011 to improve the completeness and statistical potential of the commercial property lease register.

Responsibility: Property Services Regulatory Authority

Recommendation: Continue work on the development of a Commercial Property Statistical System once administrative data sources on commercial property have been developed by public bodies.

Responsibility: Central Statistics Office

Commercial Space for Start-ups

The current structuring of commercial leases in Ireland has been cited as a potential contributory fact which is impacting commercial property development activity. Whilst landlords prefer longer lease terms, tenants and SMEs tend to prefer more flexible leases that accommodate their changing needs. In the current tight rental market, which exists in many urban centres, tenants may have little room for manoeuvre in this regard.

The Council sees the merit in the State continuing to provide demand led working facilities for entrepreneurs and start-ups to combat low vacancy rates and high rents. To support entrepreneurs, start-ups and early stage SMEs, Enterprise Ireland has supported the establishment of business incubation centres across the county. Under the

Campus Incubation Programme, Enterprise Ireland funding has supported the development of a national network of business innovation centres and specialist bio-incubation facilities. In 2015 Enterprise Ireland launched the 2015 -2017 Accelerator Development Scheme. The objective of this call was to increase the number of accelerators operating in the Irish market to support entrepreneurship, company creation and job creation in new manufacturing and Internationally Traded Services firms in Ireland. The first call under this Scheme, with a budget of up to €3 million to leverage private investment, was open to applications via a competitive process for accelerators in regions outside Dublin. In addition, the Business Incubation Centres s (namely Cork BIC, Dublin BIC, South East BIC and West BIC) work in partnership with Enterprise Ireland to assess, advise, validate and progress early stage-business plans of Enterprise Ireland clients to an investor ready stage-point, with an objective of driving the number of High Potential Start-Ups approved each year by Enterprise Ireland.

Recommendation: Continue to monitor the demand for and utilisation of State supported commercial space for enterprise.

Responsibility: Enterprise Ireland

Construction Costs

Significant concerns persist in relation to the cost of development and the cost of construction. A variety of input costs (e.g. labour, materials, levies and taxes etc.) combine to determine the final cost of construction. To incentivise the construction of new residential property, selling prices need to exceed development costs. From an affordability and competitiveness perspective, it is not necessarily desirable to increase the selling cost of residential property; we must, therefore, address the cost side of the equation to increase the supply of housing.

Dublin has been named in the top 10 of the world's most expensive cities to build - with a steep rise in costs set to hit builders' margins, a new report has found. Margins in the capital are 5 per cent, close to the global average but less than big markets like London and New York, while costs here are rising sharply. Construction costs in Dublin are set to rise 8 per cent in 2017 - far faster than the 3.5 per cent global increase forecast in the latest International Construction Market Survey[87]. Development and construction costs include the costs associated with acquiring sites, attaining planning permission, sourcing materials and labour, as well as the associated taxes and levies charged by the State. Unfortunately, to date there is limited agreement on the elements of the Irish cost base that are out of line. Understanding the cost factors that are constraining supply is a prerequisite for designing effective policy interventions.

A working group on Construction Costs, chaired by the Department of Housing, Planning and Local Government and including representatives from the Housing Agency, NAMA and industry stakeholders, is currently undertaking a detailed analysis of housing delivery input costs with a view to identifying where economies can be achieved. The findings of the working group will inform policy decisions in relation to the development of both multi-storey apartment schemes in urban areas and traditional housing/duplex homes in suburban locations. In parallel, an independent report by the Housing Agency based on international comparison of delivery costs is also being prepared.

Recommendation: Prioritise the recommendations and actions arising from the Working Group on Construction costs and develop an implementation plan to take steps to tackle costs which are out of line with international norms and to inform policy decisions in relation to the development of both multi-storey apartment schemes in urban areas and traditional housing/duplex homes in suburban locations.

87 Professional services company Turner & Townsend's annual report, analyses input costs like labour and materials and records average construction costs per square metre for commercial and residential development in 43 markets across the world.

Responsibility: Department of Finance, Department of Housing, Planning and Local Government, Representative Bodies

Rebuilding Ireland also committed to the establishing of a competition to champion best practice, efficient and cost effective design and new approaches to both affordable and quality residential delivery. The evaluation of proposed sites following a call for proposals in Q4 2016 is now complete and two sites have been identified for development. The competition will be open to applicants in the second half of 2017. Those sites not selected under this process will still be available for development as Joint Venture mixed tenure developments. The NCC recommends the prioritisation of such competitions in the interest of delivering cost effective solutions.

Recommendation: Urgently commence the competition to champion best practice and cost effective design of residential property and publish findings regarding efficiencies and innovative processes. Analyse the cost savings and disseminate the learnings from the competition to housing stakeholders.

Responsibility: Department of Housing, Planning and Local Government

Access to and Affordability of Finance

The supply and demand for credit has improved significantly since the height of the crisis. However, the cost of credit while falling continues to remain relatively high. Ireland had the 4th highest SME interest rates on bank overdrafts and credit lines in the Euro area in 2016

In January 2017, the interest rate in Ireland on loans of up to and including €1 million was almost double the Euro area average rate for new business. Furthermore, Irish interest rates for loans both under- and over the €1m threshold have been noticeably more volatile than Euro area rates. Irish and Euro area interest rates diverged further in 2014 and 2015. It is vital that cost competitiveness in this area does not weaken further.

The determinants of the cost of credit in Ireland are complex and varied but the concentrated lending market coupled with higher credit risk premiums in Ireland have been cited as the reasons for higher interest rates here over the Euro area average. Irish interest rates on business loans have been consistently higher (and more volatile) than equivalent Euro area rates and it is vital that the cost of credit is reduced to align Ireland with rates in competitor countries. While many firms are understandably primarily concerned about accessing credit rather than the cost of that credit, the interest rate differential between Ireland and the Euro area places Irish based enterprises at a disadvantage. Central Bank analysis shows the Irish SME lending market is highly concentrated with the three main lenders accounting for approximately 90 per cent of market share.

Competition and Diversification of Lending

Supporting SMEs in terms of access to finance has been a cornerstone policy for Government in recent years. Government policy is focused on ensuring that all viable SMEs have access to an appropriate supply of credit from a diverse range of bank and non-bank sources. In this regard the Government has developed several initiatives to ensure that the supply of credit in the market is sufficient to meet the existing and future needs of SMEs. As is the case for many other goods and services, increasing competition and choice in the market is one of the main methods to reduce costs – in this case, the Council are taking a broad definition competition, encompassing a diverse set of credit sources, ranging from traditional bank finance, to equity and venture capital, to alternate sources of finance such as peer-to-peer lending. The various Government initiatives already in place in the space remain important elements in providing choice and alternatives to potential borrowers given the narrow range of providers in the commercial market. These schemes should continue to be monitored in terms of their objectives and effectiveness.

Central Bank analysis shows the Irish SME lending market is highly concentrated with the three main lenders accounting for approximately 90 per cent of market share. Bank loans are the most popular type of finance sought by Irish SMEs and their preference and dependence on bank finance is significantly higher than competitor countries such as the UK. The CSO's Access to Finance Survey, March 2016, indicates that there is a correlation between size and sector and growth trajectory in successfully accessing finance. It also highlights how relatively few SMEs (particularly, non-exporting SMEs) seek funding from non-bank sources: for example, only 4.7 per cent of medium sized enterprises looked for equity finance compared to 39.8 per cent of similar sized enterprises who looked for bank finance. Further diversifying the lending market in Ireland and in turn increasing levels of private equity, crowdfunding and venture capital funding remains a challenge. The UK lending market is more diversified with almost double the amount of SME financing coming from alternative sources in 2016 than in Ireland. Ireland compares well in relation to equity finance and as a source of credit it was more prevalent in Irish SMEs than the EU28 average in 2016 and just one per cent lower than the comparable figure in the UK. Given the number of mergers, acquisitions and exits from the Irish banking system since the financial crisis, the number of banking entities has significantly reduced. The Central Bank has committed to developing new competition indicators[88] in the mortgage and personal banking sectors from Q3 2017. The Council considers the market is even more concentrated in the SME lending market and similar indicators could be devised for this sector.

Recommendation: Continue to monitor the landscape for enterprise finance so that viable businesses are not constrained by an inability to access finance. Where gaps are identified, develop proposals to increase the use of non-bank finance by SMEs.

Responsibility: Department of Finance, Department of Business, Enterprise and Innovation, SME State Bodies Group, Central Bank

Recommendation: Consider devising competition indicators showcasing the degree of concentration in the business lending market to benchmark and track the level of competition in the sector.

Responsibility: Department of Finance, Central Bank

Alternative financing activities such as crowdfunding (including peer-to-peer lending) can be valuable sources of funding to micro and small businesses, either as a complement to traditional bank funding or as an alternative to traditional bank intermediation where bank credit has either been refused or not sought in the first place. To date, take up of crowdfunding in Ireland as a source of equity has been limited. There is currently no legislation in Ireland regulating crowdfunding or the platforms that facilitate crowdfunding and the Central Bank's codes of conduct do not apply to crowdfunding platforms. As a result, certain protections do not apply to consumers of crowdfunding, increasing the risks to potential investors and thus, weakening the attractiveness of such platforms. The experience of the UK in the development and roll-out of alternative sources of finance, such as crowdfunding, suggests it is important that appropriate regulation of these activities is carried out[89].

IFS 2020 committed the Government to conducting a public consultation on the potential regulation of crowdfunding. The Council welcomes the recent Department of Finance public consultation on Crowdfunding with a view to understanding how to best facilitate the development of the crowdfunding industry in Ireland, for the benefit of the

88 The Herfindhal-Hirschman Index, (HHI) is a measure of market concentration and competition among market participants. The formula for calculating HHI is to square each market participant's market share, and then sum those squared numbers. Based on this formula, the resulting number ranges from close to 1 to a maximum of 10,000. When the number is close to 10,000, this indicates a highly concentrated, monopolist market. For instance, if there were only one market participant with 100% of the market, the square of that 100% would be 10,000. A HHI number close to 1 indicates a lot of small, equally-sized market participants in a very competitive market.
89 Financial Conduct Authority, A Review of the Regulatory Regime for Crowdfunding and the Promotion of Non-Readily Realisable Securities by Other Media, February 2015

economy, while also ensuring adequate protection for small investors and consumers. The outcome of the public consultation will help inform future policy position on whether a regulatory regime for crowdfunding would be appropriate and if a bespoke regime should be implemented in Ireland.

Recommendation: Consider the development of an appropriate regulatory framework for the crowdfunding market (including peer-to-peer lending) to enhance consumer confidence and encourage increased lending activity.

Responsibility: Department of Finance, SME State Bodies Group

Brexit Working Capital Guarantee Scheme and a Long-Term Development Loan Scheme for Irish SMEs

Brexit is likely to present a major structural change for businesses and it would therefore be prudent to put in place a contingency scheme that could be rolled out quickly should the need arise. A Brexit focussed working capital guarantee scheme would be made available to SMEs who need relatively short term credit to cope with the working capital challenges brought about by Brexit. These would include vulnerable but viable businesses dealing with the changing exporting environment and businesses affected by import substitution who are investing in diversification, innovation and market development. Given their unique exposure to the UK market, the funding will ensure that at least 40 per cent of the fund will be available to food businesses. In addition to the Brexit loan scheme, funding of €25 million will be provided to the Department of Agriculture, Food and the Marine for the development of further Brexit response loan schemes for the agri-food sector in 2018.

The Council welcomes the loan guarantee scheme for SMEs announced in Budget 2018 for those employing less than 500 that need relatively short-term credit to cope with working capital challenges brought about by Brexit. It will be offered and managed by the Strategic Banking Corporation of Ireland (SBCI) through commercial lenders and potentially leverage up to €300 million of lending. The proposed interest rate will be around 4 per cent. This rate represents a significant saving compared with the prevailing rates of up to 6 per cent that are otherwise being offered for similar loans on the market. This Scheme should introduce more competition in the business lending market and potentially incentivise new entrants into our concentrated business banking sector. It is anticipated that a longer-term loan scheme will also be developed to support SMEs facing difficulties because of Brexit. It is envisaged that the longer-term loan scheme will offer loans for investment purposes to SMEs affected by Brexit. The Council understands further ex-ante analysis is being conducted on the requirement for such a scheme.

Recommendation: Clarify the eligibility criteria for the Brexit Working Capital Scheme and engage with industry stakeholders accordingly to optimally develop the Scheme.

Responsibility: Department of Business, Enterprise and Innovation, Department of Agriculture, Food and the Marine

Recommendation: Develop a long-term Business Development Loan Scheme to support SMEs affected by Brexit.

Responsibility: Department of Business, Enterprise and Innovation

Strategic Banking Corporation of Ireland (SBCI)

The SBCI is a state backed scheme established in 2015 to deliver lower cost funding to Irish small and medium sized businesses. The SBCI began lending in March 2015. Its purpose is to make sustainable, flexible and appropriately priced

finance available to viable Irish SMEs and support investment in them that encourages growth and facilitates employment across the whole country. It uses an on-lending model; this means it does not lend directly to SMEs, rather it channels low cost financing from funders, including the European Investment Bank (EIB) and KfW bank, through lending partners, known as on-lenders. The SBCI currently has eight on-lending partners, three banks and five non-banks[90].

The SBCI's midyear report for 2017 showed the total value of loans supported by it stood at €855 million at the end of June 2017, representing an increase of 57 per cent on the amount at the end of 2016. SBCI reports indicate its loans have supported over 21,000 small and medium enterprises employing over 100,000 people. The average loan size increased to €42,000 from €40,000 in June of last year and there has been a strong geographical spread of SBCI loans across all regions. The SBCI's loan rates are on average 1.15 per cent cheaper than regular market rates. The SBCI introduced its first risk-sharing product into the market this year targeted at the agriculture sector. The Agriculture Cashflow Support Loan Scheme was developed by the Department of Agriculture, Food and the Marine in co-operation with the the SBCI, and made €150 million available to farmers throughout Ireland at low-cost interest rates of 2.95%.

The agriculture sector is the biggest user of SBCI loans, accounting for 22.9 per cent of the total loans. In terms of the purpose of loans, 84 per cent of loans supported by the SBCI are used by SMEs to invest in growing the business. A further 11 per cent are for working capital purposes and 5 per cent are used for refinancing loans owed to a lender exiting the Irish market. The Council supports SBCI's commitment to further broadening its distribution capability and market coverage by adding new on-lenders and working to develop innovative products, thereby serving to support SMEs and drive competition in the SME finance market.

Recommendation: Broaden the distribution capability and market coverage of the SBCI by adding new on-lenders and working to develop innovative products, thereby serving to drive competition in the SME finance market.

Responsibility: Department of Finance, SBCI

Recommendation: Continue to facilitate partnerships between SBCI and international lenders, especially in non-bank finance, to increase competition and provide alternative sources of finance for SMEs.

Responsibility: Department of Finance, SBCI

Utilities Costs

Water

Within Ireland, water costs vary significantly by local authority. The average cost of water for business in Ireland in 2017 is €2.38 per m^3 – ranging from €1.59 in Kildare to €3.04 in Wicklow. Failure to put in place adequate water and waste water infrastructure throughout the country damages the competitiveness of all our regions as places to live and work, and places the viability of a range of firms and sectors highly dependent on water supply at risk.

90 Department of Finance Ministers Brief – June 2017

The consequences of inadequate planning, low levels of investment in water infrastructure, and inadequate wastewater treatment facilities have been well documented in previous Council reports and elsewhere. Ensuring an adequate revenue stream to maintain water and wastewater services, to upgrade the public water and wastewater systems, and to fulfil our EU commitments is critical to delivering the required investment[91]. Irish Water has statutory responsibility for all aspects of water services planning, delivery and operation for public water services, including the delivery of water and wastewater infrastructure. The EPA recently found that Ireland failed to meet its own national target for a 13 per cent improvement of surface water standards during the six-year period to 2015[92]. The uncertainty regarding the future funding of Irish Water and the challenges this creates in terms of infrastructure planning and development is a major concern. An Expert Commission, established to make recommendations to the Oireachtas on funding of domestic public water services in Ireland and improvements in water quality, considering, inter alia, the maintenance and investment needs of the public water and waste water system on a short, medium and long-term basis, submitted its findings to the *Committee on the Future Funding of Domestic Water Services in November 2016*. The Committee published the Report in April 2017. The recommendations of the Expert Commission were:

- The funding of water services for normal domestic and personal use should be out of taxation
- The volume of water necessary to meet the normal domestic and personal needs of citizens should be independently assessed through an open and transparent process.
- Under the proposed arrangement, the national water utility will provide sufficient water to all citizens to cover their domestic and personal needs, and the cost of that water will be recovered from the State, which will be a customer of the utility, based on tariffs approved by CER following consultation. What is proposed does not therefore amount to the provision of a 'free allowance' of water.
- Excessive or wasteful use of water should be paid for directly by the user at tariffs determined by CER.

The Water Services Bill 2017 provides for the discontinuing of charges imposed by Irish Water for the provision of water services to a dwelling. The Bill also for commits to the refund of certain payments made in respect of water charges. Threshold allowances and the payment levies for provision by Irish Water of water services exceeding the threshold amount to a dwelling are also outlined in the legislation. The establishment of a Water Forum and a Water Advisory Body are provided for in the Bill[93].

Recommendation: Progress and enact the provisions of the Water Services Bill 2017 about the future funding of public water and wastewater services in Ireland.

Responsibility: Department of Housing, Planning and Local Government

The Expert Commission noted in its Report that economic regulation, with adequate expertise, will be required to ensure that the appropriate capital expenditure investments are made and that operating expenditure costs are driven down over time. The Expert Commission recommends that the Commission for Regulation of Utilities (CRU) and the Public Water Forum[94] continue to be adequately resourced with the tools and expertise to drive efficiency targets in the sector. There will, however be a continuing need to closely monitor the operational expenditure of Irish Water and to achieve savings from greater efficiencies across the organisation. The CRU has committed to ensuring a transparent

91 The EPA's Urban Waste Water Treatment 2016 shows that waste water treatment at 50 of Ireland's 185 large towns and cities fail to comply with standards set to prevent pollution and protect public health. Sewage from the equivalent of 120,000 people across 44 areas still enters the environment untreated each day. Plans to install treatment at some of these areas is delayed by up to three years and most will not be completed until 2021.

92 EPA, Water Quality in Ireland 2010-2015, August 2017

93 The Bill also amends legislation in relation to the Local Government Fund; the Local Government Act 1998, the Valuation Act 2001, the Water Services Act 2007, the Water Services (No. 2) Act 2013 and the Water Services Act 2014

94 This Forum will become the National Water Forum once it is established on a statutory basis.

and harmonised suite of tariffs are put in place for Irish Water's non-domestic customers for 2019 following necessary consultations. According to the CRU, this project will ultimately deliver a transparent, harmonised suite of tariffs to ensure non-domestic customers are charged fairly for usage of water and wastewater services. During 2017 and 2018, the CRU will consult on Irish Water's proposals for non-domestic tariffs including proposals for transitioning to the new tariff regime. By 2019, following consultation, decisions on revised non-domestic tariffs will be made which will be accompanied by revised customer protections for Irish Water non-domestic customers.

Recommendation: Commence the consultative process to inform the harmonisation of non-domestic water tariffs to develop a framework to ensure non-domestic customers are charged fairly for usage of water and wastewater services.

Responsibility: Commission for Regulation of Utilities, Irish Water, Department of Housing, Planning and Local Government

Energy

Energy competitiveness is of critical importance for enterprise development and can directly affect the ability of enterprise to retain and grow output and employment, particularly in energy intensive sectors. A reliable and competitively priced supply of energy is vital for business and its ability to compete successfully in international markets. The availability of adequate electricity capacity to meet demand is critical. Ireland has a very good record in terms of the reliability of its electricity supply compared to other countries where there have been significant power outages from time to time. From a competitiveness perspective, the primary challenge facing Ireland is to reduce energy costs while delivering on our security of supply and environmental sustainability objectives. Ireland is a net energy importer and, as such, increases in oil prices have a negative impact on real economic activity. Higher energy costs increase firms' input costs, thereby reducing profitability. At the household level, higher energy prices are likely to lead to a fall in real disposable incomes through higher inflation.

It is recognised that the range of immutable cost drivers will mean higher relative costs in Ireland. In the second half of 2016, weighted average industrial electricity prices in Ireland were 1.8 per cent higher than the simple Euro area 19[95]. Irish weighted average prices in Q2 2016 here were 7.7 per cent lower than in the corresponding period in 2015.

The Energy White Paper places a welcome emphasis on competitiveness alongside sustainability and security of supply objectives. For example, energy policy is to seek to achieve optimum benefits at least cost, and Government is to ensure that policy measures are evidence-based and subject to rigorous analysis and appraisal prior to being implemented. While factors outside of our control exert a significant influence on energy prices in Ireland, policy and regulatory decisions here also matter. Tackling the cost components within our control must be prioritised in energy policy. The Council considers policy should focus on:

- ensuring the optimal functioning of the integrated all island energy market;
- improving electricity supply/demand matching by location;
- reviewing supports for electricity generation;
- delivering infrastructure at least cost; and,
- reviewing the regulatory framework and market structure

Given the significant changes envisaged in the Energy White Paper, the Council previously noted how vitally important the review of the legal and institutional framework for the electricity and natural gas markets and the regulator's mandate were to ensure that the Commission for Regulation of Utilities (CRU) is best placed to support the implementation of energy policy and to deliver a competitive, secure and sustainable energy supply. The OECD is

95 SEAI, Electricity and Gas Prices: 2nd Semester 2016, June 2017

currently reviewing utilities regulation in Ireland. It is a peer-review of the CRU with a view to providing guidance on best practice in regulatory governance. This will enable the CRU to continue to be at the leading edge of regulatory practice in the regulation of electricity and gas markets. The review will inform the regulatory overhaul of utilities promised in the White Paper.

Recommendation: Prioritise the recommendations and actions arising from the OECD Review of utilities regulation in Ireland and set out an implementation plan for action. Alter the mandate of the CER accordingly to allow for best practice in the regulation of both electricity and gas.

Responsibility: Department of Communications, Climate Action and Environment

Business Services Costs

Legal Services

As noted in the introduction, Ireland is currently experiencing a low inflation environment. However, the CPI since 2014 has witnessed strong growth in its business services component. Legal services are an important input to all sectors of the economy and their cost has a bearing on Ireland's overall competitiveness. Throughout the recession, and relative to most other professions, prices for legal services did not adjust downwards to the degree that might have been expected given economic circumstances. While prices dipped for a brief period in 2013, in Q3 2016 legal service prices were 8.6 per cent higher than 2010 levels.

At present, data on legal service costs in Ireland is limited. The main data source is the CSO's Services Producer Price Index which is published on a quarterly basis. However, this data only captures information on solicitor fees and is based on a small number of respondents to the CSO survey. Renewed efforts are required to expand the sample – ideally to capture data on barrister fees, and to provide more granular costs data on various types of legal services.

Recommendation: Continue to develop a more comprehensive and representative data set on legal services.

Responsibility: Central Statistics Office, Legal Profession, Department of Justice & Equality

The regulatory model for legal professions was overhauled with the enactment of the Legal Services Regulation Act in December 2015. The new regulatory framework allows for the development of competition and it establishes the oversight of legal services professions by an external and independent body, together with a system for public complaints in respect of all legal practitioners. The framework should, therefore, contribute to reducing high legal services costs. The success of the Act will ultimately depend on the independence and resourcing of the Legal Services Regulatory Authority. A reduction in costs will only be achieved if the competition-enhancing and cost-reducing provisions of the planned regulatory framework are stewarded fully into being as a result of the provisions already set out in the Act (through for example, being incorporated in regulations to be issued by the Legal Services Regulatory Authority). In this regard, the specific provisions that have been made for the conduct of periodic reviews of the operation of the Legal Services Regulation Act are welcome. These periodic reviews of the Act will occur in addition to the normal annual strategic and business planning obligations of the new authority. The Competition and Consumer Protection Commission will be a part of this new exercise and has a nominee on the Authority itself.

Recommendation: Commence as quickly as possible the implementation of the regulatory functions of the Legal Services Regulatory Authority and thereby introduce measures to reduce legal costs.

Responsibility: Department of Justice and Equality

The Legal Services Regulation Act 2015 provides for independent regulation of the legal profession to improve access and competition, make legal costs more transparent and ensure adequate procedures for addressing consumer complaints. The 2015 Act makes extensive provision in Part 10 for a new and enhanced legal costs regime which will bring greater transparency to how legal costs are charged, along with a better balance between the interests of legal practitioners and those of their clients. As part of this structural reform, the existing Office of the Taxing Master, which is an office of the High Court, is to become the Office of the Legal Costs Adjudicators. The changeover to the new office will enable the introduction of key structural reforms for dealing with disputed legal costs. The Office of the Legal Costs Adjudicator, once established, will maintain a public register of all adjudication costs arising from cases before the courts. The Council view this as a positive development in increasing transparency around allowable legal costs.

Recommendation: Establish the Office of the Legal Costs Adjudicator. Publish and maintain a public register of allowable legal costs.

Responsibility: Department of Justice and Equality

The use of Alternative Dispute Resolution mechanisms, like mediation, can help make Irish businesses more efficient and competitive. The Council welcomes the Mediation Act 2017 which promotes mediation as a viable, effective and efficient alternative to court proceedings thereby reducing legal costs and speeding up the resolution of disputes. The Act forms part of the Government's overall strategy to tackle the issue of legal costs.

Insurance Costs

An adequately-reserved, cost-competitive insurance sector is a vital component of economic activity and financial stability. Insurance costs are relevant to businesses of all sizes and in all sectors of the economy. In general insurance costs account for a relatively low proportion of the overall enterprise cost base. Ultimately, the issue of greatest concern to businesses is the cost they pay for the cover they receive. While insurance costs represent a minor component of enterprise operating costs, premium increases can have an impact on costs. It has not been possible to provide internationally comparable statistics on commercial insurance prices in the Irish and broader European markets due to the lack of data. Commercial insurance prices tend to be agreed on a company-by-company basis with insurers, reflect the differences between the firms insured and the coverage purchased (i.e. the range of commercial insurance products is wide, and the nature and type of coverage provided in commercial insurance policies is non-homogeneous), and the final price charged is generally not publicised. International comparisons can also prove problematic because of differences in law, in fiscal regime, in policyholder behaviour and in the expectations of policyholders from their insurance provider.

CSO data shows motor premiums were 14 per cent lower in September compared with a year earlier. It comes after three years of rises which have seen the cost of the average policy increase up by 60 per cent. The domestic non-life insurance market is concentrated across eight firms, six of which are regulated by the Central Bank and two of which operate on a FOE basis. It is uncertain to what extent Brexit will have an impact on the structure of the domestic market. Some of the high-impact firms who write business in the UK may have to adjust their business models in time. The outlook for the domestic non-life insurance sector is improving. Increases in policy premiums are offsetting the rise in claims costs such that the combined ratio for both the motor and property book of business is improving. Nevertheless, challenges remain for the sector. Firms continue to contend with an uncertain claims environment, particularly with respect to the motor and liability books. Claims uncertainty has resulted in an increase in technical provisions rather than actual claims paid which will take some time to materialise as claims typically settle over several

years. Without European Commission action to address the unintended effects of the ECJ's 'Vnuk' judgement, there is potential for the extension of a compulsory motor insurance requirement for vehicles, including highly specialised vehicles and motorised equipment in non-public places to increase costs for businesses in the agricultural, construction, and industrial sectors. The recommendations of the Cost of Insurance Working Group may go some way to improving firms' claims experience. The Council welcomes the publication of the *Report on the Cost of Motor Insurance* in 2017 and the quarterly progress reports documenting adherence to the specific commitments outlined in the adjoining Action Plan[96]. Cost of Insurance Working Group recommended that the Department of Finance publish key aggregated metrics on a quarterly basis from Q2 2017. This first report represents the start of a process to improve data transparency in the insurance sector and it is expected that the quality of the data and response rates will improve in future iterations. The Working Group also committed to establishing a Master Licence Record (MLR). The proposed MLR will link vehicle owners to their driving licences which will provide a basis for a presumption for attributing guilt to a driver for a road traffic offence involving a vehicle linked to them[97]. The MLR will provide complete linked data between the driver and the vehicle, giving the stakeholders complete information on both, thereby reducing instances of fraud, uninsured driving and vehicle theft, as well as facilitating optimum penalty point endorsement on driving licences. Then Council views the establishment of both the claims information database and the MLR as pre-requisites to reducing the levels of pay-outs and premia in the sector.

Recommendation: Expedite the establishment of both the national claims information database and the Master Licence Record Project as set out in the Report on the Cost of Motor Insurance.

Responsibility: Central Bank of Ireland, Department of Transport, Tourism and Sport

The Council supports the Government's establishment of a new Personal Injuries Commission (PIC) tasked with carrying out international comparisons of Ireland's personal injury awards in a bid to force down premiums. The PIC is tasked with benchmarking international personal injury awards with awards in Ireland by the end of the first quarter 2018 and assess whether objective medical diagnosis of how soft tissue injuries can be improved. The PIC's Report will outline the benefits and the risks associated with carrying out any proposed amendments to the assessment of soft tissue injuries and provide an indicative timeline for their implementation. The work programme of the PIC will be considered when the Book of Quantum is next reviewed in 2019.

Recommendation: Recommend best international practice to enhance the claim process in Ireland and benchmark personal injury awards internationally.

Responsibility: Department of Business, Enterprise and Innovation, Personal Injuries Commission

The Report of the Cost of Insurance Working Group recommended the establishment of a forum for consumer and business issues. The first meeting of the Forum took place in May 2017 and concentrated on the motor insurance sector. The Council welcomes the commitment to broaden the scope of the forum, both in terms of the types of insurance to be discussed and the range of participants therein.

Recommendation: Broaden the focus of the industry-led forum for consumer and business issues as recommended in the Cost of Insurance Working Group Report.

96 Updates on Insurance working group report available on the Department of Finance's website

97 In a situation where a driver denies driving the vehicle at the time the road traffic offence was committed, the driver will have to accept penalty points on their licence for the road traffic offence, or name the actual driver.

Responsibility: Department of Finance, Business Representative Bodies

The Cost of Insurance Working Group is now in its second phase which is concentrating on the Employer Liability and Public Liability insurance sectors. This next phase will build upon the work on motor insurance to determine how it can be applied to both these sectors. The Council welcomes this next phase of the Working Group's mandate and the consideration being given to the impact the cost of insurance is having on the competitiveness of business sectors.

Recommendation: Prioritise the recommendations and actions arising from the second phase of the Cost of Insurance Working Group in relation to the Employer Liability and Public Liability insurance sectors. Devise a clear implementation plan for addressing issues identified. The plan should have specific timelines, reporting mechanisms and assigned responsibility.

Responsibility: Department of Finance

Childcare Costs

The European Commission recently noted that the limited availability and the high costs of childcare represents a significant barrier to increasing female labour market participation (and hinders efforts to reduce child poverty)[98]. The Council has previously noted childcare-related costs and benefits (as a percentage of average wage - this data takes account of childcare fees, child benefit and relevant tax reductions) for couples, earning 167 per cent of the average wage, Ireland is the second most expensive in the OECD. For lone parents (67% of the average wage) Ireland is the most expensive OECD location.

CSO QHNS Childcare statistics which relate to Q3 2016 show a fall in the number of children using parental childcare between the years 2007 and 2016. The decrease is larger among primary school children (from 81% to 74%) than among pre-school children (from 64% to 62%). The average household weekly expenditure on paid non-parental childcare is €155.60. This is an increase from 2007, when the corresponding figure was €123.20. The average weekly cost per child is highest in Dublin, at €150.00 per child per week. It is lowest in the South-East at €83.00 per child per week. Budget 2016 outlined plans to roll out a Single Affordable Childcare Scheme providing simplified childcare subsidies. This was further developed in Budget 2017, and is intended to replace the existing Community Childcare Subvention (CCS[99]), along with the Training and Employment Childcare programmes, comprising the After-School Childcare, Childcare Education and Training Support, and Community Employment Childcare. In addition, Budget 2017 also provides for the introduction of a universal measure for parents of children aged from 6 months to three years. From September 2017, a universal subsidy of up to €80 per month will be provided towards childcare costs for parents working full time. The measures introduced in September 2017, for a universal childcare payment for the under 3s and increased rates in targeted childcare subvention schemes, will continue to be supported in 2018 in advance of the introduction of the Single Affordable Childcare Scheme.

The Council welcomes the rollout of the scheme. It has the potential to facilitate a positive impact on labour market participation. For households with children, the additional costs associated with childcare can represent the largest additional costs associated with taking up either part-time or full-time employment. The introduction of the Scheme is likely to see an increase in demand for childcare and childminders; this may however lead to skills gaps and significant price inflation in the sector. Any rise in the costs of provision that pushes up fees will create pressure for subsidy levels to rise to maintain the value of the subsidy to parents. The subsidy level and the overall costs and benefits to the State arising from the scheme will therefore need to be rigorously and continuously assessed in terms of their impact on childcare provision costs; on labour market behaviour; and on the level and quality of service provision. Building on the

98 European Commission, Commission Staff Working Document, Country Report Ireland 20116, SWD (2016) 77, February 2016

99 The CCS Programme supports disadvantaged parents, parents in low paid employment and parents in training or education, by enabling those who qualify to avail of reduced childcare costs at participating community/not-for-profit childcare services.

commitment in the Programme for Partnership Government it is vital that the Department of Children and Youth Affairs conduct and publish an independent review of the cost of providing quality childcare. As set out in the Policy Paper on the Development of a new Single Affordable Childcare Scheme, to ensure the structure and level of subsidy, it is vital that this review provides an indication on average cost of provision, variation in costs and fees, and reasons for such variation (including cost, market and geographic differences).

Recommendation: Evaluate the impact of the Single Affordable Childcare Scheme on childcare costs and labour market participation. Conduct a review of the cost of providing quality childcare.

Responsibility: Department of Children and Youth Affairs

Theme 2: Chapter 2- Fostering Productivity Growth

Introduction

Productivity is a key driver of national competitiveness. Improving levels of labour and capital productivity enables enterprises to improve their efficiency and profitability, and enhances the ability of countries to maintain international competitive advantage and sustainably improve living standards. Productivity growth enables Irish firms to compete successfully in international markets by facilitating output to be produced in a more efficient and effective manner. Irish productivity growth rates and levels have been above the OECD average since the recession. Irish labour productivity growth has been above that in competitor countries since 2013 and was 2.3 per cent in 2016. However, Ireland's performance has been greatly affected by shifts in the composition of employment and by the influence of a few high value added sectors on output. The narrow base of enterprises in high value added sectors (particularly in Pharma and ICT) disguises, to a degree, underperforming sectors and skews Ireland's productivity level. Differences in productivity are evident when considering output as a measure of GDP or the OECD's measure of Gross National Income. As a measure of GDP, Ireland's output is approximately 80 per cent above the OECD baseline, as a measure of GNI, the differential falls to 44 per cent. The productivity challenge for Ireland is to broaden the enterprise productivity base and ensure that economic and employment growth is accompanied by productivity growth. As set out in the Council's 2017 report *Benchmarking Ireland's Productivity Performance 2004-2014*, there is evidence of considerable heterogeneity between sectors and between firms within sectors in terms of growth. There are many possible factors which can influence diverging growth patterns. These can include the efficiency of resource allocation between firms, intensity of competition and regulation in the market, the degree of skilled labour and capital in production, propensity to innovate and export, speed and pervasiveness of ICT adoption and participation in global value chains.

Supporting an uplift in productivity performance at firm level across all sectors remains a significant competitiveness challenge across a range of policy spheres. This year's Competitiveness Challenge considers the framework for productivity in Ireland. It also considers policy challenges to facilitate:

- Effective investment in Knowledge Based Capital;
- Support for entrepreneurship and start-ups and,
- Enhancing management practices as the drivers of enhanced productivity performance at firm and sectoral level.

At firm level, more intensive innovative activity is associated with higher productivity growth. Economy-wide productivity and employment gains are generated when innovations are diffused and widely adopted, making the strengthening of investment in R&D and technology diffusion mechanisms a key policy priority. As noted by the OECD, synergic investment in knowledge-based capital enables firm absorb, adapt and reap the full benefits of new technologies. New firms are especially relevant for expanding productivity and innovation performance. New start-ups, particularly in ICT, are more inclined to engage in more radical innovations which enhance productivity than incumbents who tend to adopt a more incremental approach. A continuous flow of new business start-ups that can survive and thrive in international markets strengthens the productivity base not only through the creation of new businesses, products and services but also by stimulating improved performance in existing businesses. From a policy perspective, therefore, facilitating entrepreneurship, start-ups and firms of scale must be cultivated as the dynamo of productivity growth in the long run. Highly proficient leadership, with ambition, vision and strong management teams, is critical for establishing the environment that facilitates an innovative culture. Research into management practices across firms and countries suggests that variations in management practices are an important factor accounting for differences in productivity. Improving management skills and quality at all levels is also particularly vital as improvements in this area are associated with positive productivity gains.

Policy Challenges and Recommendations

Productivity Policy Framework

Many of the resources that enterprises draw on to maximise productive capability come from the surrounding environment, including for example, a sound macroeconomic environment, the education and skills base of the labour force, transport and communications networks, science and technology, capital investment, competition and regulation policies, access to finance etc. In the first instance, recognising the importance that productivity plays as the key driver of longer term competitiveness and prosperity in industrial and enterprise policy is essential.

Enterprise 2025 (EP2025) is a ten-year Strategy committed to a step change in the performance of our enterprises across the economy – with more Irish owned companies of scale, a greater number of start-ups with better survival rates, more entities investing more in research, development and innovation, more enterprises exporting across a range of markets – delivering quality jobs, productivity and sustainable growth. The Strategy sets out a range of cross sectoral initiatives designed to support enterprise sector productivity. A key objective of the strategy is to deliver 2-2.5 per cent productivity growth per annum in Irish firms. In this regard, the prominence accorded to productivity performance in EP 2025 is welcome and should be continued. A review of Enterprise 2025 is being undertaken in the context of global changes that are likely to have an immediate impact on Ireland's enterprise development, specifically Brexit and potential relevant policy changes under the new US administration. It is considered that the emphasis on productivity performance be strengthened in EP 2025. Sectors contribute variously to total economy productivity performance. Monitoring of the total economy performance should be accompanied by analysis at a sectoral level.

Recommendation: Continue to set an objective that Ireland's medium term productivity growth as part of the renewed Enterprise 2025 Strategy. Reflecting the composition of Irish productivity growth, output per hour should also be measured relative to GNI*. Separate complementary targets should continue to be set and monitored at sectoral level.

Responsibility: Department of Business, Enterprise and Innovation, National Competitiveness Council

Productivity and Competitiveness Boards

In September 2016, the Council of the EU adopted the Commission's recommendation on the establishment of National Competitiveness Boards within the Euro Area. The role of the Boards is to track developments and inform the national debate in the field of productivity and competitiveness. Member States are required to implement the principles of the Recommendation by 20 March 2018.The fact that the National Productivity Board's remit in the future may include activities currently outside the scope of the National Competitiveness Council (such as possible cost-benefit analysis, reporting and monitoring obligations) may require changes to the council's Terms and Reference and may have resource implications for the Council and its secretariat.

Recommendation: Ensure the work of the NCC has a greater emphasis on productivity analysis. Examine the Council's Terms of Reference, reflect the European Council recommendation and ensure the NCC is adequately resourced to fulfil its mandate. The NCC should engage with the European Commission, OECD and Productivity and Competitiveness Boards to ensure its work in this area is in accordance with emerging trends and international best practice.

Responsibility: National Competitiveness Council, /Department of Business, Enterprise and Innovation

Productivity Data

EP2025 sets out a defined productivity growth rate target; however, any analysis of Ireland's performance is currently limited by the absence of timely national data on productivity performance at sectoral level and firm level. Measures of productivity constitute core indicators for the analysis of the drivers of competitiveness and economic growth. However, the variables involved in measuring productivity performance such as output, value-added, hours worked and changes in capital stock are complex and tend to be a mix of administrative, survey and national accounts data. In the UK, the Office of National Statistics (ONS) have developed comprehensive productivity indicators for the UK which cover all sectors of economic activity, including the public sector, benchmarked against international competitors published on a quarterly basis. To facilitate better analysis of Irish productivity performance, data is required at sectoral level for both productivity levels and growth rates, and data should be disaggregated to the degree possible to identify sectoral trends. In the Council's 2016 Competitiveness Challenge, the Council recommended that the potential to develop and publish a comprehensive productivity dataset should be explored by the CSO. The CSO has undertaken preliminarily research to measure productivity using national accounts data. The Council welcomes the work to date and considers the publication of such data remains a priority to help policymakers adequately benchmark and understand Ireland's productivity performance.

Recommendation: Publish estimates of national productivity data at aggregate and sectoral level.

Responsibility: Central Statistics Office

Understanding the distribution of firm-level productivity performance, particularly as to how it influences sector level productivity patterns is important to inform policies to enhance aggregate productivity. Analysis[100] of firm-level performance across a range of economies using the OECD's MultiProd project suggests significant and consistent differences in labour and multi factor productivity between sectors and between firms within sectors. The analysis suggests productivity dispersion is high in both manufacturing and non-financial market services with a substantial part of this productivity heterogeneity arising from differences among firms within the same sector of activity in the same country. The most productive firms, i.e. firms in the top decile of the distribution produce six times as much value added per worker as firms in the bottom decile of the same country's manufacturing sector, and nine times in services. The Council welcomes the ongoing work by the Department of Finance which is undertaking analysis of firm level productivity performance using CSO micro-data and in conjunction with the OECD. Such analysis of firm level data should help identify policy measures which could help improve understanding of the key drivers of aggregate productivity in Ireland and facilitate the development of tailored and targeted policy instruments to drive future productivity growth at sectoral and firm level.

Innovation and Investment in Knowledge Based Capital to Drive Productivity Growth

Innovation and investment in knowledge based capital are key drivers of productivity. Investment in knowledge based capital includes investment in computerised information, innovative intellectual property and economic competencies. As shown in this year's Competitiveness Scorecard Report, while such investment has grown over time, Ireland remains in the lower half of OECD countries for which data is available.

More intensive innovative activity is associated with higher productivity growth. As noted by the OECD in the Future of Productivity, synergic investments in R&D, skills, organisational know-how (i.e. managerial quality) and other forms of knowledge-based capital enable economies to absorb, adapt and reap the full benefits of new technologies. Innovation active enterprises are defined as those which have carried out a product, process, organisational or

100 Firm-level Productivity Differences: Insights from the OECD's MultiProd Project, International Productivity Monitor, Spring 2017

marketing innovation or exercise an intellectual property right. The development and diffusion of innovative products, services and processes provides the platform for productivity growth and is thus an important driver of firm level competitiveness. R&D is the main source of new technologies and productivity growth in the long run. However, the concept of knowledge based capital is a broad one encompassing a wide range of activities in addition to R&D, such as organisational changes, training, testing, marketing and design.

Data published by the CSO in July 2017 from the 2015 - 2016 Business Expenditure on Research and Development survey show that more than €2.2bn was spent on research and development (R&D) activities by enterprises in Ireland in 2015. This is a 10 per cent increase compared with 2013. The CSO reports foreign owned enterprises accounted for 64 per cent of all R&D expenditure. The largest 100 enterprises in terms of R&D spend accounted for over €1.6bn, or 73 per cent, of the total R&D expenditure in 2015. Of these top 100 enterprises, 76 per cent of expenditure is attributed to foreign owned enterprises. Irish owned enterprises reported an increase in R&D spend of 15 per cent or €107m, up from €703m in 2013 to €810m in 2015.

Recent research by the ESRI[101] on investment in knowledge-based capital and its contribution to productivity evidence finds that since 2010 investment in KBC as a percentage of gross value added remained relatively consistent in Ireland at approximately 9 per cent per annum. Investment in KBC has been highest in the economic competencies[102] sphere accounting for more than 50 per cent of investment. There is considerable heterogeneity in Ireland at sector level in terms of the intensity and concentration of KBC investment. As a percentage of adjusted gross value added, investment in KBC in 2014 ranged from 3.5 per cent in financial services to 27.2 per cent in utilities. As percentage of total KBC investment, investment in computer software ranged from 0.2 per cent in construction to 77 per cent in utilities. Investment in innovative property ranges from 11.4 per cent in construction and utilities to 37 per cent in other business services. Investment in economic competencies ranged from 11.2 per cent in utilities to 88.5 per cent in construction.

At firm level, the ESRI analysis indicates investment in KBC and more intensive innovative activity is associated with higher productivity growth. ESRI analysis of firm level investment in KBC in Ireland over the period 2006-2012 shows approximately 50 per cent of firms investing in KBC with 17 per cent investing in R&D and 35 per cent investing in non-R&D KBC. Some 52 per cent of Irish owned firms invest in KBC compared to 71 per cent of foreign-owned firms. Exporting firms are more likely to invest in KBC (65%) with 60 per cent of Irish-owned exporting firms investing in KBC. Irish owned SMEs are less likely to invest in KBC compared to foreign-owned SMEs. A ten per cent increase in investment in KBC increased firm level labour productivity by 2 per cent for all firms with the impact greater on Irish-owned firms (3.6%). For small Irish-owned firms a ten per cent increase in KBC investment was associated with a 5.3 per cent productivity gain. Productivity gains associated with KBC investment were larger in the manufacturing sector (3.8%) compared to the services sector (1.1%). Amongst Irish-owned enterprises investment in R&D and organisational capital are associated with the largest productivity gains.

Supports for Knowledge Based Capital

The most recent Community Innovation Survey (CIS) shows that the innovation activity rate for enterprises based in Ireland increased from 59 per cent to 61 per cent in the period 2012-2014. While the increase is relatively small, in a European context Ireland continues to perform strongly and has the 3rd highest innovation rate of all countries for whom data has been published. While the overall results are positive, the detailed findings suggest significant variation in the level of innovative activity carried out by indigenous and Foreign-owned enterprises and between and within sectors. 38 per cent of enterprises had process innovations in the period 2012-2014, while 36 per cent were

101 Investment in knowledge-based capital and its contribution to productivity growth: a review of international and Irish evidence, ESRI, May 2017
102 Economic competencies refer to market research; advertising: training: organisational capital (own account and purchased). ESRI Ibid

engaged in product innovations. 27 per cent of enterprises engaged in both. 45 per cent of Industry enterprises were engaged in process innovation compared to 34 per cent of enterprises in Selected Services. Foreign-owned enterprises were more likely to engage in product innovations, process innovations or both compared to Irish-owned enterprises. Almost 23 per cent of the turnover of Foreign-owned enterprises was generated because of new to the market and new to firm product innovations which is double the turnover generated by Irish-owned enterprises. The gains associated with new technologies are best realised when firms make complementary investments in organisational change and upskilling. New methods of organising work responsibilities and decision-making (39%) and the introduction of new business practices (38%) were the most cited innovations. An organisational innovation was introduced by 68 per cent of large enterprises, 54 per cent of medium sized enterprises and 41 per cent of small enterprises.

While acknowledging differences in survey methodologies, it is concerning that the most recent SME Credit Demand Survey published by the Department of Finance in June 2017 suggests a less positive trend than the CIS in enterprises undertaking innovation activities. In March 2017 43 per cent of SMEs reported that they were undertaking innovative activities, a 10 per cent decrease year on year. The most common form of innovation cited is in marketing with 25 per cent of SMEs reporting that they had undertaken new marketing approaches in the last 6 months. It is notable that the proportion of enterprises engaging in new business practices (15%) has halved in the last year. In addition, the proportion of SMEs undertaking New/improved services (17%) or goods (15%) has fallen over the past three years. The proportion of SMEs undertaking new improved methods of production, distribution or support activity has also decreased (11%). It is also a concern that a recent review[103] of Capital Expenditure on Research, Development and Innovation concluded that a sizable cohort of client companies supported by Enterprise Ireland and IDA Ireland is not meaningfully engaged or investing in innovation and are most vulnerable to structural change brought about by external forces.

There is a wide portfolio of instruments and supports in place administered primarily by Enterprise Ireland, Science Foundation Ireland and IDA Ireland that aim to address market failures and contribute towards increased productivity and competitiveness by supporting KBC investment and activity at firm level. The analysis (ESRI, DBEI, EI) suggests that a mix of policies to enhance the framework conditions (human capital, business environment and access to finance and support) that facilitate investment in KBC would have a positive impact on firm's propensity to invest in KBC and generate an uplift in enterprise competitiveness and productivity. It also suggests that policy approaches to incentivise investment in KBC supports should be tailored to specific groups of firms with similar characteristics including ownership, size and sector. Finally, at a national innovation systems level, it is important to address any coordination and information failures that can arise between enterprise and the various players in the innovation system, in terms of information and awareness, risk sharing, capability and financing supports that might hold back enterprise innovation activity.

Recommendation: Identify the obstacles and enablers to increasing investment in knowledge based capital and innovation activity at firm level amongst EI and IDA client companies.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Agencies

Recommendation: Consider how approaches and offerings to encourage participation in existing KBC supports should be tailored and communicated to specific groups of firms with similar characteristics including ownership, size and sector.

Responsibility: Enterprise Ireland

103 Department of Business, Enterprise and Innovation, Review of Capital Expenditure on Research, Development and Innovation (2000-2016), 2017

Productivity Enhancing Supports

Enterprise Ireland provides supports for firms to enhance productivity, improve competitiveness and realise transformational change based primarily on Lean principles. From a productivity perspective, increasing participation on programmes based on productivity enhancing programmes such as Lean[104] appears to be an important means of increasing both innovative activity and productivity. The Council welcomes the proposed approach to competitiveness and productivity and the roll out of a new Competitiveness Strategy by Enterprise Ireland in Q4 2017.

It is understood that Enterprise Ireland's new Strategic Competitiveness Approach will be:

- Based on a holistic and whole-of-business approach to Competitiveness that examines enterprise competitiveness drivers across all six pillars of business development i.e. Business Strategy, Sales & Marketing, Innovation, Operations, People and Organisational Development and Finance;
- Staged to support clients at each step combining financial supports and access to expertise;
- A streamlined and integrated process with a simplified single application for support that can address the full range of company needs; and,
- An expanded and enhanced offer with increased funding limits against many of our existing offers and the development of new funding offers focussed on driving the sustainability and growth of firms.

When it comes to operational efficiency, increases in input costs have been identified as a major concern amongst Enterprise Ireland's most Brexit exposed clients. Proactive action to contain, reduce and control costs under every heading is a short-term necessity and tis will be achieved through the continued use of Lean supports as part of a broader suite of competitiveness supports:

- Operational efficiency is recognised as a crucial element in tackling the competitiveness challenge, and lean and/or agile efficiency improvements are required;
- Improving operational efficiencies in terms of how these products and services are accessed through strategic sourcing will be essential to improving margins. EI's clients spent €26.6bn on materials and services inputs in 2016, €9.9bn of which was imported; and,
- Automation and investment in capital expenditure is also vital. In that context, the latest CSO statistics on investment is concerning. Business investment in equipment and machinery slowed substantially, to 0.8 per cent annually in 2017, this reflects anecdotal evidence that businesses are delaying investment decisions because of increased uncertainty.

Recommendation: Roll out Enterprise Ireland's new Competitiveness Approach to support Enterprise Ireland clients to become more competitive and increase productivity. Promote awareness of the benefits of participation in productivity enhancing programmes such as Lean.

Responsibility: Enterprise Ireland

Collaboration for Innovation and Productivity

The OECD study "The Future of Productivity" suggests that the productivity of frontier industrial firms increased by 3 per cent per annum more than that of other firms in the same sector. Economy-wide productivity and employment gains are generated when innovations are diffused and widely adopted; meaning the strengthening of technology diffusion mechanisms represents a key policy challenge. Effective innovation activity facilitates an increase in the productivity and turnover of innovating firms. From a policy making perspective, the key issue is to foster a supportive

[104] See http://www.lean.org/WhatsLean/

environment for investment in innovation and technology adoption. In Ireland, the Community Innovation Survey (CIS) shows that of those firms undertaking innovative activity, 31 per cent engaged in some co-operative activity when developing their innovations with 23 per cent of cases who engaged in technological innovation working with partners located in Ireland. The CIS results indicate there is potential to further increase levels of collaboration and co-operative activity between firms based in Ireland and with the public research system.

The level of collaboration between business and academia in Ireland has been highlighted by the European Commission as relatively low in a European context. The main reasons behind Ireland's relative performance are attributed to weak absorptive capacity within indigenous SMEs, lack of research centres/RTOs in certain sectors with applied research capabilities and a lack of clarity on the side of enterprise regarding schemes and research centres. The Council supports the policy emphasis in recent years which has sought to stimulate collaboration between research institutes and both Foreign-owned and Irish-owned enterprises. Initiatives to increase knowledge transfer, particularly the mobility of personnel between research and enterprise are also welcome. As set out in Innovation 2020 a correlation exists between collaboration activities (ranging from Innovation Vouchers and Innovation Partnerships to Technology/Research Centres and Strategic R&D partnerships) and quantifiable increases in company turnover – these can be as much as seven times the investment in these instrumentso. For example, as set out in Innovation 2020, for every €1 invested in Innovation Vouchers and Innovation Partnerships respectively, company turnover increased by €7. In addition, novel initiatives such as the Technology Showcase and Health Innovation Hub Ireland are designed to drive collaboration between the health system and enterprise leading to the development and commercialisation of new healthcare.

Innovation vouchers are common across the OECD and refer to small lines of credit provided to small and medium-sized enterprises (SMEs) to purchase services from public knowledge providers with a view to introducing innovations (new products, processes or services) in their business operations. The Innovation Voucher Programme has been operational since 2007 and in 2016 838 Innovation Vouchers were issued valued at €2.9 million. An independent evaluation of the scheme over the period 2007-2015 found that firms participating in the scheme reported benefits including: new products to company (24 per cent) and to the market (23 per cent); improved products to the company (20 per cent) and to the market (19 per cent); and new processes to the company (16 per cent) and to the market (12 per cent). It is planned to continue the programme as long as the demand justifies it and it continues to meet a need in the small business sector.

Knowledge Transfer Ireland (KTI) operates at the intersection of business and the research and innovation eco-system. By contributing to increased academic-industry collaboration and enhanced in-firm capabilities State supports can help drive increased levels of innovation and collaboration. KTI recently announced a new interactive "Find R&D Funding" tool, to provide organisations with a mechanism to help them source funding and supports for research and development activity in Ireland.

Among the principal programmes which support enterprise collaboration on R&D are the SFI Research Centres, and the Enterprise Ireland/IDA Ireland Technology Centres. Science Foundation Ireland established 12 large-scale research centres in 2015, associating over 200 industry partners. In addition, Science Foundation Ireland (SFI) provides a range of partnership funding mechanisms and programmes to facilitate industry and academia build competitive advantage by enhancing their R&D capabilities; enable them to engage in projects of scale and relevance and allow them to explore novel opportunities and priorities. The SFI Partnership Schemes aim to provide a flexible mechanism by which SFI can build strategic collaborations with key partners such as industry, funding agencies, charities, philanthropic organisations or higher education institutes (HEIs). The schemes co-fund projects or people (for a limited time) to aid development and retention of talented researchers, foster industrial collaborations and develop capacity in areas of current and emerging economic importance.

The Council welcomed the announcement that additional funding is also being allocated to bring the number of Research Centres funded by Science Foundation Ireland (SFI) to 17 up from 12 at the beginning of 2017. It is important

that future Budgets facilitate enhanced expansion of Research and Technology Centres aligned to the needs of the enterprise sector.

Research and Technology Organisations RTOs bring together enterprise and research across the whole innovation chain to facilitate the development and transfer of science and technology to firms. Most EU member states have a form of publicly State supported industrially oriented and applied research organisations. Currently, such centres are funded through SFI and EI/IDA Ireland and provide a mechanism through which enterprise can access expertise and technology beyond what they have available in-house to enhance their products and services. Innovation 2020 commits to addressing an identified enterprise need for additional research technology support, based on the 'close to industry' RTO model in Advanced Manufacturing.

RTOs should have the scale and scope to support market-oriented, applied, industry led research. An inter-agency (EI, IDA, SFI) group has been established to progress proposals for the establishment of an Advanced Manufacturing Centre (AMC) based on the RTO model. It is proposed that the AMC will build on the existing supports being provided by the IMR Technology Centre, as well as the two recently announced SFI Research Centres in the manufacturing research area. Innovation in Services and Business Processes has lagged that in other priority areas. Advances in technology have presented new opportunities for firms to innovate their service delivery and business processes such as: new monetising models; new channels for service delivery; and improved customer experience.

There would appear to be a good base on which to deliver an RTO through one of the EI/IDA Ireland Technology Centres (Irish Manufacturing Research). The RTO model could be further explored to complement the work of SFI Research Centres and, in combination; this could be an effective platform to drive greater economic impact from public investment in research and development. It is vital that the model is aligned to enterprise needs. The model should be focussed on facilitating SME participation and be flexible and adaptable to evolving enterprise needs in terms of research and training.

Recommendation: To drive greater economic impact from public investment in research and development progress proposals for a Research and Technology Office model to complement/add value to the work of Research and Technology Centres.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Agencies

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Recommendation: Address gaps in the provision of RDI support, particularly in product and process development, to enhance manufacturing competitiveness and to address innovation in services and business processes.

Responsibility: Department of Business, Enterprise and Innovation/Enterprise Agencies

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Recommendation: Improve awareness of the range of existing supports to foster greater levels of industry-knowledge producer collaboration.

Responsibility: Knowledge Transfer Ireland with Enterprise Agencies

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Recommendation: Examine enterprise RDI support programmes where necessary and appropriate to ensure their comprehensiveness and appropriateness to indigenous enterprise particularly SMEs.

Responsibility: Department of Business, Enterprise and Innovation

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Global Value Chains and Strengthening MNC/Indigenous Linkages

The productivity performance of SMEs could be enhanced through knowledge spillovers, access to networks and opportunities to partner with larger enterprises. Facilitating and supporting SMEs to identify and connect with appropriate partners and networks at local, national and international levels is a major challenge across the OECD. The ability to learn from the firms with high levels of productivity is stronger in economies that are more connected with the global frontier via trade; are more integrated in Global Value Chains (GVCs). Over 70 per cent of global trade is now in intermediate goods and services and in capital goods. Participation in GVCs is, therefore, a critical component of a country's ability to increase productivity and compete internationally. GVC participation may boost productivity via several channels, including stronger competitive pressures that reduce the cost of intermediate inputs and access to a wider variety of foreign inputs that embody more productive technology. Enhancing exports from indigenous firms, increasing linkages and supporting greater linkages across multinational and indigenous enterprise offers potential to deepen indigenous firms' links in GVCs and increase productivity. Multinational-dominated sectors exhibit higher labour productivity and wages than indigenous firms.

The growth of GVCs has increased the interconnectedness of economies and led to a growing specialisation in specific activities and stages in value chains, rather than in entire industries. OECD data suggests that FDI in Ireland is largely responsible for Ireland's high participation rates in GVCs. The international evidence on productivity spillovers from multinationals is somewhat mixed. Research indicates that to benefit from the presence of FDI, firms' absorptive capacity is particularly important (i.e. they must possess certain capabilities before they can usefully apply knowledge gained from a multinational). This suggests that policies which strengthen the absorptive capacity of indigenous firms are central to enhancing productivity levels through knowledge diffusion. In addition, policies which encourage multinationals to generate linkages with the domestic economy and providing new and potential investors with information on the availability sub-suppliers are important. The development of greater linkages between Irish-owned firms and Foreign-owned firms also offers Ireland a potential competitive advantage in terms of attracting FDI and developing Ireland's indigenous enterprise base and should be progressed as a priority.

The Council supports the ongoing partnership of IDA Ireland with Enterprise Ireland and its indigenous base of firms in identifying synergies, enhancing clusters and participation in site visits. Under the Global Sourcing Initiative, both agencies work together to maximise the opportunity for greater sourcing of materials and services by multinationals from indigenous enterprises. While ultimately linkages and partnerships will depend on the competitive advantages offered, information barriers can discourage both SMEs and larger enterprises in their search for commercial partners. Enterprise Ireland-IDA Ireland Global Sourcing initiative provides procurement teams in multinational firms (not only in Ireland but also internationally) with access to innovative Irish firms in all sectors. The Council considers that the Enterprise Agencies should continue to work towards deepening the partnership of Irish-owned firms with the multinational sector in Ireland to facilitate productivity growth as well as to develop appropriate skills and management practices for co-ordinating and integrating knowledge created by external partners with in-house practices and innovation processes.

Recommendation: Strengthen and intensify linkages between indigenous and multinational enterprises. This includes active engagement by the Enterprise Agencies to assist suitable indigenous firms to optimise supply chain business opportunities. Review the impact of the Global Sourcing Initiative.

Responsibility: Department of Business, Enterprise and Innovation

Supporting Entrepreneurship and Start-ups

New firms are especially relevant for expanding productivity and innovation performance. A continuous flow of new business start-ups that can survive and thrive in international markets strengthens the productivity base not only through the creation of new businesses, products and services but also by stimulating improved performance in existing businesses.

The European Commission's annual Small Business Act (SBA) report benchmarks regulatory trends and national policies which affect entrepreneurs and SMEs across Europe. The SBA assesses elements such as entrepreneur supports, State Aid, procurement, education and training, female entrepreneurship, bankruptcy procedures, support services and the operational environment for business creation. In 2016, Ireland maintained its competitive SBA profile. Since 2008, the level of entrepreneurial activity has improved steadily, and at a faster pace than in the EU. The Commission consider that Ireland offers a generally welcoming environment for entrepreneurs. In five of the SBA's principle areas — Entrepreneurship, 'Second chance', 'Responsive administration', Single market and Skills and Innovation —the European Commission reports that Ireland performs well above the EU average and is among the top three performers in the EU. In three other areas — State aid & public procurement, Access to finance and Environment — it performs on a par with the EU average. In internationalisation Ireland is behind the EU average, however, the Commission attribute this to technical reasons.

Analysis by the World Bank shows that Ireland has a relatively supportive environment for starting a business compared with many of our international competitors. In the World Bank's latest Ease of Doing Business report, Ireland improved its ranking in terms of Ease of Starting a Business to 8th out of 190 countries and is the highest-ranking EU member state in this category. Ireland outperforms both the UK and the US with regard to the number of procedures involved and administrative costs of starting a business. The EU's SBA reports that the general administrative environment is very competitive in core elements of SMEs' day to day business. The general administrative burden is very low and the licence and permit system is, in general, rather straightforward. Relative to other EU member states, the broader legislative framework is also considered more stable and less complex.

While no single policy intervention can be expected to generate critical impact on the environment for enterprise or increasing start up levels, various coordinated interventions taken together can combine to create an environment that facilitates the creation of start-ups. This requires institutional arrangements that facilitate efficient firm entry, growth, and exit. In addition, improving the administrative and regulatory environment and well-developed capital markets for seed and early stage finance; bankruptcy laws that do not excessively penalise failure; and low entry barriers to entrepreneurship, are fundamental for enterprise growth.

The proportion of self-employed in Ireland remains slightly below pre-recession levels (from 15.1% to 14.9% in 2015), but remains above the level seen in the UK (13.6%) and the Euro area average (14.2%). At 4.5 per cent, the proportion of self-employed persons with employees is almost double the level seen in the UK (2.3%). Simply measuring the number of individual entrepreneurs or company incorporations is insufficient. Policies that fail to consider the quality of entrepreneurial activity are not likely to succeed. The 5-year survival rate also underlines the importance of policies which support start up activity being accompanied by complementary approaches which facilitate new firms surviving and scaling. To be effective, investment by the State in entrepreneurs must continue to be well targeted, avoid deadweight and evaluate the potential quality of entrepreneurial activity, particularly potential to scale. State support to start-ups through Enterprise Ireland in the form of feasibility funding, Competitive Start Funds, HPSU supports and the LEO network is critical. It is also critical that private investment in entrepreneurs be encouraged to increase the scope and competitiveness of the start-up investment market.

The 2014 National Policy Statement on Entrepreneurship sets out the Government's approach to improving the Irish entrepreneurship ecosystem. The Department of Business, Enterprise and Innovation reports that of the 96 Actions outlined in the Policy Statement, 60 have been completed and the remainder are ongoing in nature. 2017 saw the Mid-

term review of the Policy Statement with engagement and feedback gathered from stakeholders, most notably entrepreneurs themselves. The findings of this review are due to be published in Q4 of 2017. It is timely at this point to assess progress on the strategy, the relevance of the existing targets to 2019 and the priority obstacles and barriers to achieving a 25 per cent uplift in the number of start-ups, and increasing the survival rate of start-ups. The focus on encouraging female entrepreneurs and developing entrepreneurship in the education system as set out in the Action Plan for Jobs should continue to be enhanced.

Easing administrative burdens imposed through regulation can improve firm level productivity by reducing costs and minimising the time businesses spend fulfilling regulatory requirements. The Council welcomes the Department of Business, Enterprise and Innovation's development of an SME test, which will put the "Think Small First" Principle to the fore in legislator's minds. The purpose of the SME test is to request policymakers to think about the negative impact of any new legislation or regulation which may create a burden on SME's. The main thrust of the test is to propose possible exemptions or less stringent requirements for smaller firms.

Well-developed capital markets for seed and early stage finance; bankruptcy laws that do not excessively penalise failure; and low entry barriers to entrepreneurship are fundamental for the development of innovative start-ups. Benchmarking the framework conditions that support enterprise formation and the level of entrepreneurship in a country is a complex task as there are many variables involved. Internationally comparable data on enterprise formation and the factors which affect the entrepreneurship ecosystem is collated by a wide variety of sources. These include the World Bank, GEM, GEDI and the OECD. However, at present there is little data available on the employment, exporting, scaling, and survival performance of Irish enterprise, particularly start-ups relative to our international competitors. Internationally comparable data would facilitate more effective policy evaluation of the key enabling components for entrepreneurship, survival and scaling. The Department of Business, Enterprise and Innovation in the context of the National Policy Statement on Entrepreneurship should continue to progress work on the development of business demography indicators which monitor the level of quality of start-up and enterprise performance.

In terms of Ireland's environment for entrepreneurship a key gap identified by the European Commission has been the absence of a national strategy to embed entrepreneurship education in school curricula. The Council welcomes the commitment in the Action Plan for Education which includes actions to develop and publish a new Entrepreneurship Education policy statement and to develop new Entrepreneurship Education Guidelines for schools. The Department of Education and Skills is developing an Entrepreneurship Education Policy Statement which is designed to cover the whole of the education and training system, including primary and post primary schools. New Entrepreneurship Education Guidelines for Schools are to be issued following publication of the Entrepreneurship Education Policy Statement and will be informed by that statement.

Recommendation: Continue to monitor Ireland's performance in relation to entrepreneurship and administrative burdens and costs regarding starting a business. Actively pursue reform in areas of identified weakness.

Responsibility: Department of Business, Enterprise and Innovation

Recommendation: Prioritise the recommendations and actions arising from the Mid-term Review of the National Policy Statement on Entrepreneurship.

Responsibility: Department of Business, Enterprise and Innovation

Recommendation: To ensure the impact of any new legislation or regulation does not create a disproportionate burden on SME's, develop and implement the SME test.

Responsibility: Department of Business, Enterprise and Innovation, Government Departments

Recommendation: Work with stakeholders to develop a range of indicators to assess relative performance across the entrepreneurship ecosystem to inform entrepreneurship policy.

Responsibility: Department of Business, Enterprise and Innovation

Recommendation: Prioritise the recommendations and actions arising from the Entrepreneurship Education policy statement and develop new Entrepreneurship Education Guidelines for schools.

Responsibility: Department of Education and Skills

Management Practices Development

Management practices are an essential element in driving improved productivity performance. Management practices may be considered as the approaches and techniques used to improve performance, focusing specifically on operations management, performance & target management and human resource deployment and development. At a global level, the available research shows that there is a strong relationship between management practice and business performance. Research[105] suggests a positive relationship between management development, management practice and the bottom line performance of a firm. McKinsey have found that management performance is closely correlated with a range of corporate performance metrics, including labour productivity, sales growth and return on capital employed. There are relatively few international benchmarks of management practice available. McKinsey & Co. have found that improved management practice is associated with large increases in productivity and output[106].

For example, in the Manufacturing sector, managerial quality differs significantly between countries and Ireland scores relatively poorly, particularly when compared to the US, Japan and Germany. Increasing managerial quality in manufacturing in Ireland to the best practice levels observed in the US could potentially boost manufacturing productivity by over ten per cent. In the UK, the ONS[107] launched a pilot survey in 2016 of the management practices of manufacturing businesses. The results suggest that on average large businesses and multinationals have more structured management practices than smaller businesses. Businesses which are owned and managed by family members have less structured management practices. The ONS analysis finds a positive relationship between structured management practices and higher levels of labour productivity. The ONS estimate that an increase in the management score of 0.1 is associated with an increase in labour productivity of 8.6 per cent.

The Report of the Management Development Council (MDC) published in 2010, found that the level of general management skills in Irish businesses was relatively poor, particularly in skills such as human resources, marketing and finance, and in forward planning and strategic management. The age of this data and research indicates there is scope to introduce a more systematic approach to benchmarking relative management performance in Ireland, identify performance gaps and inform policy aimed at improving management practices.

Recommendation: Consider extending coverage of the Annual Business Survey of Economic Impact to benchmark the prevalence of management practices in Irish-owned and foreign-owned enterprise.

Responsibility: Department of Business, Enterprise and Innovation

105 Bloom, N. et al, Management Practices Across Firms and Countries, National Bureau of Economic Research, 2012
106 Report of the Management Development Council, 2007
107 Office of National Statistics, Management practices and productivity among manufacturing businesses in Great Britain: Experimental estimates for 2015, 2017

The Council endorses the Enterprise 2025 ambition of delivering a demonstrable uplift in business leadership skills to drive innovation and internationalisation across a broader cohort of enterprises, and in management capability across the enterprise base, so that all firms have the potential to achieve a one-step-up to higher business performance and growth. Highly proficient leadership, with ambition, vision and strong management teams, is critical for establishing the environment that facilitates an innovative culture. The State working in partnership with enterprise and training providers plays an important role in supporting SME management development. Enterprise Ireland and the Local Enterprise Office Network already offers customised management development supports and programmes designed to equip enterprise with the tools and techniques to operate more effectively. For example, Enterprise Ireland runs a range of mentoring and management programmes; client companies that participate in these programmes exhibit stronger employment growth than firms that do not participate. In addition, Skillnets, through Management Works offer a suite of subsidised management development programmes to help business owners, managers and management teams achieve better results. The Skillnets programme actively supports and works with businesses in Ireland to address their current and future skills needs. It funds groups of firms in the same region or sector, and with similar training needs, through training networks that deliver subsidised training to Irish businesses.

To facilitate enterprise competitiveness generally and productivity performance there is a need to broaden the reach of the existing programmes catering to management development and increase the take up of management development amongst firms outside of agency client companies. There is also a need to identify the elements of existing management programmes that can be tailored to meet the needs of different cohorts of firms. Thereafter, mechanisms to increase engagement with firms (particularly locally trading SMEs) that do not currently participate in management development are required to disseminate relevant modules. It is likely that all elements of existing programmes, however, will not be relevant to all firms currently not engaging in management development. For many locally trading firms in the hospitality, retail or construction sectors for example, programmes designed to boost the management capability of an exporting firm may not be directly applicable. Such firms may benefit more from greater exposure to mentoring, and/or peer-to-peer networking, and to modules related to managing sales/revenue growth. A broad range of options are available for enterprises - from more intense leadership programmes, to light touch mentor services and/or peer-to peer networks that can assist the CEO and owner/manager at every stage of the company lifecycle. Some SMEs could benefit through participation in employer networks, where they might be able to achieve economies of scale by coming together to develop and fund training that they might otherwise be unable to afford. Participation in relevant management development programmes amongst SMEs not currently catered for by either the LEOs or EI could be promoted through the development of networks of managers. The network approach should be a demand-led method of increasing SME participation in management development. In this regard, the recent development of a network of Regional Skills Fora which provides a framework for the education and training providers and enterprise stakeholders, including the Enterprise Agencies, to work together in identifying and addressing the current and future skills needs of each region on an ongoing basis could represent a vehicle in which to facilitate an uplift in management practices. The work of the Fora could be supported by a shared knowledge base regarding establishing best practice activities.

Recommendation: Consider identifying and addressing management development needs of each region on an ongoing basis and develop a vehicle in which to facilitate an uplift in management practices.

Responsibility: Regional Skills Fora/Local Enterprise Offices/Skillnets

A survey undertaken by the Small Firms Association (SFA)[108] reported that the highest demand for management development capacity-building amongst their members is in the following areas: Human resources and industrial

108 Cited in Skillnets Statement of Strategy, 2016-2019

relations; Leadership/management skills; Strategy; Sales/business development; Business/employment law. In the context of Brexit, State support for management training could be targeted towards internationalisation and skills (marketing, sales, etc.) to grow export markets. A broad range of options are available for enterprises - from more intense leadership programmes, to light touch mentor services and/or peer-to peer networks that can assist the CEO and owner/manager at every stage of the company lifecycle.

There is a need to identify the elements of existing management development programmes that can be tailored to meet the needs of different cohorts of firms. Thereafter, mechanisms to increase engagement with firms (particularly locally trading SMEs) that do not currently participate in management development are required to disseminate relevant modules.

It is acknowledged that skills development is a resource intense activity for firms and individuals. Supports should be tailored to the specific sector scale and stage of enterprise development and identify market gaps, where current and latent demand for management development is unfulfilled. In addition, public expenditure on skills development is finite and expenditure on management development needs to avoid deadweight and demonstrate clear returns on investment. Keeping per-enterprise costs low and developing resources and activities to meet enterprise needs is key to reaching many participants (but adequate budget needs to be attached). Surveys conducted by the Management Development Council indicated a lack of awareness amongst many firms about either a) the value of management development, or b) their own management development needs. In addition, firms were not fully aware of the range of programmes available. Private firms already provide most of the funding for management development without recourse to the State and the Council believes this pattern should continue. Greater use of NTF funding via Skillnets may be a vehicle through which the State could provide additional support to management practices training.

Recommendation: Consider mechanisms to facilitate the tailoring and extension of relevant management development programme modules to cohorts of firms currently not engaging in such programmes.

Responsibility: National Skills Council/Regional Skills Fora/Skillnets/Local Enterprise Offices

Recommendation: Increase the awareness and take up of management development initiatives by enterprise, particularly micro-enterprises and SMEs.

Responsibility: Local Enterprise Offices, Skillnets, Enterprise Ireland

Recommendation: Extend Skillnets Management Development programmes to generate an uplift in enterprise participation.

Responsibility: Skillnets

Theme 2: Chapter 3- Building Innovation Capacity

Introduction

The importance of innovation has been reinforced both by globalisation and by rapid advances in new technologies, with economies competing to move up the global value chain. At firm level, the returns from innovation are a major driver of productivity growth, growing FDI, creating competitive advantage in intellectual property, products and services and increases the survival probability of firms. Innovation is a key driver of competitiveness, productivity and economic growth. While the precise impact varies across countries and sectors, the European Commission[109] reports that two-thirds of economic growth in Europe from 1995 to 2007 derived from research and innovation. The impact on labour productivity growth, between 2000 and 2013 is estimated at near 30 per cent in Ireland[110]. The economic benefits of public investment in innovation can be difficult to assess and take time to measure. However, public investment is vital to address persistent barriers to private investment and to provide a platform for enterprise led innovation creation and the diffusion of innovations.

To remain globally competitive, Ireland requires continuous, sufficient and effective investment in R&D not only by the State but especially by the private sector; the presence of high-quality scientific research institutions; extensive collaboration in research between universities and industry; and sophisticated business practices and effective clusters. The EU Innovation Scoreboard shows Ireland is considered a strong innovator with an above EU28 average performance but behind the innovation leaders Sweden, Denmark, Finland, the Netherlands, UK and Germany. Ireland is the overall EU leader in the Innovators Dimension (SMEs product/process innovations, SMEs marketing/organisational innovations and SMEs innovating in-house) and Employment Impacts Dimension (employment in knowledge-intensive activities and employment fast-growing enterprises).

Other strengths of the Irish innovation system are identified in:

- Human Resources – new doctorate graduates, population with tertiary education and lifelong learning;
- Attractive Research Systems – international scientific co-publications and most cited publications; and,
- Sales impacts - knowledge-intensive service exports and sales to new-to-market/firm innovations;

Ireland performs well above the EU average in Broadband penetration for enterprises, Enterprises providing ICT training and Innovative SMEs collaborating with others. Relative weaknesses are reported in:

- Finance and support - R&D expenditure in the public sector and venture capital expenditures;
- Firm investments - non-R&D innovation expenditures;
- Linkages - public-private co-publications and private co-funding of public R&D expenditure; and,
- Intellectual assets - trademark, design and PCT patent applications.

Having come from a low base, Ireland has made significant progress in building a research infrastructure that in some instances is amongst the best in Europe; in retaining and attracting top level researchers; and in achieving closer synchronisation between research endeavour in HEIs, Government agencies, and industry. Further developing our innovation infrastructure capacity and addressing our relative weaknesses is a key factor for futureproofing competitiveness. It is particularly vital to secure sustainable productivity growth and to successfully diversify and broaden the enterprise and exports base of SMEs, which is imperative considering the challenges posed by Brexit.

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109 European Commission, The Economic Rationale for Public Investment in R&I, 2017

110 Ibid DG Research and Innovation, based on data from INTAN INVEST and EIB (2016)

Policy Challenges and Recommendations

Public Support for Innovation

In terms of the public role for supporting innovation, OECD research indicates that the strongest evidence for private under-investment exists for R&D-related spending – suggesting a continued important role for public investment. Innovation 2020 is Ireland's five-year strategy on research and development, science and technology. A key ambition of Innovation 2020 is to increase total investment in R&D in Ireland, led by the private sector, to 2.5 per cent of GNP. Eurostat data shows Gross expenditure on R&D (GERD) as a percentage of GDP ranged from 0.46 per cent to 3.26 cent across the EU in 2015. Latest estimates show that GERD in Ireland accounted for 1.28 per cent of GDP (1.62% of GNP) in 2015. The comparable (latest data 2014) European range for Business Expenditure on R&D (BERD) was between 0.18 and 2.16 per cent and in Ireland amounted to 1.09 per cent of GDP. Irish Higher education (HERD) and government sector (GovERD) spending on R&D accounted for 0.28 and 0.05 per cent respectively in 2015.

While overall levels of investment in research and development in Ireland have improved in recent years they remain below the best performing countries and behind Ireland's targets for 2020. Government expenditure for R&D was €761 million in 2016. It is acknowledged that this represents the third consecutive year that funding has increased and represents a 3.2 percent increase on 2015. However, delivering on commitments in Innovation 2020 requires almost doubling public spending across all Departments in R&D.

The current Infrastructure and Capital Investment Plan does not provide for significant increases in public R&D spending and Ireland's innovative performance may suffer further as a consequence. In addition, R&D expenditure by higher education institutions is relatively low. The higher education sector has seen a decline in R&D expenditure since 2008 and reached €730m in 2014[111]. Improving our performance in these two critical areas represents a significant challenge for Ireland. Additional funding in R&D will be required to achieve the goals of Innovation 2020 and the EU Framework Programme for R&D Horizon 2020.

The Council supports the target in Innovation 2020 to increase combined public and private investment levels in R&D. However, as noted earlier, the economic activities of Irish-based multinationals have had a significant impact on measures derived from growth based indicators such as GDP and GNP. Consequently, such measures mask Ireland's performance, including the proportion of investment in R&D. In this regard, a measure based on the Modified Gross Income Indicator developed by the CSO is a useful supplementary metric for informing Government policy in this area. Data on the gross R&D expenditure expressed as a proportion of GNI* confirms that the R&D intensity has fallen from 1.92 per cent of GNI* in 2014 to an estimated 1.72 per cent in 2016.

Recommendation: Supplement the Innovation 2020 expenditure target with a measure of R&D intensity relative to GNI*.

Responsibility: Department of Business, Enterprise and Innovation

Innovation 2020 contains a commitment on behalf of all Government Departments with an R&D spend to ensure that such expenditure is afforded a sufficiently high priority in Departmental spending plans. The National Investment Plan gives Government Departments a further opportunity to review and re-prioritise their R&D spend. Any additional funding secured for R&D will directly impact the overall level of Gross Expenditure on R&D.

Recommendation: Address the commitments in Innovation 2020 to increase national R&D investment as part of the National Investment Plan.

Responsibility: Department of Public Expenditure and Reform, All Government Research Departments

111 HERD Survey 2014-2015

Maximising the impact of public research funding must remain a priority for policymakers. The current research prioritisation cycle has identified 14 priority areas of strategic importance. These priority areas address six themes: ICT, Health and Medical, Food, Energy, Manufacturing and Materials and Services and Business Processes. A new cycle of research prioritisation is on target to be launched in 2018. The refreshed research prioritisation areas will be determined following analysis of the evidence base which will include a horizon scan of global markets to identify strategic areas of commercial opportunity for Irish based enterprise; a technology futures exercise which will assess technologies that are of critical importance to Ireland's economic and social development; and an audit of progress on the current priority areas and new and emerging areas of national research strength and opportunity.

Recommendation: Focus the next phase of research prioritisation on core strategic areas of commercial opportunity in global markets for Irish-based enterprises, particularly, exporting SMEs.

Responsibility: Department of Business, Enterprise and Innovation

Supporting Firm Level Investment in Innovation *(see also productivity chapter)*

Private investment continues to be the main source of investment in R&D. CSO data shows that more than €2.2bn was spent on research and development (R&D) activities by enterprises in Ireland in 2015[112]. This represents an increase of 10 per cent compared with actual expenditure in 2013. The research expenditure of the indigenous business sector is small relative to the foreign owned sector but growing. Irish owned enterprises reported an increase in R&D spend of 15 per cent, up from €703m in 2013 to €810m in 2015. Ireland's BERD expenditure continues to be dominated by a small proportion of multinationals, although their share in the BERD spend is decreasing. Foreign owned enterprises accounted for two thirds (64%) of all R&D expenditure. The largest 100 enterprises in terms of R&D spend accounted for over €1.6bn, or 73 per cent, of the total R&D expenditure in 2015. Of these top 100 enterprises, 76 per cent of expenditure can be attributed to foreign owned enterprises.

As well as maintaining and increasing the level of R&D activities by high productivity enterprises in the FDI and globally trading indigenous sectors, to affect a real step-change in innovation performance there is a need to increase innovation activity amongst firms in sectors where such activity is currently less intensive. The Council considers that there is therefore further scope to increase R&D activities in Irish enterprise, particularly in Irish-owned SMEs. The 2017 European Commission Country-Specific Recommendation noted that support from the government for business research and development has increasingly relied on research and development tax credits and that more targeted policy mixes with more direct funding may better address the needs of Irish young innovative firms and to exploit opportunities from the strong investing power of multinationals. The Country-Specific Recommendation recommended prioritising public investment in innovation, in support of SMEs. This is especially the case given the backdrop of the potential negative impact of Brexit. In implementing the innovation, research and development policy agenda, the Department of Business Enterprise and Innovation works with, and funds, in whole or in part, several agencies and programmes, namely Enterprise Ireland, Science Foundation Ireland, IDA Ireland, InterTrade Ireland and the Higher Education Authority (who administer the Programme for Research in Third Level Institutions).

The Council welcomes the review being undertaken by the Department of Business, Enterprise and Innovation on its full range of programmes to establish where overlaps and complementarities may exist and ensure better transition between supports where needed. Enterprise agency involvement will be important, particularly, where any Enterprise Agency delivered supports are to be developed.

112 Business Expenditure on Research and Development survey, 2015 - 2016

Recommendation: Continue to develop the range of policies and supports to further embed R&D activity in Ireland and to incentivise increased business expenditure on R&D. Ensure that these incentives remain internationally competitive and relevant to evolving enterprise needs.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Agencies

Ireland provides a relatively high level of public support for Business Investment in Research and Development, through the R&D tax credit scheme. The State's R&D Tax Credit scheme has been a key element of Ireland's strategy to increase and deepen the research capabilities of firms based in Ireland. A 2016 evaluation[113] considered that while the scheme carries a significant level of deadweight (40%) it is relatively successful in its aim of increasing business R&D. The report states that a tax incentive cannot be relied on in isolation as a policy tool to pursue the outcome of increased business R&D by young or small firms. The report also finds that larger, foreign firms were in a better position to take advantage of the credit in the earlier years, with smaller indigenous firms now beginning to be better positioned to utilise the credit but there are issues with respect to ease of use for small firms.

The Report shows that the R&D Tax Credit is responsible for 60 per cent more R&D being conducted that would be the case if there was no R&D tax credit. Noting that research and development tax credits play an important role in Government funding for business R&D, the 2017 Country Specific Recommendation for Ireland[114] suggests that to stimulate innovation by SMEs, innovation policies could be rebalanced towards more direct forms of funding. Such measures could facilitate access to global value chains and accelerate knowledge spillovers.

Tax incentives account for 81 per cent of the total public support for BERD in Ireland[115]. However, OECD[116] research finds that such support is not always well suited to the needs of domestic and young firms. This is in line with the Commission's Country Specific Recommendations which urge the Government to better target government expenditure, by prioritising public investment in innovation in support of SMEs.

Firm level analysis of the scheme suggests it is mainly older, larger firms who benefit from the scheme and less effective in encouraging R&D in younger firms. As noted by the Department of Finance this may suggest other barriers to conducting R&D for this type of firm and these could be examined in greater detail, and public policy tailored appropriately. Non-finance barriers could include firm level capacity, administration costs, and skills.

The Knowledge Development Box, KDB, was introduced in the Finance Act 2015 as an incentive to encourage innovation and boost research and development. Under this initiative, a corporate tax rate of 6.25 per cent applies to profits on certain intellectual property assets that result from qualifying R&D carried out in Ireland. In 2017, the initiative was amended to enable SMEs that invest in R&D to benefit from the lower rate of corporation tax if their IP meets the criteria of being novel, non-obvious and useful. The extension of the KDB is welcome and it is hoped will incentivise greater levels of R&D within the indigenous sector, particularly SMEs.

The significant take-up by the enterprise sector of the R&D tax credit means that indirect public supports for R&D activities are now in financial terms larger than the direct measures to support in-company R&D provided by the State Enterprise Agencies. Accordingly, it is important that Ireland's R&D tax credit and the new Knowledge Development Box achieve their objectives and remain internationally competitive and evolve to meet the needs of the enterprise sector – particularly emerging sectors and the needs of small and early stage firms as well as the needs of larger, established firms.

113 Department of Finance, Economic Evaluation of the R&D Tax Credit, 2016

114 Council recommendation of 11 July 2017 on the 2017 National Reform Programme of Ireland and delivering a Council opinion on the 2017 Stability Programme of Ireland

115 OECD, R&D Tax Incentives Country Profiles 2016: Ireland

116 OECD Ireland Policy Brief – Innovation September 2015

Recommendation: Ensure the R&D tax credit and Knowledge Development Box incentives provide value for money and remain internationally competitive, accessible and relevant to evolving enterprise needs.

Responsibility: Department of Finance

It is important that tax incentives encouraging research and development are effectively promoted and administration barriers do not negatively impact take-up, particularly among SMEs. Recent research by the Irish Taxation Institute[117] suggests that almost half of participating firms considered the R&D tax credit process difficult to prepare for and administer. The recent establishment by the Revenue Commissioners[118], in conjunction with relevant stakeholders of an R&D discussion group to consider the administrative burdens faced by those engaging with the R&D Tax initiatives in tandem with a new practice for SMEs regarding the qualifying 'science test' is welcome. It is important that firms are aware of and there is certainty regarding the qualification and claims criteria for participation in both the R&D Tax Credit and the KDB, and the practicalities of using both schemes are clear and understandable for users, particularly for younger firms and SMEs.

Recommendation: Continue to work with SMEs and relevant stakeholders to ensure clarity and certainty regarding the qualification and claims criteria for participation in both the R&D Tax Credit and the Knowledge Development Box.

Responsibility: Office of the Revenue Commissioners, Department of Finance

Building the IP capability of Irish-owned enterprise and SMEs is of strategic importance for increasing their competitiveness, particularly in the context of Brexit. A revised IP Protocol has been published to ensure that the Irish protocol remains 'best in class'. The Council welcomes Enterprise Ireland's commitment to develop an approach for measuring and monitoring the progress of IP capacity at a firm level. It will be useful if the diffusion of IP activities from the multinationals to Irish-owned firms is also monitored and measures to intensify this process are put in place.

Horizon 2020

Recognising the importance of research and innovation, the EU research framework Horizon 2020 is at the heart of the EU's blueprint for smart, sustainable and inclusive growth and jobs. For Ireland, Horizon 2020 is a key element for enhancing the research and development system, creating linkages with world leaders in academia and enterprise and facilitating the collaboration between the public and private sector in delivering innovation. Research[119] suggests that firms in Ireland that secure European R&D Funding report a positive impact on turnover, employment and productivity. On average, higher levels of: R&D expenditure; employment; productivity; sales; exports; and export intensity are characteristics of firms that win financial public supports via the European R&D Funding programmes. Ireland secured €424m in funding from Horizon 2020 to May 2017. Ireland's performance in terms of SME Instrument drawdown (16%) is significantly above the EU average of 6 per cent. As the Horizon 2020 framework enters it's the final phase it is expected that the competition for funding will increase. It is important that Irish research institutions and firms maintain the momentum gained and ensure that drawdown from Horizon is maximised.

117 Irish Taxation Institute, A future tax strategy to grow Irish indigenous exports, 2017
118 Revenue e-Brief 17, 2017
119 Department of Business, Enterprise and Innovation, Economic and Enterprise Impacts from Public Investment in R&D,2016

Recommendation: Continue to maximise the drawdown from Horizon 2020. In relation to Horizon 2020 funded research assess the potential opportunities and threats arising from the future disengagement of the UK from the EU.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Ireland

Innovation Linkages and Collaboration

The challenge of how to enhance the diffusion of knowledge and knowhow from the leading firms, including the multinational enterprises, to the rest of the Irish enterprise base, remains. We must ensure that indigenous enterprises stay at the forefront of technology and innovative activity, and in this regard achieving the targets related to increasing private funding of R&D in the higher education sector, increasing the number of innovation active firms, increasing commercialisation activity and collaborative research projects between industry and the public research system are key.

Government plays an important role in developing the human capital required by enterprise to undertake R&D. Innovation 2020 outlines measures to increase the collaboration between research institutions and industry. The low level of collaboration between academia and industry remains a challenge as indicated by Ireland's position in the Global Innovation Index (Ireland ranks 13th while the UK is ranked 7th). The EU's Community Innovation Survey shows that in Ireland of those firms undertaking innovation activity, 31 per cent engaged in some co-operative activity when developing their innovations, an indication that there is potential to further foster collaboration between Irish firms and academia. The European Commission's Research and Innovation Observatory Country Report 2016[120] lists the weak absorptive capacity in Irish SMEs, lack of research centres/RTOs in certain sectors with applied research capabilities, and confusion among enterprises over the relatively large number of schemes and research centres as the main reasons for the low level of collaboration between universities and industry.

In 2016 Science Foundation Ireland provided funding for support of over 1,200 research collaborations with industry building capacity across a range of enterprises. As part of its Strategic Partnership programme SFI launched the first Fraunhofer Project in Ireland which will focus on contract and collaborative research. Health Innovation Hub Ireland also seeks to encourage collaboration between the health services and the business sectors to facilitate the development and commercialisation of new healthcare technologies, products and services. Enterprise Ireland continues to support industry-led collaborative projects such as Technology Centres, Research & Development (R&D) Fund and Knowledge Transfer Ireland, which are driving innovation to help firms to grow and scale. Enterprise Ireland is also working to deliver an 'in market' clustering strategy promoting Irish sectoral cluster capabilities to international buyers in priority markets and sectors. Promoting interdisciplinary collaboration between researchers and institutions also gives rise to integrated research effort and adds value along the research chain. SFI has added four new large scale Research Centres, bringing the total to 17 to continue encouraging multi-institutional and multi-researcher collaborations.

Recommendation: Streamline the supports available for universities/industry collaborations. Increase awareness of and take-up of funding schemes promoting academia/industry collaborations, especially amongst Irish SMEs with a focus on firms that have not previously engaged in such collaboration.

Responsibility: Department of Business, Enterprise & Innovation, Enterprise Ireland, IDA Ireland, Science Foundation Ireland, Department of Education and Skills, Higher Education Authority, Irish Research Council, InterTradeIreland

As part of Ireland's commitment to deepening its engagement within the European Research Area (ERA) the Government is working to enhance coordination and coherence across the full range of policy instruments so that

120 European Commission, RIO Country Report Ireland, 2016

public resources are deployed to maximum effect making our research system more effective. As part of Innovation 2020 the Department of Business, Enterprise and Innovation and the Enterprise Agencies are conducting a Review of RD&I supports available to enterprise in Ireland to maximise Business Expenditure on R&D. It is important that the review highlights opportunity areas with potential to increase business expenditure on R&D and present a series of recommendations on increasing/deepening R&D expenditure, increasing the number of R&D performers and improve structures of R&D support programmes.

Recommendation: Based on the findings of the review of RD&I supports prepare an implementation plan to intensify business R&D activity.

Responsibility: Department of Business, Enterprise & Innovation

To ensure that the demands of Irish academia and industry are met, the Council considers that the domestic research resources can be enhanced with talent from abroad, particularly in priority areas where gaps have been identified. Accordingly, the Council supports the action in Innovation 2020 to attract world leading research professors and future research leaders to address such gaps. Successful tapping into the global research market will require creating the necessary conditions for attracting and retaining research talent from abroad and promoting Ireland as a destination for a research career. The Council supports the action in Innovation 2020 to develop a clear career structure for researchers, including structured progression and opportunities for improved research mobility.

Recommendation: Attract world leading researchers from abroad to develop Ireland's research capacity. Ensure that appropriate mechanisms facilitating mobility and structured progression of researchers are put in place.

Responsibility: Department of Education and Skills, Higher Education Authority, Science Foundation Ireland

Higher Education Authority data[121], shows enrolments at Research Masters and Ph.D. level dropped to 9,773 (full-time and part-time postgraduate researchers) in 2015/2016 from a peak of 10,398 in 2010/2011[122]. SFI's Research Centres Programme continues to fund research Masters and PhD enrolments, however, SFI has not progressed the proposed PhD studentship scheme pending additional resources.

It is important that the commitment in Innovation 2020 to increase the enrolment of postgraduate researchers by 500 places by 2020, is met, particularly in disciplines aligned to enterprise skills needs, and therefore welcomes the allocation of €7.5 million in Budget 2018 through the Department of Business, Enterprise and Innovation for 150 new PhD and Research Masters enrolments complementing measures being taken by the Department of Education and Skills. As funding is increasing, it is crucial to ensure that the new enrolments have a particular focus on disciplines aligned to enterprise needs.

Recommendation: Secure funding to increase the number of research masters and PhD enrolments particularly in areas of strategic importance to enterprise. Act to increase the number of trained researchers moving to enterprise.

Responsibility: Science Foundation Ireland, Irish Research Council, Department of Education and Skills

121 Key Facts and Figures, HEA, 2016

122 DBEI's submission on the Mid-Term Capital Review notes that "There are strong signals of a growing gap between the output of researchers from our higher education system and the demand from employers for skilled researchers. The enterprise agencies forecast that the number of R&D personnel needed in the enterprise sector will increase from 25,000 in 2013 to 40,000 in 2020."

Theme 2: Chapter 4- Enhancing and Diversifying Ireland's Export Base

Introduction

Ireland's ability to achieve sustainable growth is dependent on our ability to trade internationally and maintain export competitiveness. While the trade performance of an economy such as Ireland's will always depend on the ebb and flow of global markets, much of our recent export performance, particularly in manufacturing depend on a relatively small number of sectors selling a narrow range of products into a narrow range of markets[123]. In the short and medium run export volumes are a function of sales of existing products to their current markets. However, the drivers of long term export growth are expansion of market and product portfolios. Exporting is a dynamic process with enterprises adapting and changing product and market mixes to meet demand. Brexit has underlined how Ireland faces two significant and complex challenges that may over time undermine national competitiveness. Firstly, Irish export markets are geographically concentrated with exports particularly dependent on the EU, the US and UK markets. Secondly, our export base in terms of the range of products and services exported has become increasingly concentrated. Ireland's relatively high degree of export concentration by trading partner is reflected in our rank of 55th in the IMD's ranking which measures exports to top 5 countries as a percentage of total exports. Ireland is ranked 50th (1st being the most export diverse economy) in terms of export concentration by product which measures top 5 export products as a percentage of total exports. Brexit means further company-led expansion into new markets and a deepening of trade links with the world's leading emerging economies is required. The Council's view is that enterprise policy needs to intensively support Irish based exporters, particularly SMEs to intensify their efforts to scale and diversify sustainably and strategically to reduce exposure to external economic shocks.

Inward investment will remain critical to Ireland's economic development and export base. In addition to direct and indirect job creation and tax revenues, Foreign Direct Investment (FDI) plays a key role in stimulating the development of 'new' sectors in Ireland, in enhancing research, development and innovation performance and in accelerating the achievement of critical mass within sectors. Competition for foreign direct investment is global. Despite increasing international competition for globally mobile investment, Ireland has maintained a remarkably strong performance in terms of jobs and investments from FDI. New and established multinationals continue to invest and re-invest in Ireland in several established locations with leading global firms in Life Sciences, ICT, Engineering, Services, Digital Media and Consumer Brands. The Council considers deepening and broadening the Inward Investment base and maintaining Ireland's competitive advantage as a location for new and existing mobile investment must remain a cornerstone of enterprise policy.

Greater participation in the digital economy is vital. At national and international level work would appear to be advancing which should facilitate the improvement of the key architecture which underpins the digital economy. The expansion of e-Government has the potential to increase efficiency and ease of doing business and to reduce the administrative burden on enterprise. The availability of talent will remain central to attracting FDI and developing indigenous enterprises capable of thriving in a borderless digital economy. This issue is being actively addressed by Government and the Enterprise Agencies. The adequacy and availability of digital skills and specialist ICT skills in enterprises and the capability of entrepreneurs and SMEs across all sectors of the economy to exploit digital technologies could be further exploited.

123 Exports are amongst the most concentrated in Europe with the top 10 goods products (out of 3,900) accounting for 45% of all goods exports. Services exports are also concentrated National Treasury Management Agency, Irish Exports: The facts, the fiction and the risks, 2015

Policy Challenges and Recommendations

Generating an Uplift in Exporting Enterprise, Particularly Amongst SMEs

In 2016 exports from Ireland are estimated at 124 per cent of GDP. The dynamics and composition of Irish exports are however heavily influenced by the large stock of exporting FDI. National accounts data shows export volumes grew by 4.6 per cent in 2016 reflecting contrasting performances from goods and services exports, which increased by 0.9 per cent and 10.5 per cent respectively. Exporting fuels the domestic economy and delivers more sustainable job opportunities. The increasing importance of exporting for Irish-owned enterprise is evident in the increasing export intensity (exports as a percentage of total sales) of Irish-owned firms in the last decade. In the European Commission's SAFE[124] survey an enterprise is classed as an exporter when at least some percentage of its turnover is accounted for by exports of goods or services. In 2016, 41 per cent of all SMEs in the EU28 were exporting enterprises. It is notable that both Ireland and the UK are behind the EU28 average in this metric, (38% and 39% respectively). The proportion of exporting SMEs is relatively high in small-sized countries, such as Slovenia, Estonia and Luxembourg.

Data from the 2015 Annual Business Survey of Economic Impact[125] shows Irish-owned firms have increased their export intensity from 45 per cent in 2010 to 52 per cent in 2015, the highest level of intensity on record. There is divergence across sectors and ownership in terms of export intensity. The majority of goods and services produced by foreign-owned firms are destined for export, with an export intensity of 96 per cent in 2015. The Irish-owned sectors with the highest export intensity at 72 per cent in 2015 are in Modern Manufacturing (Chemicals, Medical Devices and Computer, Electronic & Optical Products). 99 per cent of all FDI sales in this sector are exported. The Irish owned Food & Drink sector has an export intensity of 53 per cent in 2015 (87% for foreign-owned enterprises). The Irish-owned ICT sector has an export intensity of 59 per cent (foreign owned is 93%).

Enterprise Ireland reports that client exports grew by 6 per cent in 2016 reaching a record high of €21.6bn. Enterprise Ireland's 2016 results show strong growth in North America where exports grew by 19 per cent to €3.74bn and Asia Pacific where exports increased by 16 per cent reaching €1.82bn.

Despite the impact of Brexit, the UK will remain the largest single market for Enterprise Ireland client companies. There is currently and will continue to be significant export opportunities across different sectors and regions in the UK. Export growth to the UK, however, which accounts for €7.5bn of exports, slowed from 12 per cent in 2015 to 2 per cent in 2016. The slowdown in growth occurred against the backdrop of a 16 per cent devaluation of Sterling over the course of 2016 which impacted on Irish exporters' ability to compete in the UK market. From a sectorial perspective, the Food sector reported the largest decline, with the value of Food exports to the UK falling by 2.8 per cent while non-food sectors saw exports increase (6.4%). This poses significant policy challenges for 2018 and beyond.

Shifting global growth and trade dynamics create opportunities for SMEs in international markets and present challenges in terms of effective policies to facilitate sustainable internationalisation. Entering export markets presents Irish enterprises with challenges in terms of their institutional environment, language, and distance related overheads such as transport. While Irish exporters are heterogeneous, there are several common internal and endogenous factors affecting their ability to export which Brexit is likely to intensify. Internal obstacles can include the lack of managerial skills and qualified/experienced staff; access to appropriate finance constraints and limited presence in foreign markets. Endogenous factors include language barriers, tariffs and quotas, rules of origin, Intellectual Property (IP) enforcement and exposure to exchange rate fluctuations. Non-tariff measures such as standards compliance and licensing procedures may also affect SMEs disproportionately due to fixed compliance costs and the inability of small firms, particularly start-ups to absorb costs. SME exporters may also suffer from relatively higher costs and challenges

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124 The European Commission's Survey on the access to finance of enterprises (SAFE) sheds light on the varied set of potential problems enterprises may encounter, and which problems are considered most pressing. Data refers to April to September 2016

125 Department of Business, Enterprise and Innovation, Annual Business Survey of Economic Impact, 2016

than larger exporters due to economies of scale. Enterprise Ireland provides significant financial, informational, contact and in-market support to overcome barriers to SME internationalisation.

Enterprise Ireland's Strategy 2017-2020 – "Building Scale: Expanding Reach" aims to develop a larger cohort of more resilient firms capable of competing globally and less susceptible to specific shocks and employing a greater number of people across the State and drive client exports to €26bn by 2020. A key objective is also to reduce dependence on the UK market – in part by increasing exports to the Euro area by 50 per cent (€2bn) by 2020.

Competitiveness is a strategic imperative for Enterprise Ireland clients given the small and open nature of the Irish economy and the need for client companies to compete on international markets. Irish SMEs and Small Mid-Caps must continually innovate to keep pace with macroeconomic and technological changes and successfully compete and win sales in global markets. Following from the Brexit vote, the business environment in which Irish SMEs are operating in is in a heightened state of uncertainty and there is an increasing urgency to build client competitiveness. In this regard, it is vital that Enterprise Ireland takes an increasingly strategic approach to supporting its clients to enhance their competitiveness to position them to compete internationally.

Recommendation: Continue to ensure an uplift in the number of competitive and market-ready firms internationalising and work with targeted clients to enhance their competitiveness capability and potential to sustain and grow exports.

Responsibility: Enterprise Ireland

Geographic Market Diversification

As well as substantial intra-EU trade, Ireland has significant trading links outside of the EU. CSO data shows Ireland's export destinations, however, are very concentrated and over a third of our goods exports go to just two countries (i.e. the US and UK). In terms of markets, the EU accounted for 51 per cent of merchandise exports in 2016. Within the EU, the Euro area accounted for 35 per cent of total exports, with the Netherlands, Belgium, France, Germany, and Spain the primary markets. In 2016 the UK and US accounted for 11 per cent and 26 per cent of merchandise exports respectively. Data for 2015[126] shows the EU accounts for 54 per cent of services exports. The UK and US accounted for 19 per cent and 10 per cent of services exports. Exports to countries such as Canada, Mexico, Australia, China, Japan and Saudi Arabia have increased in value and share terms over the last five years. However, Ireland's trade performance remains heavily dependent on the EU, US and UK markets.

Supporting the internationalisation and market diversification of Irish enterprise would contribute to making the economy more resilient to external market shocks such as Brexit. Enterprise Ireland's 2017-2020 strategy focuses on supporting client companies to both build scale and expand reach with a key objective being that at least a 50 per cent growth in exports would be outside the UK while continuing to sustain and grow UK exports. Given the different challenges and exposures faced by Irish exporters a one size fits all diversification policy is not likely to be appropriate. A strategy of segmentation market by market and sector by sector is likely to be necessary and this should be looked at on a company by company basis.

In the context of Brexit, market intensification in Europe and particularly the Euro area appears vital to mitigate any adverse consequences of Brexit and to build diversity in our export markets. In May 2017 Enterprise Ireland launched a new Eurozone Strategy to assist Irish exporters increase exports in Euro area countries by 50 per cent by 2020. The Strategy will see Enterprise Ireland partnering with some 600 client companies, approximately half of which are 'relatively new to the market and who are heavily reliant on the UK. Bord Bia's programmes and activities in this area

126 International Trade in Services data for 2016 not available at time of drafting.

are all directly relevant to expanding market penetration and diversifying outlets for Irish food and drink against the background of Brexit.

A recent survey[127] of Enterprise Ireland client companies identifies the Euro area as the key region for potential exporters, with 65 per cent of those who are not currently exporting, plan to do so in the next year. Within the Euro area, respondents indicated Germany (22%), France (16%), Netherlands (14%), Belgium (11%), and Spain (11%) as countries with the most export potential for their business. Irish beef exports have been growing strongly in European markets and Irish food and beverages are gaining an impressive foothold in Poland and the Nordic region. In terms of barriers to exporting, the survey identifies lack of market information (23%), costs (22%), human resources (17%), languages (13%), the need to adapt products (11%), and regulation (10%) as the main challenges businesses consider they face.

Enterprise Ireland continues to provide equity and other financial supports to clients to support market and product development, to strengthen management capability and enhance company competitiveness. The findings highlighted above show the multifaceted challenges faced by exporters and the important role of the Agency's client engagement model in helping client companies overcome these challenges.

Recommendation: Continue to support clients through a client engagement model to sustain, grow and diversify their exports in the Euro area and beyond through the provision of financial and non-financial supports.

Responsibility: Enterprise Ireland

The UK remains the largest export market, for firms supported by Enterprise Ireland. Exports to the UK as a proportion of total client exports has declined from 44 per cent in 2009 to 37 per cent in 2015, as more firms have diversified their export strategies into the Euro area, the USA and high growth markets including China, India, the Gulf and Brazil. Enterprise Ireland client exports to the UK, tend to be concentrated in a relatively small number of sectors and products. To diversify Ireland's export markets an increased emphasis needs to be placed on developing presence in emerging regions. In this case, the nature of the export promotion assistance provided would be influenced both by the availability of resources and the chosen export strategy. Regions such as South East Asia and South America present different challenges in terms of distance and culture than traditional markets for Irish based exporters. Irish-based exporters, particularly in exposed sectors such as traditional manufacturing and agri-food, must continue to be supported to scale and diversify sustainably and strategically to reduce the market exposure which Brexit has highlighted. Enterprise Ireland Market Diversification Supports are vital in that they assist firms investigate the potential of introducing a) new/existing products/services to a new geographic market or b) new products/services to a new materially differentiated or new sectoral market in an existing geographical market.

Recommendation: Ensure Market Diversification Supports are effective and responsive to client needs to support companies funding new market expansion programmes in key sectors/markets.

Responsibility: Enterprise Ireland

As part of the diversification drive, Enterprise Ireland has launched a new 'Irish Advantage' campaign building on the success of the Agency's Ambition Campaign to promote the advantages of sourcing suppliers from Ireland directly to buyers in key export markets where trade opportunities and Free Trade agreements exist. The campaign is focussed

127 Enterprise Ireland, Press Release, September 6, 2017

initially on two sectors – construction and Medtech services – across three key markets - France, Germany and the Netherlands.

Recommendation: Scale the Irish Advantage campaign encompassing multiple sectors and a wider mix of markets.

Responsibility: Enterprise Ireland

Cross Government Approach to Company Led Market Expansion

Increasing Ireland's export footprint goes beyond the work of any single agency. A cross Government approach is essential to building on established and new markets which present growth opportunities. The Council welcomes the recently published Ireland Connected Strategy[128] which represents a coherent global approach to maximising Ireland's trade potential. From a strategic policy perspective, a careful balance needs to be struck between prioritising resources on those export opportunities (product-country combinations) where Irish based exporters already have proven capabilities to sustain and grow exports and a sizeable market and targeting resources at alternative growth market opportunities that are relatively unexploited and may take time to yield results.

The Council welcomes the proposal by Government to double the Team Ireland footprint overseas by 2025. This means new and augmented diplomatic missions and as well as significantly increased resources for Ireland's investment, tourism, cultural and food agencies overseas. From a competitiveness perspective, it is important that this ambition is grounded in a coherent strategy that maximises Ireland's presence in key trading partner markets and locations of opportunity. Operationally, success in international markets is dependent on the Enterprise Agencies, supported by the Embassy network, working collaboratively with each other and with enterprises. As reflected in *Ireland Connected*, it is how Governments and Enterprise Agencies respond, and the pace at which they do so, that differentiates a country's ability to succeed in today's intensely competitive environment. The Embassy network plays an important in-market role promoting Ireland's reputation, raising visibility in markets where Ireland is less well known and supporting agreed national sector and agency strategies. It is important that at local level, there continues to be a well-structured approach across the agencies and Embassy network as outlined in Ireland Connected to help identify potential export and investment opportunities and to inform sectoral ecosystem development.

The work of the Overseas Offices of the Enterprise Development Agencies is vital to support Irish firms in developing export markets. There would also appear to be a need for Enterprise Ireland to continually review their overseas footprint to ensure that this significant investment made by the Department of Business, Enterprise and Innovation through the agency is aligned to client needs and positions firms to sustain, grow and diversify their exports.

Recommendation: Prioritise and implement the key actions arising from the Ireland Connected Strategy. Implement a whole-of-Government regional strategy for new and emerging high growth potential markets such as Asia-Pacific and others as required.

Responsibility: Department of Foreign Affairs and Trade

Recommendation: Develop a plan for expanding Ireland's Global Enterprise Agency Footprint to 2025 in line with the needs and ambition of Irish firms to sustain, grow and diversify their exports.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Ireland, IDA Ireland

128 Department of Foreign Affairs and Trade, Ireland Connected Strategy, 2017

Recommendation: Identify further market opportunities where exports need to be sustained and with the highest potential for growth. Where appropriate, increase enterprise agency resources in existing or new markets to strengthen efforts to sustain, grow and diversify their exports.

Responsibility: Department of Business, Enterprise and Innovation, Enterprise Ireland

Maximising the Benefits of Trade

Trade agreements provide opportunities for Irish-based firms to further diversify their export markets. Historically, the removal of barriers to trade and enhanced access to new and existing markets has been an important driver of Irish economic development. Ireland must continue to maximise the opportunities which arise from negotiated trade agreements and to ensure that its interests are progressed in such negotiations and that the benefits and opportunities of trade are articulated to enterprise. The Council welcomes the announcement that the Department of Business, Enterprise and Innovation will undertake a comprehensive study which will examine in depth the economic impact of existing and forthcoming EU Free Trade Agreements. This work should inform the policy framework required for Irish businesses to take full advantage of concluded trade agreements and preferential trade access, and to prepare for future opportunities. It is important that sectoral impacts of trade agreements on the Irish economy, areas of export opportunity and impacts on SMEs and the labour market are assessed as part of the study.

In February 2017, the European Parliament voted in support of the provisional application of the EU-Canada Comprehensive Economic and Trade Agreement (CETA). It is expected that the Agreement will take effect on a provisional basis in the coming months. CETA is a comprehensive free trade agreement that will remove tariffs between the EU and Canada. Promoting Canada / CETA appears a clear way to facilitate market diversification. It facilitates opportunities for enterprise in services and investment, ends limitations in access to public contracts, eases regulatory barriers and ensures more transparent rules for market access. More than 400 Enterprise Ireland client firms are doing business in Canada in sectors including Financial Services and Fintech, Education, Software, Digital Media and Animation, Engineering and Food. Considering CETA, Enterprise Ireland should intensify further its support to Irish firms in furthering relationships with new and existing Canadian customers, secure market insight and target new opportunities in Canada across a range of growth sectors.

Recommendation: Continue to optimise Irish enterprise interests in negotiation and implementation of EU trade and investment agreements and ensure Irish enterprise is supported to benefit from newly completed agreements such as with Canada.

Responsibility: Department of Business, Enterprise and Innovation

Recommendation: Assess the economic impact of existing and forthcoming EU Free Trade Agreements, particularly regarding areas of opportunity for exporting SMEs.

Responsibility: Department of Business, Enterprise and Innovation

Recommendation: Support clients with Canadian export potential and promote and target market opportunities accordingly.

Responsibility: Enterprise Ireland/Bord Bia

The Export Challenge of Brexit

Despite the uncertainty that Brexit has created, the UK market will continue to be a priority market for Irish exporters, due to its geographical proximity, a common language and similar culture and tastes, particularly in food. Goods and services exports to and imports from the UK account for a significant share of Irish trade. The UK market is particularly important for Agri-Food (e.g. Dairy, and Food related produce) and Traditional Manufacturing sectors (e.g. building materials, basic materials, textiles), which are particularly exposed to the negative impacts of a changed trading relationship. Import share decreased from 29 per cent in 2010 to 22 per cent in 2016. The UK's share of total goods exports was 13.9 per cent in 2010 and 11.3 per cent in 2016. While the share of aggregate Irish exports going to the UK has been decreasing in recent decades, research shows the UK as a share of total exports has been increasing for the Agri-food and Traditional Manufacturing sectors over the past 15 years. The Department of Finance research shows that compared to other EU Member States Ireland is substantially more exposed in several goods sectors, particularly in Agri-food[129].

Irish exports, particularly indigenous SME goods exports to the UK tend to be concentrated in a small number of sectors and a small number of products. The principal exported goods to the UK are Meat & Meat preparations, Medical & pharmaceutical products, Organic chemicals and Dairy & Eggs. CSO data shows the UK accounts for 37 per cent and 41 per cent of Food and live animals exports and imports respectively. The UK accounts for 43 per cent of exports and 36 per cent of imports in the category manufactured goods classified chiefly by material, including products such as leather, cork and wood, textiles and rubber. This narrow base means that Irish exporters may be more vulnerable to sector-specific trade barriers or tariffs or to any other developments such as a loss of cost competitiveness which weaken our relative export competitiveness.

Recommendation: Identify potential sub-sector markets and new collaboration opportunities for food firms, both within and outside of the UK. Through competitiveness and innovation supports facilitate greater expansion by Irish food exporters to new third country markets for Irish food and drink products while maintaining access to existing markets.

Responsibility: Enterprise Ireland/Bord Bia

Brexit means further company-led expansion into new markets and a deepening of trade links with the world's leading emerging economies is required. Enterprise Ireland client exports grew by 6 per cent in 2016 reaching a record high of €21.6bn. Export growth to the UK, however, which accounts for €7.5bn of EI client company exports, slowed from 12 per cent in 2015 to 2 per cent in 2016. At the sectoral level, research published by the Department of Finance[130] identified several mainly indigenous sectors comprised of SMEs that are highly reliant on trade with the UK. These include: Food and Beverages, Electrical Equipment, Materials Manufacturing and Traditional Manufacturing. Using Census of Industrial Production (CIP) data the research shows these sectors are highly dependent on the UK both as a destination for exports and for turnover. Over 40 per cent of turnover in food and beverage, traditional manufacturing and electrical equipment comes from indigenous firms and almost 70 per cent in the materials manufacturing sector. These sectors also import intermediate goods from the UK. Sectors that trade in bulky goods (i.e. high volume/low value products) tend to be most affected by the introduction of trade tariffs. Since the UK vote, the Department of Business, Enterprise and Innovation and its agencies have been developing a range of responses to support firms in dealing with these challenges. Enterprise Ireland and the Local Enterprise Offices (LEOs) have made information and advice available to all businesses, particularly around financial issues through their "Brexit – Be Prepared" campaign. In relation to the UK market, Enterprise Ireland was given approval following the referendum last year in the 2017 Budget

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129 Department of Finance, UK EU Exit: Trade Exposures of Sectors of the Irish Economy in a European Context, 2017
130 Department of Finance, ibid

to recruit 39 staff in Dublin and overseas to help firms to maintain UK markets and to diversify into new markets. Enterprise Ireland and the LEOs have also been working directly with clients to offer a range of supports to help deal with Brexit. These include training, mentoring, export research, key skills, innovation and business competitiveness, to help firms to address Brexit-related challenges. The Council supports initiatives and information and awareness campaigns such as Enterprise Ireland's "Prepare for Brexit" Scorecard to benchmark preparedness across all aspects of operations and strategy and to plan their response. Enterprise Ireland also offers clients a 'Be Prepared' grant of up to €5,000 towards the cost of preparing a Brexit Action Plan. The Scorecard is also available through the LEOs.

The Council commends the policy response so far and considers it imperative that complacency or Brexit fatigue does not set in amongst the enterprise base. It welcomes the report by the Department of Business, Enterprise and Innovation 'Building Stronger Business', which sets out the supports being put in place to help businesses deal with a post-Brexit marketplace, and details the areas most affected by Brexit. The Council supports the approach focussing on: deepening national and firm level competitiveness; fostering product, service and process innovation within companies; and working with businesses to diversify their trade with the world. It considers enterprises must continue to be provided with mitigating supports through the Enterprise Agencies for market development and investment in international sales and marketing in the UK and other markets. This should include support for placement of marketing executives in international markets by food and drink businesses. The Enterprise Agencies must be provided with appropriate resources to raise awareness of the challenges of Brexit and they must effectively marshal those resources to maximise funding for competitiveness, innovation, market development and in market trade support. Budget 2018 commits to recruiting an additional Brexit-related 50 staff to help Irish exporters to grow their international sales and diversify their markets, and to secure new investments and help enterprises grow in international markets. To support firms under pressure from Brexit, it is important that this staffing resource is availed of in a timely and effective manner. Enhanced instruments to promote Ireland as an export and investment location should be prioritised and accelerated where a demonstrable improvement in performance is achieved, such as for the 'Winning Abroad' disruptive reform as part of the Action Plan for Jobs.

Recommendation: Ensure the Enterprise Agencies are adequately resourced to support Irish firms to scale internationally.

Responsibility: Department of Business, Enterprise and Innovation

It remains unclear at this juncture what the trading relationship between the EU and the UK will look like. Post Brexit and in the interim, it is vital that Ireland can support firms impacted by Brexit, particularly in ways that are compatible with the State aid framework. This includes engaging with the European Commission to establish the feasibility and costs/benefits of targeted supports for businesses impacted by Brexit, particularly within the context of State aid guidelines. Research by the Department of Business, Enterprise and Innovation shows a quarter of all Irish SMEs believe they will have a requirement for additional working capital funding over the next 18 months, a need which appears particularly acute amongst exporting enterprise, and more so for the food exporting sector. Research and engagement indicates enterprise may also need longer term support to invest in innovation and diversification in preparation for the post Brexit environment. The longer-term impacts of Brexit include the potential disruption that might arise, including: new market entry and development costs; trade facilitation requirements; new trading arrangements and possible tariffs; transport costs and trans-shipment costs; changes to regulations and standards; and border controls and certification. The Council welcomes the new €300m Brexit Loan Scheme announced in Budget 2018 which is designed to provide affordable financing to Irish businesses that are either currently impacted by Brexit or will be in the future. The new scheme is open to all trading SMEs and large firms employing less than 500. The scheme will see a sizeable reduction in interest rates charged for lending to circa 4 per cent (See Theme 2: Chapter 1).

Recommendation: Continue to develop targeted supports (financial and otherwise) for businesses impacted by Brexit.

Responsibility: Department of Business, Enterprise & Innovation/Enterprise Agencies

In terms of new markets outside the UK, the constraints to entry cited by Enterprise Ireland client companies are multifaceted and include a lack of market knowledge; human resources; regulatory uncertainties; capital requirements and currency risk. It is acknowledged that barriers will vary from company to company and between markets. In addition, the nature of operations (e.g. heavy construction products) can make market expansion difficult. Currency risk was identified as a risk by the majority (63%) of survey respondents.

Sterling is likely to remain vulnerable to further weakness as the countdown to Brexit continues. In 2016, the Euro strengthened and appreciated by 16 per cent against Sterling, posing significant challenges for parts of the exporting sector reliant on trade with the UK, particularly the food sector, traditional manufacturing and areas of the economy sensitive to cross-border and online trade. The sharp decline in sterling in recent months – to an 8 year low against the euro of 92.2p to €1 as at August 2017, and the permanency of the exchange rate shift is an important competitiveness consideration. Further volatility and depreciation of Sterling represents a major threat to Irish export competitiveness. Smaller, less diversified exporting firms may find it harder to manage their exchange rate risk than larger firms. Unfavourable and uncertain movements in currency rates act as an inhibitor to investment and trade, particularly for firms initiating or expanding export strategies.

Following the vote, Enterprise Ireland announced a series of actions designed to mitigate risk, and to ensure that Irish firms are in the best possible position to survive the challenges posed by unfavourable exchange rate values. Enterprise Ireland should continue to raise awareness of approaches such as hedging and forward contract strategies that can be adopted to mitigate against currency exposure. There will be a need for the Department of Business, Enterprise and Innovation and Enterprise Ireland to continually monitor the impact of the currency volatility and other issues to ensure the agencies are positioned to deliver the financial and soft supports needed through the negotiation period and following the formal exit of the UK from the European Union. Unlike other previous crises this is not cyclical but rather a structure change in the trading relationship between the UK and Ireland.

Recommendation: Work with those firms most exposed to Brexit to develop growth and business stability plans to sustain and diversify their exports to other geographic markets, particularly in the Euro area, the US and Canada.

Responsibility: Enterprise Ireland, Bord Bia

Recommendation: Continue to develop UK in-market expertise and networks to respond to client needs.

Responsibility: Enterprise Ireland, Bord Bia

Product Diversification

The Council has for some time emphasised the importance of Irish enterprise evolving into new products, markets and sectors, whilst maintaining the competitive advantages we enjoy in existing ones. This message has acquired further urgency in the context of shifting global growth patterns and new trade dynamics post Brexit. Ireland's export trade is very concentrated in a small number of high-tech intermediate and final products (Chemicals/Pharma, Medtech, and Computer, Electronic & Optical) and in services (computer and business services). While this indicates some vulnerability, for example if there are sectoral shifts in trade, this is in some ways inevitable because of our competitiveness in these economic sectors. These sectors are a key component of export values in nearly all advanced

economies although we have experienced faster growth in some areas. A diversified strategy to attract and develop projects in different sectors should remain a priority of Irish enterprise policy. The focus should be balanced on those areas where Ireland has comparative advantage, as evidenced by our existing shares of world trade, and sectors likely to expand faster, including in sectors as personalised medicines, generic drugs, diagnostic tools and FinTech. The balance between meeting high current demand and catering to future growth prospects is a delicate one and can be highly dependent on firm level conditions. On the one hand, greater heterogeneity in export product variety may be beneficial to enterprise as it decreases exposure to adverse shocks, on the other specialisation and a more concentrated export structure may mean that the enterprise is operating per its comparative advantage. The pattern of many firms exporting a small number of products to few destinations shows that there are costs associated with each new product introduced and new market entered. Recent ESRI research suggests that entering a new market or launching a new product is an uncertain undertaking for an exporter with the probability of exit greatest in the first year[131]. Shifting product focus and the development and adaptation of products and services to suit diverse tastes, to adapting the logistics infrastructure is not an easy undertaking. At enterprise level improving competitiveness and investing in research and development to move up the value chain is essential. It takes skill, investment and time. This suggests a continuing need to ensure that supports for firms evolve to ensure maximum impact.

Economic complexity research proposes that countries grow by expanding their knowledge and capability base, enabling them to diversify into new products and activities. Highly developed countries export products that are more complex: those requiring rare capabilities and inputs processed by only a handful of economies. Under the economic complexity model, countries grow as they diversify into more complex industries in a step-wise fashion in the product space. For many developing countries, complex industries are far away in the product space and achieving growth is difficult. Over the last twenty years, small advanced economies with which Ireland competes for mobile investment and export share have differed in their experiences in specialisation and diversification. The number of products exported with revealed comparative advantage has decreased in Switzerland, Ireland, Israel and Singapore, increased in New Zealand, and remained at similar levels in Denmark and Finland. Previous research on behalf of the Council suggests that the range of manufactured products that Ireland has exported competitively (i.e. the number of products exported with a Revealed Competitive Advantage[132] (RCA) has been shrinking[133]. Since 1995, Ireland has specialised, exporting fewer and fewer products with RCA. It has fallen from over 200 to under 130. From a policy perspective, it is difficult to be definitive regarding the merits of increasing specialisation and consolidating existing production strengths or greater diversification of activities to enhance economic resilience as there are trade-offs involved in both. However, in Ireland's case, a large range of relatively complex industries are close to current products and challenges such as Brexit mean Ireland must be well-positioned to move into more complex activities. Research by the ESRI[134] shows that like exporters across a wide range of countries, most Irish based goods exporters are small in terms of product coverage. Overall, export volumes are heavily influenced by a small cohort of large exporters with wide product and market scope. Related research by the ESRI[135] suggests a similar pattern of concentration with services exports with:

- Overall performance dominated by a relatively small number of enterprises;
- 16 per cent of Irish-owned goods exporters export just one product to one market and account for just 1.4 percent of total export value;

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131 ESRI/DBEI/EI-Expanding and diversifying the manufactured exports of Irish-owned enterprises, 2017

132 The revealed comparative advantage (RCA) is defined by the OECD as a measure of the intensity of trade specialisation of a country within a region or the world. It is calculated as the export share of an industry of the total exports (of goods) of a country divided by the export share of this industry of the region or the world. If the RCA takes a value less than 1 this implies that the country is not specialised in exports of this industry. The share of this industry within the total exports of goods of this country is less than the corresponding regional/global share. Similarly, if the index exceeds 1 this implies that the country is specialised in this industry's exports.

133 : O'Clery N. A Tale of Two Clusters: The Evolution of Ireland's Economic Complexity since 1995. Journal of the Statistical and Social Inquiry Society of Ireland [Internet]. 2015;

134 Ibid ESRI

135 ESR/DBEI/EI Services exports and exporters of services, 2017

- In comparison to foreign-owned manufacturing exporters, the export product coverage of Irish-owned enterprises is less diversified, with median Irish-owned firm exporting four to five products, approximately a third less than foreign-owned firms;
- Compared to exporters of both food and non-food products (a median of nine or ten products exported), exporters of food products alone are more specialised, (median number of products between one and two). Non-food-only exporters had a median product range of between three and four; and,
- Over 20 per cent of Irish-owned firms export one product with almost 50 per cent exporting fewer than five. Food products account for close to half of Irish export value and in this sector, 40 per cent of firms export a single product. In 2015, one product, Meat of Bovine Animals accounted for 23 per cent of total exports by Irish-owned enterprises.

Specialisation amongst exporters can be a positive strategy if the specialisation is in areas of high current demand and future growth prospects and the research provides evidence that the current concentration patterns of Irish-owned firms are well chosen. However, changes in the external environment must be continually monitored to ensure firms are well placed to take advantage of new opportunities and to mitigate any potentially negative movements.

Recommendation: Introduce a systematic, approach to horizon scanning that will harness in-market sectoral knowledge and facilitate identification of emerging opportunity areas and/or disruptive trends, the early assessment of potential and whether there are specific implications that necessitate a policy response.

Responsibility: Enterprise Agencies, Department of Business, Enterprise and Innovation

It is important that analysis of the strengths and weakness of firms in sectors and products that are vulnerable, particularly those sectors heavily reliant on a single product line, set out an approach to mitigate this challenge. Enterprise Ireland provides a range of supports and programmes for Product, Process or Services Development for established SMEs in the manufacturing and internationally traded services sectors. These include:

- Technical Feasibility Study Grants;
- An in-house Research, Development and Innovation (RD&I) Fund;
- Innovation Vouchers;
- An innovation Partnership Grant Programme;
- Horizon 2020 and other EU Research Funding Programmes; and,
- Innovation 4 Growth Programme.

Recommendation: Continue to promote innovation, research and innovation supports and programmes to support product, service and process development.

Responsibility: Enterprise Agencies

Inward Investment

Ireland has an established and internationally recognised track record of attracting inward investment. New and established multinationals continue to invest and re-invest in Ireland in several locations with leading global firms in Life Sciences, ICT, Engineering, Services, Digital Media, and Consumer Brands. The contribution of inward investment, to employment, innovation activity, expenditure in the wider economy (on payroll, Irish goods and Irish services) and taxation revenue remains of key significance.

Continued success in this sphere cannot be taken for granted. As the global investment climate continues to evolve, and with an increasing share of FDI is originating outside Ireland's traditional markets of the US and Europe, Ireland must adapt to secure new FDI projects and the jobs that go with them. It is important however at the outset to recognise that key elements which influence the attractiveness of Ireland as a desirable location for mobile investment can be affected by factors outside of the direct control of domestic policymakers.

Firstly, the nature and pace of external demand conditions, particularly technology driven change and increased global connectivity, can influence the global FDI market. The digital transformation of international production has important implications for global inward investment flows. Secondly, developments in the US are highly significant for Ireland given that it represents the single largest source of FDI for Ireland. As set out earlier in this year's Challenge, the US Government has signalled possible policy changes regarding the taxing of multinationals in the US that could potentially significantly impact on the global FDI landscape. International tax developments, most notably the ongoing OECD BEPs project also shape the flow of global investment patterns. Finally, the introduction of a common European corporate tax base could adversely affect Irish foreign direct investment flows. The impact of any US or EU tax reform on Ireland will clearly, however, depend on the exact nature of the proposals. It is the case as well that any reforms are likely to be complex and will entail more than simply the reduction of headline tax rates. The Department of Finance has a vital role to play in continuing to monitor potential international tax changes that may have an impact on Ireland. Our capacity to continue winning and maintaining investment, despite challenges such as Brexit and intense competition for mobile investment should be aided by the underlying strengths of our FDI offering. These include our talented workforce, pro-enterprise business environment, first-rate education system and our proven track record as a home to global businesses. Competition for inward investment is increasingly intense with other jurisdictions continually developing their FDI offerings, particularly regarding incentives that reward talent, encourage innovation and investment and enhance tax competitiveness.

In terms of the factors which can be influenced by domestic policymakers, enhancing the long-term foundations underpinning Ireland's track record of attracting, maintaining and growing FDI will clearly remain vital. The competitiveness and consistency of our tax offerings, our legal, regulatory and administrative environment, cost base, the availability of talent, technology and property solutions are crucial to attracting and retaining inward investment, particularly considering Brexit. The foremost inward investment challenge for Ireland remains the enhancement of our relative competitiveness for mobile investment, particularly in the context of Brexit. The challenges that Brexit poses for the Irish domestic economy are well-documented. It is also the case, however, that it presents opportunities for Ireland to increase its share of FDI. Harnessing those opportunities as best as possible will be a key challenge over the next number of years Ireland and the UK are competing for and winning inward investment in similar sectors. In both countries, in recent years, Software & IT services, Business Services, Financial Services and Communications account for most inward investment projects and job creation. Research by the ESRI[136] has examined the extent to which Ireland and the UK are perceived as similar alternatives with respect to factors that determine the location choice of foreign affiliates. The Report found that:

- Over and above the effect of corporate tax rates, several other location characteristics are found to significantly increase countries chances of being chosen as a location for FDI, including market size, access to

136 ESRI, Corporate Taxation and Foreign Direct Investment in EU Countries: Policy Implications for Ireland, 2016

the European Single Market, low production costs, high R&D capacity, as well as cultural and geographical proximity relative to investors;

- EU and non-EU investors value location characteristics differently. Investors from outside the EU are mainly seeking access to the European Single Market and are more likely to choose locations with low corporate tax rates. Intra-EU investments are more likely to be in countries where the corporate tax is high but where they benefit from other local advantages such as low production costs.

The research concludes that in addition to maintaining a competitive corporate tax rate, Ireland's attractiveness to FDI would benefit from policies aimed at maintaining cost competitiveness and enabling further R&D investment. The Council's position on these policies is set out earlier in this report.

In recent years, the global market for FDI has undergone significant changes, with emerging market multinational enterprises increasingly important. While the North American and European markets continue to be key to Ireland from an FDI perspective, growth markets elsewhere, and in the Asia Pacific region have become central sources of and destinations for global FDI flows. The Council acknowledges IDA Ireland is working to diversify Ireland's sources of investment, by seeking to increase market share from outside North America and Europe. The agency has seen good progress over the last years with an increased share of new name investments from the territory from 4 per cent in 2010 to 12 per cent in 2016.Growing FDI from markets such as the BRICS, Asia Pacific, Turkey, Middle East and South Africa represents an investment opportunity and challenge for Ireland. The Council welcomes IDA Ireland's increased focus on these important markets. The Agency has put additional resources into these markets over the past five years and the results are encouraging with 'New Name' investments rising from 4 per cent in 2010 to 20 per cent in 2014 and on average accounting for 10 per cent of total investment. The Council welcomes the focus on developing markets beyond Ireland's traditional trading partners including doubling the number of trade missions, and placing extra staff in overseas markets. Consistent, sustained in-market presence by IDA Ireland is necessary to take advantage of emerging growth opportunities across the globe.

New and established multinationals continue to invest and re-invest in Ireland in several established locations with leading global firms in Life Sciences, ICT, Engineering, Services, Digital Media, and Consumer Brands. A key challenge is to ensure that Ireland becomes a global leader in a clear number of areas. We must continue to build on our strengths in sectors and activities that are contributing to the economy through Greenfield investments, reinvestments and transformation of the existing base as well as scan the horizon for new opportunities. In terms of new investment opportunities, it is vital that IDA Ireland actively examines the potential of new sectors to widen the flow of investment into Ireland as the FDI sector changes, expands and develops over the medium term.

Another continuing competitiveness challenge in terms of inward investment is managing the contrast between the developmental trajectory of Dublin, regional cities and other parts of the country. Globally, the number and scale of cities continues to grow. In an international context, Ireland has one city of international scale, i.e. with a population greater than 1 million persons - Dublin. Everything thereafter is below that threshold. With more people (and consequently more skills) concentrating in cities, urban areas are increasingly becoming the driving forces of national economies, and are the preferred destinations for firms to locate their facilities. Urban areas have been found to reach systematically higher levels of performance and focus on specific, often knowledge-driven, activities. They are also exposed to specific demand led cost and congestion pressures. On the other hand, regional locations struggle with issues relating to under capacity in skills and infrastructure availability. Population density directly impacts on competitiveness - particularly in relation to infrastructure networks and service delivery costs. Ireland is more sparsely populated than the EU average. There is significant divergence across regions with population density in Dublin estimated at 1,401 persons per km2 compared to 32 persons per km2 in the West.

A key element of the IDA's current strategy to 2019 is a focus on increasing investment into regional locations with a target to increase investments in all regions outside of Dublin by 30 to 40 per cent while also maintaining the high level

of investment into Dublin. Each region in Ireland posted jobs growth in 2016. A total of 52 per cent of all jobs created by IDA Ireland clients were based outside Dublin while 59 per cent of all employment in IDA Ireland-supported firms is outside Dublin. The Council supports the ongoing efforts to meet this target and the important role played by the regional Action Plan for Jobs in facilitating regional enterprise development, but considers it challenging given the global trend towards FDI locating in large urban centres. The key policy challenge for Ireland is to strike a balance between facilitating the growth of Dublin and bringing forward the accelerated development of a "next tier" of cities as key engines of economic performance, whilst simultaneously unlocking the potential of their wider regions and their urban and rural drivers of economic activity. The concept of more balanced regional development means all policy actors must focus on ensuring that regions are enabled to realise their potential in a coherent way. To address these issues in the context of intensified global competition for investment and talent, Ireland needs to use the NPF as the primary vehicle to further develop a choice of strong and attractive city and regional locations. From a competitiveness perspective, the Council considers the following challenges need to be addressed to continue to enhance Ireland's attractiveness as a location for inward investment.

Recommendations:

- Continue to sustain and enhance mobile investment from established investors, while at the same time diversify Ireland's FDI portfolio by tapping into new opportunities and investments from new markets and new sectors of opportunity;
- Continuously refresh Ireland's value proposition in relation to these priority areas of activity, leveraging the targeted State investment in related research, regulatory policies and other ecosystem strengths;
- Continue to enhance in-market presence to take advantage of emerging growth opportunities;
- Promote increased productivity, and stimulate innovation through linkages and collaboration with HEIs and Irish owned enterprises; and
- Continue to balance regional/ urban investment, partnering with Government Departments, sister agencies and, other National and Regional Stakeholders to stimulate regional economic activity.

Responsibility: IDA Ireland

Digital Economy

The continuous digitalisation of the economy is altering the structure of long established business models, supply and value chains, and productivity, consumption and competition patterns. Over the past decade advances in online trade, device and content development and infrastructure advances have rapidly transformed business, health, education, transport, recreation, and communications. It is likely that digital capabilities will increasingly determine which enterprise and sector thrives, survives or dies. Future productivity national competitive advantage is expected to be derived from Big Data, Cloud technology, autonomous vehicles, 3D printing, the Internet of Things, smart ageing, Artificial Intelligence (AI) and advanced robotics. The digital economy has the potential to yield more positive (direct and indirect) competitive benefits. The continuing digitisation of the economy in Ireland will be dependent on the take up and diffusion of new technologies, infrastructure development, skills availability and reform of regulatory frameworks. Estimates by Indecon[137] for the DCCAE suggest the size of the internet economy in Ireland represents approximately 6 per cent of GDP in 2016, (€12.3 billion) an increase of 40 per cent compared to 2012. The digital economy is conservatively expected to expand to about €21.4 billion or 7.9 per cent of GDP by 2020. Indecon estimates that since 2012 there has been a 30.2 per cent increase in the number of jobs that are supported directly within the

137 Indecon, Assessment of the Macro-Economic Impact of Internet/Digital on the Irish Economy, 2016

sectors and activities which produce the goods and services purchased by consumers, businesses, government and non-residents, the purchase of which are facilitated by the internet.

It is important that policy continues to facilitate the improvement of the key architecture which underpins the digital economy. The expansion of e-Government has the potential to increase efficiency and ease of doing business and to reduce the administrative burden on enterprise. The availability of talent will remain central to attracting FDI and developing indigenous enterprises capable of thriving in a borderless digital economy. This issue is being actively addressed by Government and the Enterprise Agencies. The adequacy and availability of medium level ICT skills in enterprises and the capability of entrepreneurs and SMEs across all sectors of the economy to exploit digital technologies could be further exploited. While Ireland is relatively competitive across a broad range of digital economy competitiveness indicators, competition in this area is likely to intensify in the medium to long term. Nationally, the Department of Communications, Climate Action and Environment through the National Digital Strategy and National Broadband Strategy is driving the development of digital economy initiatives at State level. At European level, the EU's Digital Single Market Strategy aims to tackle several obstacles which prevent cross-border online activities from differences in contract and copyright law; regulatory obstacles such as different VAT procedures, cross border shipping costs, e-skill, connectivity and standards fragmentation.

The ICT sector is a priority strategic sector for Ireland. As evidenced by export and employment performance, Ireland has existing competitive advantage in many cornerstones of the digital economy which further drive export and market/product diversification and which will provide the foundations of future national competitiveness. CSO/Eurostat[138] data shows Ireland is one of the best performing countries in Europe in terms of SMEs trading on line. The data shows:

- In 2016, 30 per cent of Irish enterprises reported e-Commerce sales compared with 22 per cent in the UK and an EU-28 average of 20 per cent;
- As a percentage of turnover, online sales accounted for 36 per cent;
- 31 per cent of Services enterprises reported e-Commerce sales which accounted for 38 per cent of total turnover for that sector;
- The Manufacturing sector reported 36 per cent of enterprises had e-Commerce sales which accounted for 31 per cent of all sales generated in that sector; and,
- There is also a relationship between firm size of firm and propensity to trade online with 26 per cent of small firms selling online compared to medium sized firms (47%) and large firms (52%)[139].

Indecon[140] report that the capabilities of Irish SME websites have progressed significantly over the period 2014-2015. 42 per cent of Irish SMEs can now take sales orders online (up from 19% in May 2014) and just over a third (35%) can process payments online, up from 20 per cent in May 2014. There would appear to be considerable scope for more rapid growth in sales from online trade, particularly amongst SME and micro- enterprises. Despite being a comparatively strong performer, it is likely Ireland's performance is skewed by the activities of larger firms, particularly multinationals. However, many SMEs have websites whose functionality is limited to information provision. A recent survey[141] of SMEs where micro-enterprise accounted for 86 per cent of the sample reported that 30 per cent of Irish

138 Information Society Statistics, CSO, 2016
139 Data is not available for micro-enterprises i.e. enterprises with fewer than 10 employees.
140 Indecon, Ibid
141 dot ie Digital Health Index, 2017

SMEs with websites can process payments or take sales orders online. The survey is notable in that two thirds of offline SMEs consider there is no need for them to be online. For a third of offline SMEs, the biggest barrier to getting online is time constraints. 29 per cent consider a lack of know-how, 26 per cent cite costs and 13 per cent of SMEs cite a poor internet connection.

As noted in the Impacts of the Trading Online Voucher Scheme[142] "there is a two tier Irish digital economy: one dominated by multinationals where productivity and product innovation are powered by digital, the other tier predominantly traditional indigenous Irish businesses which are slower in leveraging digital to reduce costs, drive innovation and expand markets". Irish SMEs and micro enterprises must therefore make greater use of the opportunities offered by online commerce, including cross-border trade. The National Digital Strategy set a target to get 10,000 Irish businesses online for the first time and to achieve a further 2,000 small Irish businesses trading online over a period of two years. The Trading Online Voucher Scheme assists small businesses to trade online by developing their ecommerce capability. Since the scheme commenced in 2014, over 3,300 vouchers have issued to successful small businesses and more than 7,000 businesses have benefitted from advice and peer-to-peer support through their participation in the information and training seminars delivered by the LEOs. The Department of Communications, Climate Action and Environment is currently scoping initiatives to build on the scheme. In collaboration with the LEOs, the Department of Communications, Climate Action and Environment is working to highlight the benefits of trading online, and raise awareness of the Government support available.

The development of a new National Digital Strategy should be progressed. This should have a specific focus on enhancing enterprise digital competitiveness and consider domestic and international developments since 2013 including the EU's Digital Single Market agenda, the Government's Data Forum and Ireland's Data Protection Roadmap. The new Strategy is likely to need a whole of Government commitment to deliver. A new strategy should be developed to enable pilot programmes to be rolled out and financed in 2017/2018 with a view to full rollout by 2020 to coincide with universal high speed broadband availability in 2020.

Recommendation: Commence work on the successor to the National Digital Strategy.

Responsibility: Government

Recommendation: Build on the Trading Online Voucher scheme and set ambitious targets to increase the number of enterprises, particularly off-line micro-enterprises trading online.

Responsibility: Department of Communications, Climate Action and Environment /Local Enterprise Offices

Recommendation: Continue to encourage SMEs and micro-enterprises engage in digital trading by further promoting the benefits of online sales.

Responsibility: Department of Communications, Climate Action and Environment /Local Enterprise Offices

Digital Single Market, Data Management, Security and Privacy, General Data Protection Regulation

142 Local Enterprise Offices/DCCAE Impacts of the Trading Online Voucher Scheme,2016

The Digital Single Market (DSM) strategy aims to open digital opportunities for people and business and enhance Europe's position as a world leader in the digital economy. The Digital Single Market strategy was adopted on the 6 May 2015 and includes 16 specific initiatives which have been delivered by the Commission up until January 2017. Legislative proposals are now discussed by the co-legislators, the European Parliament and the Council. The DSM can create opportunities for new start-ups and allow existing firms in a market of over 500 million people. Completing a Digital Single Market could contribute € 415 billion per year to Europe's economy, create jobs and transform our public services. In May 2017, the European Commission published the mid-term review of the Digital Single Market Strategy. It shows the progress made in implementing the Strategy since 2015 and where further actions are needed[143]. In addressing its commitments in relation to DSM, the Government has established an Interdepartmental Committee[144] to:

- Develop stronger networks with other Member States;
- Provide regular progress reports to the relevant Cabinet Committees as appropriate; and,
- Strengthen engagement with the European Commission, the European Parliament and Irish stakeholders.

The Council believes the latter function in relation to engagement with enterprise is of critical importance and efforts should be made increase the engagement the Committee has with firms based in Ireland who are at the forefront of the digital agenda.

Recommendation: Coordinate a whole-of-Government response to delivering the Digital Single Market as an enabler towards advancing Ireland as a leading global digital economy. Increase Government interaction and consultation with firms at the forefront of the digital agenda.

Responsibility: Government, Interdepartmental Committee on Digital Single Market, Business

The General Data Protection Regulation (GDPR) will come into force on the 25th May 2018, replacing the existing data protection framework under the EU Data Protection Directive. The GDPR significantly increases the obligations and responsibilities for enterprise in the collection use and protection of personal data. At the centre of the new law is the requirement for organisations and businesses to be fully transparent about how they are using and safeguarding personal data, and to be able to demonstrate accountability for their data processing activities. The GDPR adopts a risk-based approach which means that individual data controllers and processors must put appropriate technical and organisational measures in place to ensure and can demonstrate that the processing of personal data is in compliance with the Regulation, considering the nature, scope, context and purposes of the processing and the risks of varying likelihood and severity for the rights and freedoms of individuals. A recent survey by the Office of the Data Protection Commissioner found that just over a quarter of businesses (26%) did not know when they expect to begin their GDPR-implementation plan, with this number increasing to 39 per cent for micro enterprises (1-9 employees). Raising awareness among organisations and the public of the new law will be a combined effort of the Data Protection Commissioner (DPC), the Government, practitioners, and industry and professional representative bodies. Over the course of 2017, the DPC will be proactively undertaking a wide range of initiatives to build awareness of the GDPR and provide guidance to help organisations prepare for the new law.

143 See European Commission, Digital Single Market /// Mid-Term Review, May 2017

144 The Committee is comprised of officials from the Department of the Taoiseach, Department of Communications, Climate Action and Environment, Department of Business, Enterprise and Innovation, Department of Justice and Equality, Department of Finance, Department of Foreign Affairs and Trade and the Government's Chief Information Officer.

Recommendation: Continue to raise awareness among enterprise of the General Data Protection Regulation.

Responsibility: The Data Protection Commissioner (DPC), Government, practitioners, and industry and professional representative bodies

Recommendation: Ensure Ireland's GDPR regulatory regime is robust and best in class internationally.

Responsibility: Department of Justice and Equality

Cyber Security

Several significant cyber-attacks occurred globally in 2017. While the impact of these on Ireland was limited, the speed at which these developed and their impact across a wide range of organisations have given fresh emphasis to improving the resilience of critical infrastructure and business, and improving the capacity of society in general to respond to these issues. The Department of Communications, Climate Action and Environment is home to the National Cyber Security Centre (NCSC), and has responsibility for the National Cyber Security Strategy 2015-2017, which includes measures to improve the security of public sector infrastructure and services, to better protect critical national infrastructure and to formalise arrangements in law to comply with EU requirements on cyber security capabilities, co-operation and reporting. To date, the NCSC has focused on developing capacity and engaging with national and international stakeholders around securing systems and responding to incidents. The NCSC has also worked to collate and analyse data from cyber-attacks and to coordinate with those targeted to introduce mitigation measures and continues to work with utility operators and with similar bodies in other jurisdictions to ensure that risks to infrastructure in Ireland are managed appropriately, including the active management of ongoing issues.

Recommendation: Ensure the NCSC is adequately resourced. Continue to work with the Office of the Government Chief Information Officer and the Departments and Agencies that own these systems to mitigate and manage these risks.

Responsibility: Department of Communications, Climate Action and Environment, National Cyber Security Centre

Disruption to our digital assets brings significant economic costs and undermines trust and confidence in them. Directive 2016/1148 of the European Parliament and of the Council of 6th July 2016 concerning measures for a high common level of security of network and information systems requires:

- EU Member States, including Ireland, to increase their preparedness and have a minimum set of cyber security capabilities at regulatory and operational levels, encompassing national strategies, National Competent Authorities (NCAs) and national Computer Security Incident Response Teams (CSIRTs);
- Establishing formal EU co-operation arrangements at both strategic and operational levels, namely a co-operation group and a CSIRT network, between the Member States to improve mutual collaboration on cyber security;
- Identified "operators of essential services" (digital infrastructure, energy, transport, finance, health, water supply) to take appropriate and proportionate technical and organisational measures to manage security risks, to report serious incidents to NCAs and to comply with instructed requirements of NCAs; and,
- Digital service providers (online/e-commerce marketplaces, online search engines, cloud computing services) to take appropriate and proportionate technical and organisational measures to manage security risks, to report incidents to NCAs and to comply with requirements of NCAs.

The Department of Communications Climate Action and Energy considers the Directive will have direct implications for a range of firms and utilities in the State. Some of these firms and utilities are to be designated as 'operators of essential services' with security obligations and incident reporting requirements binding on them. The Directive will also result in Ireland having to regulate multinational corporations who have their European headquarters based in Ireland and provide digital services in Europe. These digital services are online/ecommerce marketplaces, online search engines and cloud computing services.

Recommendation: Continue to engage with enterprise regarding the implications of the transposition of Directive 2016/1148.

Responsibility: Department of Communications, Climate Action and Environment

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