Annual Competitiveness Report 2008

Volume 2: Ireland's Competitiveness Challenge

Forfás

National Competitiveness Council

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Introduction to the NCC

The National Competitiveness Council was established in 1997 as a Social Partnership body, reporting to An Taoiseach on key competitiveness issues facing the Irish economy and offering recommendations on policy actions required to enhance Ireland's competitive position.

Each year the NCC publishes the two-volume Annual Competitiveness Report.

- Volume One, **Benchmarking Ireland's Performance**, is a collection of statistical indicators of Ireland's competitiveness performance in relation to 17 other economies and the OECD or EU-15/Eurozone average.
- Volume Two, **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 other papers on specific competitiveness issues.

This publication, **Ireland's Competitiveness Challenge**, examines the challenges facing Ireland, and in particular our exporting sectors in more detail. It will highlight policy directions that will sustain Ireland's competitiveness and future prosperity. The National Competitiveness Council hopes that this report will stimulate further debate and discussion on the competitiveness challenges that face Ireland.

Council Members

Dr Don Thornhill	Chairman
Mr Rory Ardagh	Telecom Property Holdings Limited
Mr Brendan Butler	Director of Strategy, Trade, EU and International Affairs, IBEC
Mr Donal Byrne	Chairman, Cadbury Schweppes Ireland Limited
Mr Shay Cody	Deputy General Secretary, IMPACT
Mr Martin Cronin	Chief Executive Officer, Forfás
Mr Pat Delaney	Director of Sectors and Regions, IBEC
Ms Clare Dunne	Assistant Secretary, Department of Enterprise, Trade and Employment
Ms Annette Hughes	Director, DKM Economic Consultants
Mr William Prasifka	Chairperson, Competition Authority
Mr William Slattery	Executive Vice President and Head of European Offshore Domiciles, State Street International (Ireland) Limited
Mr Paul Sweeney	Economic Adviser, Irish Congress of Trade Unions
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Ms Mary Doyle	Department of the Taoiseach
Mr Mark Griffin	Department of Environment, Heritage, and Local Government
Mr Kevin McCarthy	Department of Education and Science
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What is Competitiveness and Why is it Important?

The National Competitiveness Council defines competitiveness as the ability of Irish-based firms to achieve success in international markets, so as to provide Ireland's people with the opportunity to improve their living standards and quality of life. Improving living standards depends on, among other things, raising incomes through strong productivity growth and providing high quality employment opportunities for all. Given Ireland's small domestic market, Ireland requires a vibrant exporting sector and must therefore maintain and develop its international competitiveness[1].

An economy that is internationally competitive needs to be supported by a business environment and broader socio-political climate that encourages high levels of investment in enterprise, public infrastructure, skills and knowledge, and that provides the appropriate incentives and flexibility to respond to change. As recently highlighted by NESC, the vulnerabilities that are currently present in the Irish economy must not distract attention from the policies and actions that matter most for economic prosperity and well-being in the long-term[2].

The role of the NCC is to report to Government on key competitiveness issues facing the Irish economy and to identify policy actions required to enhance Ireland's competitive position.

In this report, the NCC assesses Ireland's current competitiveness performance and the opportunities and challenges that face the enterprise sector. It identifies four areas to improving our competitiveness position:

- Fiscal sustainability;
- Managing costs;
- Achieving public services reform, and;
- Positioning Ireland for future recovery.

In October 2008, the NCC brought together over 100 of Ireland's leading economists, business and trade union leaders and policymakers to discuss the key competitiveness challenges facing the Irish economy, to analyse Ireland's current performance and to develop policy proposals to improve our competitiveness. Through a number of round-table discussions, the proceedings and outputs of this conference have informed the finalisation of this report.

1 In the long term, raising per capita incomes is ultimately dependent on increases in productivity. Given the small size of Ireland's domestic market, exporting sectors have the potential to achieve the economies of scale necessary for productivity gains.

2 NESC, 2008, *The Irish Economy in the Early 21st Century*, Number 117, June.

Foreword by the Taoiseach

In these difficult and uncertain times, it has never been more important to identify clearly those issues which are key to underpinning national competitiveness, and rebalancing economic activity to support sustainable, export-led growth.

To deal with the sharp deterioration in the public finances, the Government has chosen a direction based not on soft options, quick fixes or political expediency. The choices we make will determine whether we can maintain to the greatest possible extent the economic progress we have achieved in the last decade.

Put simply, the downturn in the economic climate means we have less money to meet growing public expenditure demands. We cannot borrow our way out of trouble or return to the days of punitive tax rates that stifled economic growth and resulted in high unemployment.

The Government will make the right decisions to ensure that we return to growth as soon as possible based on exporting goods and services, building on the many inherent strengths of the Irish economy. That is why we must continue to prioritise investment in our productive capacity, and to secure greater value for money across all areas of public spending, while supporting and protecting those most vulnerable to more difficult circumstances.

One of the clearer lessons of our recent history is the value of a shared assessment of changing challenges and opportunities, supported by a constructive, participatory and problem-solving approach to managing change.

The National Competitiveness Council is well positioned to contribute to our understanding of a rapidly changing global environment. I would like on behalf of my colleagues in Government to thank the Council for its important work at this difficult time, and am pleased to introduce Ireland's Annual Competitiveness Report 2008.

Brian Cowen, T.D.
Taoiseach

Chairman's Preface: Ireland's Competitiveness Challenge

Following many years of strong growth, we are now addressing a severe economic crisis. Irish businesses and citizens are facing into a period of economic transition and uncertainty. But this is not a time for pessimism. It is now time for us to get back to focusing on the policies that will enhance our economic competitiveness and provide a foundation for sustainable economic growth. As noted by An Taoiseach, we must implement actions and reforms to support our long term competitiveness. Paradoxically, times of economic difficulty are often times of opportunity — especially for policy reform.

As a small open economy, we have limited independence from global trends or shocks. This places a premium on sound, evidence-informed policies that support the competitiveness of firms based in Ireland. This report sets out priority recommendations for Government, which can restore competitiveness and position Ireland to take advantage of a global upswing in the future.

It is essential that Ireland develops a credible and widely supported programme to restore the sustainability of public finances. Continued investment to address infrastructural deficits is critical to improving the productive capacity and future growth potential of the economy — even in the context of a slow-down in current expenditure. It is vital to achieve balance between unpopular decisions on controlling current expenditure, broadening the tax base and introducing transparent user charges where appropriate, and to meet the challenge of delivering better public services with fewer resources.

This report sets out priorities for Government in order to restore our cost competitiveness — including exposing sheltered sectors of the economy to greater competition, controlling energy costs, balancing our renewables targets with affordability and removing barriers to private investment in waste management infrastructure. The decisions taken now will determine the future ability of Irish firms to compete on world markets. Positioning Ireland for economic recovery will involve meeting difficult challenges in diverse areas: from building on the strengths of our schools and teachers in an environment of fewer resources, to adapting our fuel mix to meet long-term targets of sustainability, to reconciling affordability with security of supply. Moving towards a lower carbon economy will require additional measures to reduce emissions, but also opens many avenues for new growth within the environmental goods and services area.

I would like to thank Council Members and the Advisors from the relevant government departments for their work on this document, and to acknowledge the Forfás Secretariat for the work that they have done in preparing material for consideration by the Council.

Don Thornhill
Chairman, National Competitiveness Council

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Executive Summary

Following more than a decade of strong economic growth, Irish businesses and citizens are facing a phase of economic transition and uncertainty. The economy is contracting and national income declining, as construction investment and domestic demand fall from the unsustainably high levels of recent years. The intensity of the economic downturn has been exacerbated by unprecedented international economic difficulties, particularly in the banking and financial sectors. While it is difficult in the current environment to forecast future growth rates, a consensus is emerging that Ireland is facing into a potentially extended period of contraction or weak growth.

Although Irish unemployment is still below the Eurozone average it is now rising rapidly. This has been driven by, but is not limited to, construction related activities. Notwithstanding the significant challenges ahead, employment levels in internationally trading firms remain stable.

Following a number of years where internationally trading sectors have underperformed, net exports played a greater role in 2007 and the first half of 2008 in terms of driving Irish economic growth. Irish exports are dominated by overseas-owned firms in a small number of sectors, such as pharmaceuticals and information and communications technologies, and Ireland remains an attractive location for mobile investment, although there is significant competition for new investment.

Services have become the main drivers of growth in developed economies; services exports are an increasingly important component of foreign earnings for Ireland and are likely to overtake merchandise exports in the next two to three years. Ireland is the tenth largest exporter of services in the world, and one of the largest in per capita terms. The collapse of World Trade Organisation talks represents a missed opportunity for Irish services and manufacturing exporters, who stand to benefit from lower tariffs and simplified procedures both in the established markets of our OECD partners and the high-growth markets of emerging economies.

Decline is not inevitable but neither is success. Difficult decisions are necessary to restore Ireland's international competitiveness. Sustainable growth must be based on building the success of Ireland's manufacturing and services export base, and the focus of public policy now needs to be on providing a competitive operating environment for our key exporting sectors.

Restoring Fiscal Sustainability

Ireland now faces harsh new fiscal realities. Public finances are under serious pressure as the recent slowdown of economic activity has led to a sharp deterioration of €6.5 billion or 13.3 percent in Government revenue. The cost of running the State in 2009 will require a budget deficit of 6.5

percent of GDP[3]. This deterioration of the public finances is both rapid and alarming. It is essential that Ireland develops a credible and widely supported programme to restore the sustainability of public finances.

Investment Priorities

- The Government's commitment to sustaining investment in road and public transport is welcome. In general, a rigorous process of prioritisation of public capital expenditure is required, based on demonstrable returns on investment and ensuring that those critical to supporting a return to export-led growth are front-loaded. Investment projects should be prioritised and sequenced based on their expected economic and social returns on investment — underpinned by rigorous multi-criteria ex ante analysis which should be published.
- A more integrated approach to the planning and implementation of capital investment projects is required, given the range of planning and investment bodies across sectors (i.e. roads, energy, telecoms, water and public transport) and the potential for investment efficiencies.
- Investment in next generation broadband services is essential to our success in developing and attracting knowledge-intensive enterprises and improving productivity growth. A regulatory framework that will incentivise and support private sector investment in next generation infrastructure (fibre) and reward providers for the risk involved in undertaking long-term investment is required, together with strategic investment by the State in key areas.
- Sustained investment is also required in the suburban rail network, in improving bus networks in major urban centres and the implementation of integrated ticketing.

Supporting Competitiveness and Broadening the Revenue Base

While the key driver of tax policy must be to restore the sustainability of Government finances, it is critical that this is achieved in a fashion that continues to support economic growth and competitiveness.

- Maintaining our competitive tax wedge on labour should remain a priority for Government. The Council's preference is to broaden the tax base, rather than to significantly increase taxes on income.
- While the five percent increase in the R&D tax credit scheme announced in *Budget 2009* and the provisions in the Finance Bill to enhance its attractiveness for early-stage and low-profit companies are welcome, the competitiveness of the scheme needs to be continuously improved.
- Further potential exists to make Ireland a more attractive location for the purchase and management of intangible assets (e.g. intellectual property, brands, software, copyright). Initiatives in this area need to be accelerated in order to capture mobile investment and jobs.
- Potential may exist to incentivise participation in life long learning and create a culture of up-skilling, through effective use of the taxation system.

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3 Dept of Finance, 2008, *Budget 2009: Financial Statement*, 14 October, Dublin.

- The NCC welcomes the recent reductions in stamp duty on property and believes that further reform of stamp duty is required. An alternative annual levy on property stock, rather than transactions, would benefit the housing market and increase the predictability of tax revenues.

Sharing the Benefits and the Costs of Public Services

It is unsustainable for Government to increase its borrowing requirement to finance current expenditure. If current expenditure on front line services and capital investment in infrastructure are to be retained, the need to reduce service levels elsewhere and/or part-finance them through user charges is inescapable.

- Adequate funding is essential to enable Irish higher education institutions to achieve excellence and to equip Irish students with the highest quality of education available. Graduates, who will benefit significantly from higher education in terms of increased earnings over the course of their life, should contribute a portion of the cost of their education.
- If the introduction of tuition fees is required to meet the resource needs of the sector, it would be important to ensure that such a measure does not act as a barrier to participation in third level, for example, through the introduction of a comprehensive student loan and adequate maintenance grant system. It is also important that the resources currently provided to the sector are being deployed in a manner that provides the best value for money and that there is a continuous process of reform and modernisation at institutional level.
- The NCC welcomes the broadening of the local authority revenue base to include a levy on non-principal private residences and hopes this will forestall increased charges on business. Further and alternative methods of raising revenue should be considered – including charges for all users of services.

Lowering the Costs of Doing Business

A key challenge for the Irish economy is the decline in Ireland's cost competitiveness – reflecting a combination of higher price inflation in Ireland (approximately one third of the loss) and an appreciation of the euro against the currencies of many of our trading partners. Ireland's above average rate of inflation during the 1999-2007 period was largely due to inflation in the price of services, most of which are domestically provided.

Electricity Costs

Irish industrial electricity costs are the second highest in the EU-25. Irish prices increased by 70 percent between January 2000 and January 2007. Low levels of spare generation capacity, limited interconnection, the poor availability performance and relatively small scale of Irish generation plants, and limited competition in generation and supply directly contribute to our uncompetitive electricity costs.

- Recovery of the carbon windfall from generators should continue to be passed through to electricity users through lower prices, on an annual basis, to 2012.
- Domestic controllable costs are estimated to account for 30 percent of the difference between Irish and average EU electricity prices in 2004. Regulation of the market should focus on bringing this differential in controllable costs into line with our competitors.

- Meeting the 2020 target of 40 percent electricity generation from renewable sources will require substantial investment in the electricity grid and back-up power generation.
- Implementation of more burdensome targets should not proceed in the absence of a finalised cost assessment. In conjunction with the 3 percent per annum reduction in CO_2 levels also set by Government, this would result in a cumulative reduction in greenhouse gases emissions in excess of those mandated by the EU Commission.

Competition

Enhancing competition within Ireland's domestic economy is vital to improving our overall competitiveness. If sheltered sectors of the locally traded services sector are not exposed to greater competition, services inflation will continue to outpace the Eurozone average and the cost competitiveness of Irish firms will deteriorate further.

- A number of outstanding Competition Authority recommendations deserve attention. The NCC welcomes the recent announcement of a process by the Tánaiste and Minister for Enterprise, Trade and Employment for progressing recommendations of the Competition Authority.
- Action is also required to remove barriers to private investment in waste management infrastructure.

Accessing Affordable Credit

The NCC believes scope exists to leverage the Government's guarantee of financial institutions to press upon lenders the importance of the availability of adequate and affordable capital to businesses, to leverage funding from the European Investment Bank to meet the needs of the productive sector, and to ensure that commercially sound firms have access to sufficient working capital.

Achieving Public Services Reform

The efficiency of the delivery of public services is an important part of overall competitiveness of the economy. A well managed, innovative and efficient public administration system will be essential to driving Ireland's economic recovery. Starting from a very low base by international standards, the total number of people employed in the public sector has risen 40 percent since 2000 — at least partially to meet greater demands on education, health and policing from a burgeoning population, high levels of net inward migration and rising living standards.

- In the changed economic and fiscal environment, the challenge for the sector will be to deliver better services with fewer resources.
- There is an urgent need for a more integrated approach across Government departments and agencies. New governance structures need to be considered to address the complex challenges and cross-cutting objectives such as competitiveness, social inclusion and climate change — ultimately addressing the long-term needs of citizens more effectively.
- Periodic reviews are necessary to assess if regulators are meeting their objectives effectively and if their number or role requires amendment, including whether potential exists to merge regulators or regulatory activities and the overall coherence in delivering public policy objectives.

- While social partnership has served to underpin competitiveness and achieve difficult reforms in previous times of budgetary constraints, it is important that the relationships between Government and the social partners continue to remain both relevant and responsive to economic and social conditions.
- The NCC endorses many of the reforms identified in the OECD's review of the Irish public service including: outcomes-focussed performance measures; improved coordination across departments and agencies; greater use of networks across the public service; new budgetary frameworks to facilitate prioritisation and reallocation of spending; strengthening the role of ICT and eGovernment; enhanced mobility between public and private sectors at all levels; greater accountability at the individual level; and mechanisms to enable managers to address under-performance.

Positioning Ireland for Recovery

Achieving higher productivity growth rates will be critical for long term competitiveness and sustainable wage growth. The future supply of a highly educated workforce, equipped with skills sets aligned to business needs, is an important enabling factor for recovery. Our future success is equally dependent on how we respond to the all-pervasive issues of energy security, cost and climate change.

Education

- Achievement of the targets set out in the *National Skills Strategy* is essential. Increasing retention rates at secondary level and progression to tertiary education will require the successful targeting of poorly performing students earlier in their development.
- To tackle disadvantage where it exists, and to support the working lives of parents, the establishment of a system of pre-primary education should be a medium-term priority.
- Enhanced teacher professional development, particularly when tailored to school needs, offers the potential to raise teaching quality and improve outcomes for students.
- A strong focus is required on improving mathematics, science and ICT skills. Further efforts are required to increase the quality and time spent teaching these subjects in Irish schools, to address the perceived disadvantages to studying higher level mathematics at Leaving Certificate level and to improve the learning environment for science education, including the quality of science laboratories.
- Despite the harsh fiscal climate, the NCC believes that innovative approaches (e.g. the leasing of IT equipment) can deliver on the promise of the *Strategy for ICT in Schools*.
- Rising unemployment places new demands on existing structures for skills-specific training (e.g. construction related apprenticeships), retraining and upskilling. The NCC supports a focus on training for displaced construction workers and others to find opportunities in other sectors of the economy such as environmental management systems and energy efficiency.

Securing Our Energy Supply

- Ireland remains particularly exposed to rising international oil and gas prices due to our dependence on imported fossil fuels. The timely delivery of the East-West interconnector and the North-South tie line is critical to improving Ireland's energy competitiveness and security of supply.
- There is a need for a comprehensive review of all energy sources, underpinned by robust analysis, to determine Ireland's future fuel mix. The review should focus on reducing our dependence on imported fossil fuels, improving our cost competitiveness and improving security of supply. In this context, the Council proposes the establishment of an expert commission to oversee a technical study on the feasibility of nuclear energy as part of Ireland's future energy mix.
- Significant potential exists to attract investment into niche environmental goods and services areas such as renewable energies and clean technologies and processes. Improving energy efficiency will require the development of new skills sets in terms of the design, building and operation of more energy efficient systems, including buildings, equipment and transportation. The downturn in the construction sector provides an opportunity to train/retain people to take advantage of these opportunities.

Moving Towards a Low Carbon Economy

Much of the focus on emissions reduction has fallen on the electricity generation and industrial sectors, however agriculture and transport are together responsible for 47 percent of total greenhouse gas emissions.

- Road transport accounts for the overwhelming majority of transport emissions (97 percent). There are a number of policies that need to be pursued to reduce emissions from this sector, such as greater investment in sustainable public transport, renewable energy sources for transport, electric and hybrid vehicles, cycling, car-pooling and mobility management schemes, flexible working patterns and the connectivity infrastructure required to enable this.
- Fiscal instruments, such as road pricing (congestion charging) and higher parking charges may have a role in reducing private commuting and greenhouse gas emissions.
- Revenue recycling measures may be required for certain sectors to avoid adverse cost competitiveness impacts — for example in the road haulage sector.
- The agricultural sector remains the largest source of greenhouse gases in Ireland. There are very few cost-neutral avenues for emissions reduction available to the sector, and a more serious engagement with improving the emissions performance of the agricultural sector is now required.

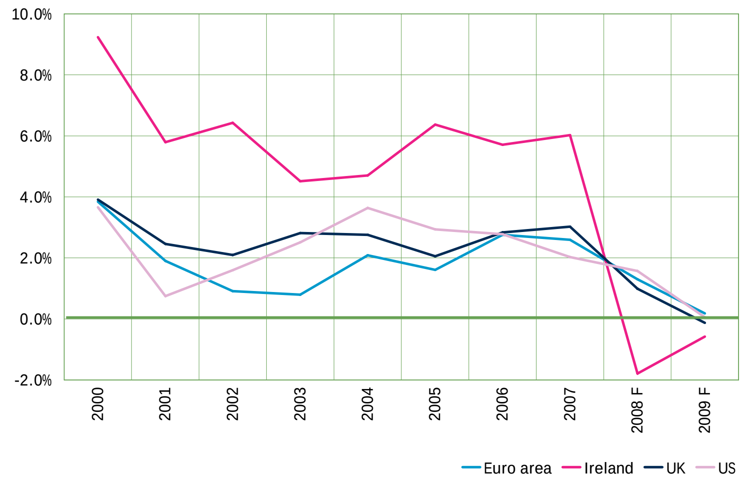
Good land-use planning can play a key role in terms of supporting sustainability and competitiveness. The NCC specifically recommends prioritising the key elements of the recently published *Planning Guidelines on Sustainable Residential Development in Urban Areas* including adequate public transport to meet existing demand; new public transport services in tandem with proposed developments; encouraging emissions reduction in local area and development plans; and, promoting sustainable patterns of urban living through higher residential densities.

1 Introduction

1.1 An Extremely Challenging Macroeconomic Environment

Following many years of strong growth, the Irish economy is now in the throes of a severe crisis. The economy is contracting and national income declining. The international and Irish housing booms have ended and we are now experiencing a painful economy-wide correction. Activity in the Irish housing market is declining sharply from a historical peak, with strong negative impacts on the wider economy in terms of declining output (GDP/GNP), employment levels, consumer spending and Exchequer revenue. Correction was inevitable as growth in private sector borrowing had reached unsustainably high levels in recent years. The intensity of the economic downturn has been exacerbated by international economic difficulties particularly in, but not confined to, the banking and financial sectors.

Figure 1.1 Annual Percentage Change in Gross Domestic Product, constant prices (2000-2009f)



Source: IMF World Economic Outlook , October 2008

Irish businesses and citizens are facing a phase of economic transition and uncertainty. While it is difficult in the current environment to forecast future growth rates, a consensus is emerging that Ireland is facing into a potentially extended period of contraction or weak growth. The latest CSO data shows that in the first half of 2008 both GDP and GNP contracted by 1 and 0.6 percent respectively year on year. Overall capital investment in the first two quarters of 2008 is 18.8 percent down on the previous year as a result of a fall in construction activity. Forecasts for future economic growth have been revised progressively downwards in recent months. The ESRI's most recent forecast is for a contraction in both GDP and GNP of 1.3 percent in 2008 and a further 0.7 percent in 2009, while a range of other forecasters (including the IMF, see Fig 1.1) are more pessimistic[4].

Although Irish unemployment is still below the Eurozone average, the trends of recent months are of deep concern. Unemployment is rising rapidly — driven by but not limited to construction related

4 For example, the average forecasts from various commentators for GNP contraction is -1.8 percent in 2008 and -2.1 percent for 2009. Source: DKM Economic Consultants, 2008, *DKM Economy Watch*, November 2008.

activities[5]. There has also been an increase of six percent in the numbers unemployed for one year or more, indicating a more serious rise in long-term unemployment[6&7]. The ESRI predicts that unemployment will rise from 6.1 percent in 2008 to 8 percent by the end of 2009[8]. Employment levels in internationally trading firms remain stable, though there are challenges ahead. Internationally traded services have dominated new job creation, while net job losses have been concentrated in more traditional manufacturing sectors — reflecting on-going restructuring in the economy and competition from lower-cost locations.

The financial systems in Ireland and other developed economies are undergoing a massive deleveraging process following an extended period of rapid credit growth. Ireland's household debt per capita increased rapidly and Ireland is now one of the most indebted Eurozone members. At €36,449 average Irish household borrowing per capita is more than twice the Eurozone average[9]. This growth in debt fuelled an unsustainable level of activity in the domestic housing market and construction sector. Growth driven by increasing indebtedness is not sustainable and the economy is now suffering from an inevitable correction process. Notwithstanding this, Irish net household savings are among the highest in the OECD, standing at 11.1 percent of disposable income in 2008[10].

Future growth needs to be driven by productive, internationally-trading businesses from Ireland. Section 1.2 summarises the recent performance of internationally-trading businesses in Ireland. Their recent performance has been mixed and future performance is not certain. The challenge for Ireland is to ensure that the economy is sufficiently competitive to enable international trade to support economic recovery. We need to identify and implement the necessary actions to ensure that competitiveness is restored.

1.2 A Mixed Performance on Exports

Following a number of years where internationally trading sectors have underperformed, net exports played a greater role in 2007 and the first half of 2008 in terms of driving Irish economic growth (as illustrated in figure 1.2)[11]. Irish exports are dominated by overseas-owned firms in a small number of sectors, in which there is significant competition from other countries for new investment. Foreign owned firms account for 89 percent of total exports from firms assisted by the IDA and Enterprise Ireland[12]. Within these foreign owned sectors, chemicals and pharmaceuticals, electrical and electronic equipment and software account for 76 percent of exports[13].

5 There was a sharp fall of 26,800 in construction employment in the year to the second quarter of 2008. CSO, 2008, *Quarterly National Household Survey*, August.

6 CSO, 2008, *Live Register Analysis*, April.

7 4.3 percent using the stricter ILO definition (CSO, *Quarterly National Household Survey*, 2008, April).

8 The Economic and Social Research Institute, 2008, *Quarterly Economic Commentary*, Autumn, Dublin: ESRI.

9 See NCC, 2008, Benchmarking Ireland's Performance, Figure 4.40.

10 Based on 17 countries reporting a SNA93/ESA95 standard measure. Source: OECD, 2008, *Economic Outlook*, Number 83, June, Paris: OECD, Table A23.

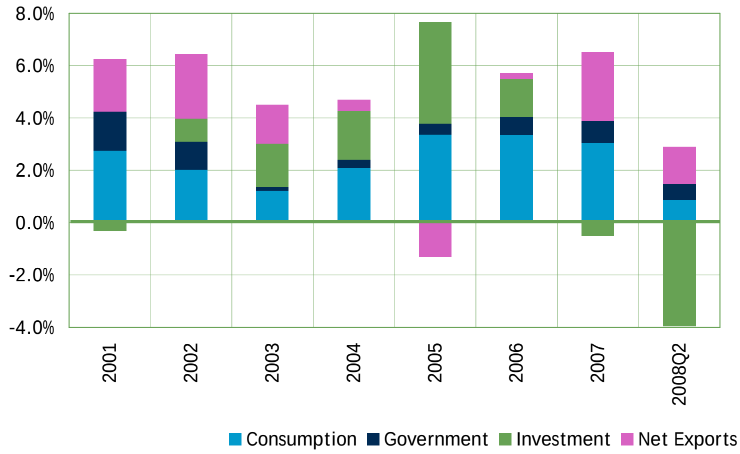
11 Notwithstanding this, the dramatic slump in investment (dominated by construction) pushed the economy into recession.

12 The reported exports of all agency-assisted firms accounted for 71 percent of total Irish exports in 2007.

13 Forfás, 2007, *Annual Business Survey of Economic Impact 2007*.

Export performance has also varied significantly by sector in recent years, and overall export growth has been weak. The value of merchandise exports fell four percent in the first two quarters of 2008 relative to 2007, having increased by two percent from 2006 to 2007. Set against the rise in export volumes (1.9%) over the same period, this confirms a continued decline in unit export prices and demonstrates the challenges faced in becoming a higher value economy. At a more detailed level, chemicals accounted for 49 percent of total exports in 2007 and grew by 7.7 percent relative to 2006. Exports of pharmaceuticals have shown consistent growth and now account for a quarter of total exports. Exports of machinery and transport equipment have been declining since 2000, falling by 6.15 percent in 2007.

Figure 1.2 Contribution of Net Exports to Economic Growth, 2001-2008 (Q1 & Q2)



Source: Forfás calculations, CSO, Annual National Accounts

Services have become the main drivers of growth in developed economies and services exports are an increasingly important component of national income in Ireland. In 2000, the contribution of services to total Irish exports was 21 percent[14], rising to 43 percent of total exports in 2007. Irish services exports are likely to overtake merchandise exports in the next two to three years. With a 2.7 percent share of global services exports in 2007, Ireland is the tenth largest exporter of services in the world and one of the largest in per capita terms. Services exports continued to grow through the first half of 2008 but at a slower rate, with CSO data showing a 4.65 percent increase relative to the first half of 2007. Increases in exports of computer services (10.2%) and trade-related services (27%) contributed most to this growth[15]. While growth in services exports has remained robust, it has moderated considerably from the fast pace of previous years and the international climate for services exporters (especially financial services) has become highly uncertain.

The recent collapse of the WTO trade talks represents a missed opportunity for Irish services and manufacturing exporters who could benefit from lower tariffs and simplified procedures in both the established markets of our OECD partners and the high-growth markets of emerging economies. A WTO agreement would improve access in almost all countries and sectors of interest to Irish

14 Ibid.
15 CSO, 2008, *Balance of International Payments*, Quarter 2 2008.

exporters. It would provide an important part of the policy framework on which the efforts of our development agencies to improve the export potential of our manufacturers and service providers are built. Similarly, liberalisation of trade would enhance competitiveness by reducing the cost of imports for producers and consumers. UNCTAD has raised concerns that the liquidity crisis in money and debt markets, slower economic growth and declining corporate profits in many developed countries could lead to a decline in FDI flows in 2008[16].

1.3 Key Competitiveness Strengths and Weaknesses

Despite declining economic activity, Ireland retains a range of competitive strengths that we can capitalise on. These include[17]:

- Ireland continues to be a leading country in terms of the attraction of overseas investment, and the IDA has been increasingly successful in attracting research and development-related operations.
- Quality of life has improved significantly with positive benefits for Irish citizens and people wishing to move to Ireland. Ireland ranks fifth in the world in the most recent *Human Development Index*, a composite index of economic, educational and health indicators.
- The Irish tax and regulatory environment remains very positive. In particular, Ireland's tax wedge on labour, which is an important competitive advantage, remains low[18]. Corporate taxes remain very competitive and important to sustaining high rates of return to firms operating from Ireland. The regulatory environment also supports the development and expansion of enterprise.
- Educational attainment in Ireland has increased significantly in recent years and Ireland is making substantial progress in strengthening its research and development capabilities.

However, a number of major challenges to our competitiveness exist:

- As a small open economy, economic conditions in our key trading partners have a major bearing on our success. In the second quarter of 2008, the Eurozone experienced its first contraction in activity since the launch of the euro. The US and the UK economies are also contracting and there are significant risks of a global recession.
- Irish productivity growth has slowed in recent years.
- A key weakness of the Irish economy is the continued decline in Ireland's cost competitiveness. Between January 2000 and September 2008, Ireland has experienced a 32 percent loss in international price competitiveness, reflecting a combination of higher price inflation in Ireland (approximately one third of the loss) and an appreciation of the euro against the currencies of many of our trading partners. The euro's appreciation against sterling has been persistent, whereas the US dollar has recently strengthened.

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16 The average growth rate of global FDI flows increased by 23 percent in 2007 when measured in local currencies. United Nations Conference on Trade and Development, 2008, *World Investment Report*, 2008. UNCTAD: New York.
17 NCC, 2008, *Benchmarking Ireland's Performance*, Annual Competitiveness Report: Volume 1.
18 See Chapter 2.3 following.

- The sustained appreciation of the euro vis-à-vis sterling has acute competitiveness implications for exports from the traditional manufacturing, the food and drink and the tourism sectors.
- Despite significant investment and tangible progress, key infrastructural deficits remain and perceptions of quality remain poor.
- Ireland's innovation and R&D rankings, while improving, remain below those of leading countries.
- Our high dependence on imported fossil fuels presents us with a range of challenges relating to our exposure to international oil and gas prices, long-term security of supply concerns and the high carbon intensity of the Irish economy. The price of oil has oscillated significantly in response to global events. While its price more than doubled in the 18 months preceding July 2008, it has now eased significantly in response to recession in major developed economies. This brief respite in oil price increases is unlikely to continue into the medium term.
- Finally, while it appears that Irish banks have limited direct exposure to the excesses of the US sub-prime market, fears do exist regarding their exposure to domestic property lending. The impact of the credit crunch is being felt in the real economy. Turmoil in global financial markets and exposure of Irish banks to the declining property sector is affecting commercially sound Irish firms (in particular SMEs) in terms of the availability of finance and its cost.

1.4 Decline Is Not Inevitable, But Neither Is Success

Foreign direct investment and international trade were key drivers of growth in the 1990s and early part of this decade. These were supplanted by domestic consumption and investment (particularly in construction) in more recent years — a domestically driven boom which in any event was unsustainable. It is impossible to predict how long the current global downturn will last. Furthermore, when the global economy recovers there is no guarantee that the Irish economy will automatically return to either the high growth rates of the past or the more moderate growth rates of other developed economies. While the experience of some large national economies has been that declining sectors (e.g. the auto industry in Detroit, coal and steel in the UK midlands) are replaced with new industries (e.g. software in San Jose, financial services in London), the experience of smaller regional economies like Ireland has often been different. When key sectors in regional economies go into decline there is no guarantee that they will be replaced by other economic activities that offer the same opportunities for productivity growth and wealth creation. Many regions have entered a prolonged period of decline following a negative shock to their export base. For Ireland, the risk of recession also brings a risk of emigration of high skilled labour.

Decline is not inevitable but neither is success, and difficult decisions are necessary to restore Ireland's international competitiveness. Without appropriate action, it is entirely possible for the Irish economy to enter a prolonged period of depressed economic activity and for the convergence of Irish living standards on other high-income countries to unwind. Sustainable growth must be based on Ireland's manufacturing and services export base, and policy must focus on providing a competitive operating environment for our key exporting sectors. As a society and economy we have successfully addressed economic difficulties in the past, most recently in the late 1980s. While the taxation system, public finances and the productive base of the economy are much stronger today, international economic conditions are now much more difficult and uncertain. Without effective and resolute action, and without public support for the policies and actions required, we could fail to arrest the recent deterioration in our economy, labour market and public finances. This report sets out some of the key challenges and responses required from Government, the business sector and wider society, in order to ensure that positive medium-term growth prospects are attainable.

2 Restoring Fiscal Sustainability

2.1 Harsh New Fiscal Realities

Ireland now faces harsh new fiscal realities. Public finances are under serious pressure as the recent slowdown of economic activity has led to a sharp deterioration of €6.5 billion or 13.3 percent in Government revenue. The cost of running the State (Estimates of Government Expenditure) in 2009 requires a budget deficit of 6.5 percent of GDP[19]. These estimates may be conservative. This deterioration of the public finances is both rapid and alarming — the ratio of debt-to-GDP is projected to rise from 24.8 percent at the end of 2007 to 43.4 percent by 2009[20]. It is important not to jeopardise Ireland's hard won reputation for strong fiscal management as this would ultimately divert additional tax revenue towards servicing debt. It is essential that Ireland develops a credible and widely supported programme to restore the sustainability of public finances.

In *Budget 2009* Government opted to raise the overall tax burden (largely via an income levy), to reduce capital expenditure (-8.4 percent), to slow the growth of voted current expenditure (2.6 percent) and to borrow the remainder, resulting in a 6.5 percent General Government Deficit. It is clear that we will face more difficult decisions if we are to ensure the sustainability of the public finances over the medium term. It is important that decisions on current expenditure priorities are not shirked at the expense of necessary capital expenditure with demonstrable returns and with the potential to restore competitiveness and underpin future prosperity.

The present challenge is to support long-term competitiveness while maintaining the sustainability of the public finances. In order to maintain prudent fiscal policy, difficult decisions remain in terms of prioritising key projects that will enhance our competitiveness (section 2.2), broadening the tax base and supporting competitiveness (section 2.3), introducing additional user charges where appropriate (2.4), and achieving greater value for taxpayers' money in the public sector (chapter 4).

2.2 Expenditure: Identifying Capital Expenditure Priorities

Despite some proposed reductions (-8.4 percent), the NCC welcomes the Government's commitment to maintaining capital investment at 5.2 percent of GNP, as part of a multi-annual capital envelope worth €52 billion over the period 2008-12[21]. Given the stark fiscal realities facing Government, a rigorous process of prioritisation and sequencing of capital expenditure, based on demonstrable returns on investment, is urgently required. This process should not be reduced to simply trimming expenditure on entire programmes, rather care must be taken to invest in the most relevant and productive parts of individual NDP programmes. Projects should be justified by their expected

19 Dept of Finance, 2008, *Budget 2009: Financial Statement*, 14 October, Dublin.

20 Dept of Finance, 2008, *Budget 2009*; National Treasury Management Agency, 2008, *Summary of Activities 2007*. The EU-27 average for General Government Debt/GDP ratio was 58.7 percent at the end of 2007.

21 Of which, €8.6 bn will be funded through public-private partnerships (PPPs).

return on investment and underpinned by rigorous multi-criteria *ex ante* analysis. While judgement, lobbying and political bargaining will exert an influence on the allocation process in any democratic society, it is important that there is greater transparency surrounding the translation of analytically based recommendations into policy by Government[22]. It would enable clearer prioritisation within and between different categories of investment, and it may also help in explaining to the business sector and the wider public why certain projects are being prioritised and others deferred. The NCC would welcome a commitment by Government to publish the investment analysis and projected rates of return accruing to capital projects. A more integrated approach to the planning and implementation of capital investment projects is also required — particularly given the range of planning and investment bodies across sectors (i.e. roads, energy, telecoms, water and public transport).

The NCC believes that continued investment to address infrastructural deficits is critical to improving the productive capacity and future growth potential of the economy — even in the context of economic growth which is below our long-run potential and a slowdown in current expenditure. The NCC's *Benchmarking Ireland's Performance* highlights that, despite improvements, a range of areas require significant ongoing attention. Among these are transport infrastructure, R&D, broadband, education, and their underlying programmes (*e.g. National Development Plan, Strategy for Science, Technology and Innovation and the National Skills Strategy*). The NCC's high level priorities for capital investment are outlined below.

Telecommunications: Next Generation Connectivity

The availability of high quality broadband is strategically important to improving productivity, facilitating innovation, maintaining our status as an attractive location for FDI and enabling Irish services firms to compete in international markets. Despite recent progress on improving access to basic broadband (DSL), the NCC is concerned that Ireland is lagging competitors in terms of its progress on next generation networks.

The key challenge is at the access layer from the national/regional network to the customer premises. Many cities in other countries already offer 100Mbit/s services to homes and businesses over fibre. It is imperative for Ireland's continued attractiveness as a location to do business that the main urban centres, particularly Dublin, match these service offerings. In order to do this the following measures are recommended:

- A regulatory framework that will incentivise and support private sector investment in NGN infrastructure, and reward providers for the risk involved in undertaking long-term investment, is required.
- The bundling of the existing state assets (ownership or management) would enhance backhaul connectivity for competing service providers and further support regional development. The State already has the components of a significant and extensive fibre core network, including

22 FGS/NCC, 2004, *The Allocation of Public Capital Spending*, August.

fibre infrastructure owned by ESB, Bord Gáis, CIE and the NRA. The Metropolitan Area Networks (MANs) provide a further step towards creating an extensive fibre network.

- Potential exists to build MANs in a small number of additional *National Spatial Strategy* (NSS) locations including Tuam, Castlebar, Thurles, Ennis, Shannon, and Mallow.
- Mandating the facilitation of cable ducting as other NDP investments are progressing (roads, rail, electricity transmission cables, pipelines) is a positive development and one that needs to be progressed as quickly as possible. Changes in the planning regulations should be introduced to compel the inclusion of ducting in all relevant public works.

Many of these issues are proposed in a recent consultation paper from the Department of Communications, Energy and Natural Resources, but their aggressive implementation is now critical. If next generation telecommunications are to become available in Ireland in a timely fashion, fibre-to-kerb infrastructure needs to become widely available over the next few years. Unless a way to stimulate this is found, Ireland's competitiveness will be seriously disadvantaged.

Roads and Public Transport

The Government's commitment to sustaining investment in road and public transport is welcome. The key focus now needs to be on the prioritisation and sequencing of projects within *Transport 21.* This is required to ensure that those critical to supporting a return to export-led growth are front-loaded. These include:

- Completing on schedule by 2010 the main inter-urban network linking Dublin with Cork, Galway, Limerick and Waterford;
- Completing the N18 Galway-Limerick (including the Galway outer bypass), the N20 Limerick-Cork and the N25 Cork-Waterford sections of the Atlantic road corridor;
- Upgrading the N4 (west of Mullingar); the N5 (west of Longford); N11 Dublin-Wexford; N25 Enniscorthy-New Ross; N28 Cork-Ringaskiddy; and N80 Portlaoise-Tullamore.

Arising from the 7.5 percent cut in the capital expenditure allocation for public transport in *Budget 2009*, the NCC has identified the following priorities:

- Investment in the suburban rail network where justified by demand and capacity to address bottlenecks, and the integration of land and transport planning;
- Improvement of the bus networks in major urban centres is important in terms of overcoming congestion. Extension of the Quality Bus Corridor network is required to complement improved frequency of services and real-time information on journey times. These are relatively low-cost options with immediate benefits for consumers;
- The implementation of integrated ticketing across existing public transport services is still outstanding. Progress on this important issue is inexplicably slow.

Capturing Returns from Collaborative Research & Development

The Higher Education Authority's *Programme for Research in Third Level Institutions (PRTLI 5)* and Science Foundation Ireland's programmes should be sustained at allocated levels as set out under the NDP and the commitments made in *Budget 2009* are welcome in this regard. The PRTLI investment in the physical infrastructure, aligned with SFI investment in research teams, has succeeded in beginning to establish Ireland as a world class research centre with a reputation for research excellence in the fields of ICT and Biotechnology. This commitment to sustained investment has enabled the IDA to market Ireland as a location for R&D. In 2007 40 percent of all IDA-supported new investments were in R&D-related projects and this success has been sustained in 2008. Research priorities for publicly funded R&D need to be sufficiently aligned with the needs of enterprises and developing clusters. To maximise the impact of public investment, the linkages and levels of knowledge transfer between the research and enterprise bases need to be strengthened and the level of commercialisation increased. For example, the delivery of the joint Enterprise Ireland/IDA *Competence Centre* programme will address technical challenges faced by industry by allowing closer collaboration and networking with HEIs.

2.3 Revenue: Supporting Competitiveness while Broadening the Tax Base

Given the scale of the challenges we face, Government finances will remain under severe pressure in the coming years. The NCC believes it is important to achieve balance between unpopular decisions on controlling current expenditure (section 2.2), broadening the tax base and introducing transparent user charges where appropriate, and achieving greater value for money in the delivery of public services. The nature of this balance is a political decision – the recommendations of the NCC are solely aimed at ensuring that the taxation system is optimised to support competitiveness.

Using Tax Policy to Support Improvements in Competitiveness

Ireland has been broadly successful in using the taxation system to promote employment growth and prosperity. While the key driver of tax policy must be to restore the sustainability of Government finances, it is critical that this is achieved in a fashion that continues to support economic growth and competitiveness. Ultimately, the health of our public finances depends on the success of our enterprise base and the health of the labour market.

In the context of maintaining and promoting increased employment, the NCC regards Ireland's low labour tax wedge (the ratio of labour taxes to total labour cost) as a key competitive advantage in the current environment of rising costs and increasing competition for highly-skilled and internationally mobile workers. Ireland's tax wedge on labour is very competitive by international standards and is a much lower than the OECD-28 and EU-15 averages. However, the tax wedge is highest for high-income single earners, who are taxed more attractively in Korea, New Zealand, Australia and Canada[23]. Notwithstanding the new fiscal challenges facing us, maintaining our

23 Single, no children, earning 167% of the average production wage; Ireland (33.1%), Korea (22.5%), New Zealand (27.3%), Australia (32.8%) and Canada (32.9%). Source: OECD, 2008, *Taxing Wages 2006-7*, Paris.

competitive tax wedge on labour should remain a priority for Government. While sustaining the present competitiveness of our income tax system will be difficult against a background of declining revenues, the preference of the Council is to broaden the tax base, rather than to significantly increase taxes on income.

While the five percent increase in the R&D tax credit scheme (to 25 percent) announced in *Budget 2009* and the provisions in the Finance Bill to enhance its attractiveness for early-stage and low-profit companies are welcome, the competitiveness of the scheme needs to be continuously improved.

Further potential also exists to make Ireland a more attractive location from which to purchase and manage intangible assets (e.g. intellectual property, brands, software, copyright, etc.) and to provide tax equivalence between tangible and intangible assets. An accelerated initiative is required to capture mobile investment and jobs in this growth area. Not least, we need to extend Ireland's tax treaty network to ensure Ireland remains an attractive operating base for global operations.

Broadening the Tax Base: Recurring Property Taxation

The unsustainable over-reliance on tax revenue arising from construction related activity (stamp duty, VAT, capital gains and local development levies) demonstrates the urgent need for a broadening of the revenue base. The existing tax on property transactions (stamp duty) reduces liquidity in the housing market as it increases the costs of buying and selling property. It also has negative implications for the efficient use of the existing housing stock as it discourages people from trading property as their needs and circumstances change. As such it represents a barrier to labour mobility. As a source of tax revenue, transaction-based taxes are highly volatile, being a function of both price and market activity. While welcoming the reduction in stamp duty on commercial property, the NCC believes that further reform is required. An alternative annual levy on property stocks, rather than transactions, would benefit the housing market and increase the predictability of tax revenues. The NCC believes scope exists for the recently announced levy on non-principal private residences to be used as a model for further reform of property taxes over a three to five year horizon, but cautions against a hybrid system of double taxation (via stamp duty and a levy). The introduction of an annual property tax should be phased in and should allow adequate relief for low income and other vulnerable households and those that have recently paid substantial stamp duty subject to appropriate ceilings.

2.4 Revenue: Sharing the Benefits and the Costs of Public Services

In light of the pressures on the public finances, all aspects of current expenditure need to be reviewed. It is unsustainable for Government to increase its borrowing requirement to finance current expenditure. In many cases, high levels of current and capital expenditure were justified by an optimistic view of future tax revenues, which is no longer the case. If current expenditure on front line services and capital investment in infrastructure is to be retained, the need to reduce service levels elsewhere and/or part-finance them through user chargers is now inescapable.

Sustainable Finance for Higher Education

Adequate funding is essential to enabling Irish higher education institutions to achieve excellence across the full range of activities in order to equip Irish students with the highest quality of education available. The NCC welcomes the current review of higher education announced by the Minister for Education and Science. While this review will address the future role of higher education in social and economic wellbeing and the issue of sustainable finance for higher education institutes in detail; the NCC believes it is sensible that graduates, who will benefit significantly from higher education in terms of increased earnings over the course of their life, should contribute a portion of the cost of their education.

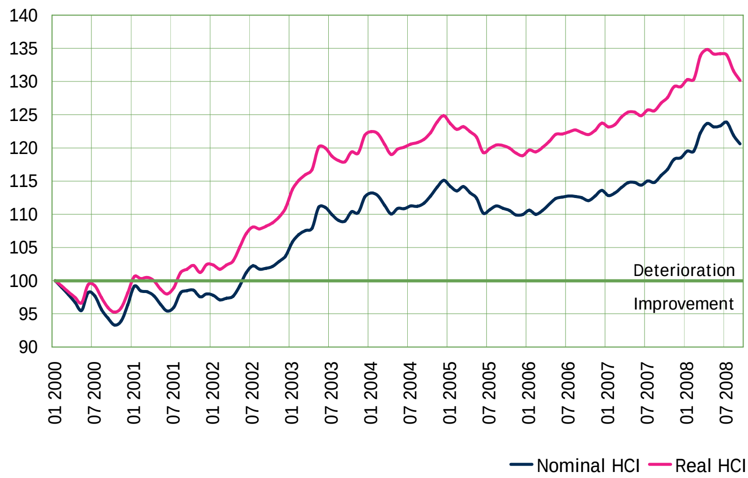
If the introduction of tuition fees is required, it would be important to ensure that such a measure does not act as a barrier to participation at third level — for example through the introduction of a comprehensive student loan system and through avoiding the upfront payment of fees. A review of the structure and administration of the current inequitable and inadequate student maintenance grant system, where assets are excluded from the eligibility criteria, is also required. Ultimately, it is important that any additional private funding would supplement a sustainable level of capitation income for the higher education institutions, and that these institutions clearly demonstrate their capacity to improve their services to students and educational outcomes. In the context of the future resource-needs of the sector, it is important to ensure that *current* resources in the higher education sector are being deployed in a way that provides the best value for money and contributes effectively to achieving the highest quality educational outcomes. The review process should also ensure that the necessary governance reforms are progressed, including new approaches to performance management and development.

Local Authority Service Charges

The NCC welcomes the broadening of the local authority revenue base to include a levy on non-principal private residences and hopes this will forestall increased charges on business. In the context of reform of Local Government, further and alternative methods of raising revenue should be considered — including charges for all users of services (*e.g.* water). Government should proceed cautiously on increasing the costs on enterprise from local authority charges, development contributions and Government regulations. Any increases in local authority charges should be transparent and based on the true economic cost of providing services.

3 Lowering the Costs of Doing Business

Figure 3.1 Harmonised Competitiveness Indicator, January 2000 to September 2008 (January 2000 = 100)



Source: Central Bank

A key weakness of the Irish economy is the continued decline in Ireland's cost competitiveness (Fig. 3.1). Between January 2000 and September 2008, Ireland has experienced a 32 percent loss in international price competitiveness (real HCI), reflecting a combination of higher price inflation in Ireland (approximately one third of the loss) and an appreciation of the euro against the currencies of many of our trading partners (nominal HCI). Ireland has a history of out pacing average Eurozone inflation since joining the currency union, becoming the second most expensive country within the EU-15. The ESRI estimate CPI inflation will be 4.5 percent for 2008, but that it will fall to 2 percent in 2009[24]. Recent negotiations on public and private sector pay have proposed a six percent rise over the course of 21 months, with staggered pay freezes of three and eleven months for the private and public sectors respectively.

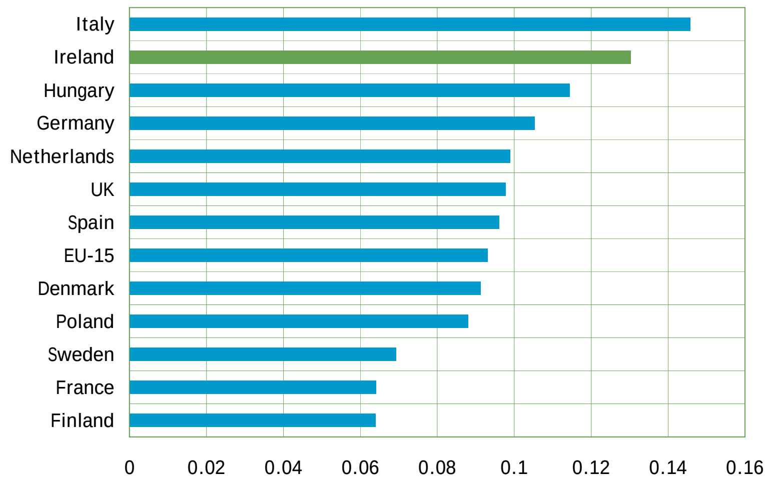
While international factors such as high oil prices and historically low interest rates dictate much of Irish inflation, domestic factors are also important. Ireland's above average rate of inflation during the 1999-2007 period is largely due to inflation in the price of services, most of which are domestically provided. Since 1999, Irish services inflation has consistently outpaced the Eurozone average[25]. Despite a slowing trend in inflation overall, services inflation (3%) continued to outpace the Eurozone average (2.6%) in the twelve months to September 2008[26]. This trend points to the strength of domestic demand in the Irish economy during this period as a significant driver of Ireland's above average inflation. It also suggests that there is limited competition in domestic services sectors of the economy.

24 ESRI, 2008, *Quarterly Economic Commentary*, Autumn.
25 The annual average for services inflation in Ireland between 1999 and 2007 was 4.9 percent in Ireland compared to the Eurozone average of 2.3 percent. The annual average for goods inflation in Ireland between 1999 and 2007 was 2.2 percent compared to the Eurozone average of 1.9 percent. Eurostat, Economy and Finance Indicators, Harmonised Index of Consumer Prices.
26 Eurostat, *Economy and Finance Indicators*. Available at http://ec.europa.eu/eurostat.

3.1 Electricity Costs

Irish industrial electricity costs are the second highest in the EU-25 (Figure 3.2). Irish prices increased by 70 percent between January 2000 and January 2007, which was more than twice the average rate of increase across the EU-15 (32.8%). Regulated prices within the public electricity supply (PES), which serves SMEs and homes, increased by 17.5 percent in September 2008. This sustained escalation in electricity costs has acute implications for small and medium sized business under PES and for large energy users under the Single Electricity Market. High electricity prices are being driven by a number of factors, including our reliance on imported fossil fuels and exposure to global fuel price increases – particularly for gas. In addition, low levels of spare generation capacity, limited interconnection, the poor availability performance and relatively small scale of Irish generation plants, inefficiencies in distribution and limited competition in generation and supply directly contribute to our uncompetitive electricity costs.

Figure 3.2 Industrial Electricity Prices (Euro/kWh, excluding VAT but including all other taxes), January 2008



Source: Eurostat, Environment and Energy

Distributing the Carbon Windfall

In August 2008, the Government announced it would use the carbon windfall[27] accruing to the ESB in 2008 to offset some of the price increases arising from increasing fuel prices. The Commission for Energy Regulation (CER) has estimated the windfall gains accruing to all generators at €280 million per annum between now and 2012[28]. The NCC supports this initiative and believes that the recovery of the carbon windfall from generators should continue to be passed through to electricity users through lower prices, on an annual basis to 2012.

Controlling Costs in Generation and Transmission

Ireland's high dependence on fossil fuels means that electricity prices are particularly exposed to global fuel price volatility. However, Deloitte estimated that domestic *controllable costs* accounted for 30 percent of the difference between Irish and average EU electricity prices in 2004[29]. They

27 Under the Single Electricity Market (SEM), the full cost of carbon is being passed through to electricity customers since January 2008 via higher prices. Since electricity generators receive grand-fathered (free) carbon credits under the Emissions Trading Scheme, this results in additional annual profits (windfall gains) until 2012 for the generators.

28 This is based on a cost of carbon of €25 per tonne and carbon allowances of 74 percent under the ETS.

29 Deloitte, 2005, *Review of the Electricity Sector in Ireland*, Report to Department of Communications, Energy & Natural Resources, December.

found that generation costs were above the EU average and that electricity transmission and distribution charges were also high. The NCC believes that regulation of operators should focus on bringing this differential in controllable costs into line with our competitors.

Ireland's transmission infrastructure requires significant investment, which will be financed through future electricity prices. There is a view that high-tension cables should be placed underground, primarily fuelled by concerns over health and the integrity of the rural landscape. However, Eirgrid estimates the incremental cost of using underground cables to strengthen the transmission grid (circa 650km of transmission cables and 100km for the North-South tie line) would be €6 billion — costs that would be borne by industrial and residential customers[30]. These costs are prohibitive and underground cables would be technically inferior from the perspective of guaranteeing security of supply. The NCC believes that high-tension transmission cables should continue to be placed overhead.

Balancing Affordable Renewables Targets with International Competitiveness

Ireland is working towards its EU target of producing 15 percent of its electricity needs from renewable sources by 2010, which will improve the diversity of the fuel mix and our carbon performance[31]. While the marginal cost of wind and other renewables is low or negligible, meeting the 2020 target of 40 percent will require substantial investment in the electricity grid and back-up power generation. From a competitiveness perspective, the NCC sees no first-mover advantage to Ireland in going beyond our already ambitious EU climate change targets. While the Commission for Energy Regulation (CER) is currently assessing the costs of implementing this target, the NCC cautions that the implementation of more burdensome targets should not proceed in the absence of a finalised cost assessment. In conjunction with the three percent per annum reduction in CO_2 levels also set by Government, this would result in a cumulative reduction in greenhouse gases in excess of those mandated by the EU. The combination of these policies has important cost implications for businesses and all consumers of energy in Ireland.

Finally, price supports for renewable electricity generation provide for a guaranteed price of €140 per megawatt hour for electricity produced by new offshore wind plants and €220 per megawatt hour for wave and tidal energy. This compares with a fixed price of €57 per megawatt hour for onshore wind generation. While public subsidies can play a key role in supporting an emerging sector, the NCC is concerned about the potential inflationary impact of an expensive price-floor on renewables and recommends that this be reviewed.

30 Ecofys, 2008, *Study on the Comparative Merits of Overhead Electricity Transmission Lines versus Underground Cables*, Report to Department of Communications, Energy & Natural Resources, July.

31 In January 2008, the Department of Communications, Energy & Natural Resources (DCENR) and its Northern Irish counterpart published the *All-Island Grid Study*. This comprehensive study focused primarily on the technical feasibility of various scenarios for increased shares of electricity sourced from renewable energy in the all-island electricity system.

3.2 Waste Costs

While landfill costs in Ireland have moderated in the last two years, Dublin and Cork retain the most expensive landfill costs of all cities benchmarked in a recent NCC report[32]. As outlined in Chapter 4, actions are required to remove barriers to private investment in waste management infrastructure.

3.3 Enhancing Competition

Enhancing competition within Ireland's domestic economy is vital to improving competition in price, quality and service. It also stimulates productivity where firms invest in the development of new products and processes to gain competitive advantage. While there are a number of examples of the benefits of greater competition in domestic markets (*e.g.* air travel, taxis, and telecommunications), a wide range of sectors in Ireland are relatively sheltered from competition[33]. Reasons for this include the power of producers in these sectors and the role of self-regulation; the nature of the good/service produced; the limited scope for competition (in the case of natural monopolies); the small size of the Irish market; the role of Government and regulators; and weak consumer voice and action.

If sheltered sectors of the locally traded services sector are not exposed to greater competition, services inflation will continue to outpace the Eurozone average and the cost competitiveness of Irish firms will deteriorate further. The NCC welcomes the recent announcement by the Tánaiste and Minister for Enterprise, Trade and Employment on addressing recommendations of the Competition Authority within a set period of time. A summary of key outstanding Competition Authority recommendations, supported by the NCC, are outlined in Box 3.1. The further development of an all-island market also offers potential to reduce some of these disadvantages (e.g. energy, cross-border retail, etc.)

3.4 Accessing Affordable Credit

There are serious concerns that the turmoil in global financial markets and the exposure of Irish banks to the declining property sector is affecting Irish firms in terms of their ease of access to finance and its cost. While the announcement of tax remissions for start-up enterprises in *Budget 2009* is welcome, it does not address the credit constraints facing existing businesses. The NCC believes scope exists to leverage the Government's guarantee of financial institutions to press upon lenders the importance of the availability of adequate and affordable capital to businesses. Funding decisions should be based on the long-term commercial viability of the business. The success of viable businesses should not be hindered by the tightening of credit standards, reduced access to wholesale funding markets, or the reluctance of banks to explore innovative solutions. Many small firms rely on bank credit to smooth out seasonal cashflow issues, while exporting firms require

32 NCC, 2008, *Costs of Doing Business in Ireland*.

33 A recent OECD paper ranks Ireland behind only Greece in terms of regulatory barriers in the services sector (e.g., energy, transport and communication), indicating further potential to reduce monopoly rents. The analysis is based on 2003 data. Source: OECD, 2007, "Product Market Regulation in the Non-Manufacturing Sectors of OECD Countries: Measurement and Highlights," in *Economics Department Working Paper*, Number 530, Paris.

access to sufficient working capital to exploit export opportunities where they exist — particularly in high growth emerging economies. In this context, scope may exist for encouraging large commercial banks to secure funds through the European Investment Bank's financing system for SMEs as in other countries.

3.5 Easing Unnecessary Regulatory Burdens

Easing the administrative requirements that regulations create can improve the business environment by reducing costs, minimising the time businesses spend fulfilling regulatory requirements and increasing productivity. Government needs to vigorously implement the *Better Regulation* agenda to achieve the target to reduce administrative burdens by 25 percent by 2012.

Box 3.1: Summary of Outstanding Competition Authority Recommendations

Legal Services

- Establish an independent and accountable Legal Services Commission, with overall responsibility for regulating the legal profession and the market for legal services, putting consumers and the public interest at the heart of the regulation of legal services. The Legal Services Ombudsman Bill, while welcome in itself, does not meet this recommendation.
- Establish a profession of "conveyancers", as exists in other countries. Conveyancers would be regulated to ensure they have appropriate training, professional indemnity insurance, ethical rules and a compensation fund to provide professional conveyancing services just like, and in competition with, solicitors.
- Enable barristers to provide legal advice directly to clients; to form partnerships; and to work in groups.
- Ensure that legal fees are assessed on work done and not on the size of a client's award.
- Ensure that inefficient "traditional" processes, where they directly and unnecessarily inflate costs, are subject to reform.

Professional Services

- The Competition Authority has made a number of recommendations to various departments in its reports on the architectural (D/Environment), dentistry (D/Health), optometry (D/Health) and veterinary (D/Agriculture) professions. These recommendations were designed to make these professions more competitive, and to give consumers more choice and value for money in service delivery.

Retail Financial Services

- Legislate for the legal recognition of electronic copies and substitutes for cheques; and to facilitate the transfer of mortgage security on a bank loan.

4 Achieving Public Services Reform

The State plays an important role in the Irish economy by providing public goods and services and regulating economic activity. A well managed, innovative and efficient public administration system will be essential to driving Ireland's economic recovery. Starting from a very low base by international standards[34], the total number of people employed in the public sector has risen by 40 percent since the end of 2000 and now stands at 227,100[35]. This compares to an increase of 8.4 percent in the total population over the same period[36]. Based on National Accounts data, total compensation to public employees has increased by 111% since 2000, rising from 22 to 26 percent of total government revenue[37]. Of the €42.8bn projected tax receipts for 2009, 47 percent (€20bn) is allocated towards the public sector pay bill[38]. Underlying these increases, at least partially, have been greater demands on education, health and policing from a burgeoning population, high levels of net inward migration and rising living standards. While absolute numbers in the public service are still modest by international standards[39], a consensus is emerging that their number will be reduced in an effort to control current expenditure. Government has committed to examining existing staffing levels and to identify non-essential posts and activities.

In the changed economic and fiscal environment, the challenge for the sector will be to deliver better services with fewer resources. This will require a commitment to the substantive changes needed to meet emerging social and economic requirements and an effective programme to bring about such changes at every level of public administration. If Ireland is to maximise the contribution of the public service to achieving societal objectives and to meeting citizens' expectations, then we need to move towards a public service which operates as an integrated and coherent system.

The public sector is not homogenous in terms of its objectives, structures, desired outcomes and service delivery. It is important to recognise that state bodies have very different roles, for example policy formulation, implementation, operational activities etc. Reform measures need to be carefully considered in light of the specific roles and outcomes required from individual public sector organisations. In this context, the NCC welcomes the recent statement from Government on transforming the public services which aims to improve performance, create flexibility in the deployment of people and assets, and to identify a precise agenda for transformation in specific sectors[40]. The NCC supports the proposed establishment by Government of a Senior Public Service with a strategic developmental role and this welcome initiative should be advanced at the earliest opportunity.

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34 OECD, 2008, *Ireland: Towards an Integrated Public Service*, Paris.
35 Excluding commercial and non-commercial semi-state bodies. Source: CSO, 2008, Principal Statistics: Labour Market.
36 Based on end-2007 data.
37 OECD.Stat, *Annual National Accounts*.
38 Dept of Finance, 2008, *Budget 2009: Estimates for Public Services*, 14 October, Dublin.
39 Core public administration, excluding doctor and teachers. Source: OECD, 2008, "Employment in Government in the Perspective of the Production Costs of Goods and Services in the Public Domain," in *Public Employment and Management Working Party* GOV/PGC/PEM(2008)1, 28 January, Paris: OECD, Figure 15.
40 *Government Statement on Transforming the Public Services*, November 26, 2008.

An urgent need now exists for a more integrated approach across Government departments and agencies. New governance structures need to be considered to address the complex challenges and cross-cutting objectives such as competitiveness, social inclusion, climate change and ultimately to address the long-term needs of citizens more effectively. A high level of integration in policy formulation and implementation across Government is now required. As the activities of a wide range of Government departments and agencies impact on the success of enterprises, Ireland needs to have structures and processes that ensure that these departments act in mutually complementary and supportive ways.

In line with international trends, the number of sectoral regulators in Ireland has grown in recent years. It is important that clear criteria are set to guide the establishment of regulators; that subject to the specific needs of different sectors, consistent legislation and structures are set across regulators; and that best practice is adopted. Periodic reviews are necessary to assess if regulators are meeting their objectives effectively and if their number or role requires amendment, including whether potential exists to merge regulators or regulatory activities. There is a need for greater clarity as to the role of regulators in respect of public policy formation.

While social partnership has served to underpin competitiveness and achieve difficult reforms in previous times of budgetary constraints, it is important that the relationships between Government and the social partners continue to remain both relevant and responsive to economic and social conditions. The immediate challenges are now restoring fiscal stability, improving cost competitiveness, reforming delivery of public services and supporting the competitiveness of our exporting sectors.

Achieving an integrated public service, capable of maximising value for the taxpayers' money, will require targeted actions in a number of areas. Many of these reforms have been identified by the OECD's review of the public service[41], including:

- Performance measures need to look at outcomes rather than inputs and compliance with processes. Increased flexibility is needed to allow managers to achieve those outcomes;
- Budget frameworks should facilitate prioritisation and reallocation of spending;
- Improved coordination is needed between departments and agencies on cross-cutting issues;
- Greater use of networks are needed to bring together relevant players from across the public service;
- A renewed emphasis is needed on the role of ICT and eGovernment in strengthening information sharing and integrated service delivery. Our relative performance in this area has weakened significantly in recent years;
- As in the wider economy, the quality and skills of people working in the public service determines the quality of outcomes. More open recruitment to the civil and public service, and

41 OECD, 2008, *Ireland: Towards an Integrated Public Service*, Paris.

greater mobility between the public and private sector at all levels, would broaden the pool of experience in the public sector and create a stronger culture of change.

- At the individual level, greater accountability and responsibility matched with suitable levels of autonomy and methods to recognise excellence will be required;
- At the management level, finding real mechanisms for addressing underperformance have been identified as a priority by Government.

Rapid economic growth and a burgeoning population have also placed unprecedented demands on our system of local government. The sector now faces a number of challenges that are relevant for national competitiveness, including:

- Working collaboratively to support the delivery of national objectives, including the development of the nine gateway towns identified in the *National Spatial Strategy*;
- Allowing inefficient or fragmented public services to be coordinated at a national level. For some public services (*e.g.* waste management, water services) local authority or administrative boundaries are not best suited to providing an integrated service or to exploiting economies of scale;
- Providing assurances that public money is properly administered and spent to good effect; and,
- Separating the multiple roles of local authorities in some areas. For example, in the area of waste collection, local authorities often act as providers, planners and even as regulators of private sector competitors.

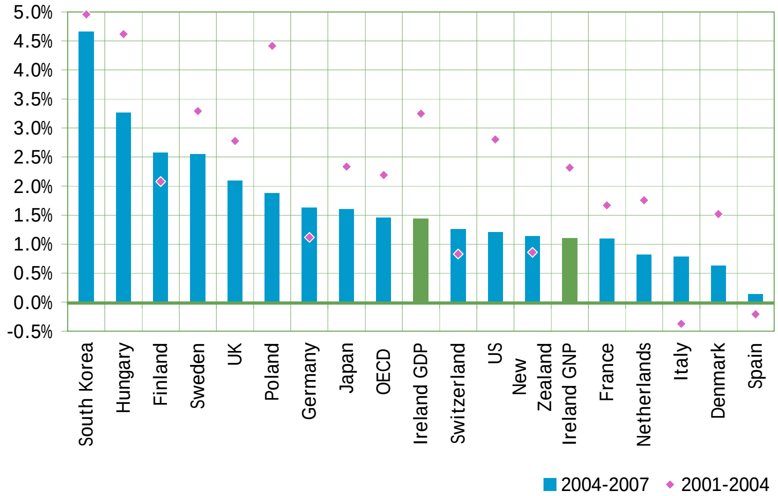
Box 4.1: A Case Study: Waste Management in Ireland[42]

- Ireland remains highly dependent on landfill facilities and the lack of alternative waste treatment options means that many companies are directly affected by high landfill costs.
- Acceleration of the delivery of waste infrastructure is critical to improving waste management performance. The removal of existing barriers to private sector investment (such as the absence of an efficient, regulated market, the lack of coordinated regional waste plans and lengthy planning delays) are priority areas for public policy reform.
- The locally based waste-planning framework is hindering the delivery of cost effective, commercially viable, sophisticated waste treatment options. Regional waste management plans need to be coordinated at national level to attract investment in waste infrastructure in a way that maximises potential economies of scale, maximises competition and uses the market to pass on benefits to businesses and households.
- Specific infrastructures that need to be developed include: thermal treatment capacity to re-cover energy from municipal and industrial waste; thermal treatment or landfill capacity for hazardous waste; biological treatment (composting, anaerobic digestion) throughout Ireland; and reprocessing capacity for recovered materials (e.g. paper, glass and plastic recycled materials).

42 The major review of waste policy provided for in the Programme for Government is now underway.

5 Positioning Ireland for Recovery

Figure 5.1: Annual Average Growth in Output per Hour Worked, 2001-2007



Source: Groningen, Total Economy Database, January 2008

Productivity growth is key to improving living standards, particularly as it allows for sustainable pay increases without eroding cost competitiveness[43]. Achieving higher productivity growth rates will be critical for long term competitiveness and sustainable wage growth. Average productivity growth rates in Ireland were below the OECD average in the period 2004-2007, and significantly below our earlier performance in 2001-2004 (Fig. 5.1). While productivity performance is multifaceted, the future supply of a highly educated workforce, equipped with skills-sets aligned to business needs, is an important enabling factor for recovery. Our future success is equally dependent on how we respond to the all-pervasive issues of energy security, cost and climate change. Diversifying our energy sources and the search for security and affordability is no longer an abstract long term policy objective. Similarly, the importance of how we implement commitments to international climate change agreements, and how we relate those to domestic targets, cannot be overstated.

5.1 Education

Achievement of the targets set out in the *National Skills Strategy* (NSS) is essential[44]. Increasing retention rates at secondary level and progression to tertiary education will require the successful targeting of poorly performing students earlier in their development. To tackle disadvantage where it exists, and to support the working lives of parents, the establishment of a system of pre-primary education should be a medium-term priority. A cost-neutral option in this regard would be to replace the poorly-targeted Early Years Supplement with a targeted subsidy to accredited early childhood care and education providers[45].

43 Productivity is defined as the amount of output created per unit of input used, and is typically measured as output per worker or output per labour-hour.
44 Key targets include 48 percent of the labour force should have qualifications at NFQ44 levels 6 to 10 (Advanced/Higher Certificate and above); 45 percent should have qualifications at NFQ levels 4 and 5 (Leaving Cert or equivalent); and the remaining 7 percent will have qualifications at NFQ levels 1 to 3 but should aspire to achieve skills at higher levels.
45 NCC, *Statement on Education and Training,* Forthcoming 2009.

Box 5.1: Education: Where Reform Can Build on the Strengths of our Schools and Teachers [46]

- The education system is an important enabling factor for recovery and therefore is an area of priority for continued investment of public resources. However it is imperative that all stakeholders recognise the new fiscal realities facing Government and respond flexibly to ensure that our education system can continue to improve the outcomes it delivers within a constrained fiscal environment.
- The quality of our education system is a linchpin of our economic and social progress. It equips the Irish workforce with skills that support growth and employment. Bold reforms and increases in education investment as far back as the 1960s, and more recently in third-level institutions, have provided a highly skilled pool of human resources and enabled Ireland to take advantage of the new business opportunities arising from globalisation.
- In Ireland, strong educational outcomes have consistently been produced with relatively modest public financial resources; and it has become clear that the manner in which resources are used is just as important as absolute levels of funding.
- The NCC believes that schools have the potential to achieve excellent outcomes on a system-wide basis — given the incentives, supports and opportunities to do so. Teacher professional development should be frequent, continuing and progressive during a teacher's career and not limited to introduction of new syllabi. Outstanding teachers need to be recognised with merit based promotion. Teachers should share best practice, upgrade their skills regularly and receive feedback on their performance.
- Greater autonomy for principals in setting and achieving goals and greater scope for principals to focus on being leaders of learning in their schools, rather than planners and administrators, would support the quality education students receive and raise national outcomes.
- Stakeholders and Government need to work towards consensus on these complex issues, to ensure the potential of our education system to support future prosperity.

Building on the *National Skills Strategy*, the NCC considers development in the following areas of our education and training system to be essential:

- Teacher professional development, particularly when tailored to school needs, will raise teaching quality, improve outcomes for students and ensure that education responds to emerging economic and social needs.
- The continued supply of people with high levels of mathematics, science and ICT skills is crucial to the success of Ireland's strategy to facilitate the development of innovative knowledge intensive sectors. A strong focus is required on improving mathematics, science and ICT skills[47]. In particular, further efforts are required to increase the quality and time spent teaching these subjects in Irish schools. There is a clear need to address the perceived disadvantages to studying higher level mathematics at Leaving Certificate level. The quality of science

46 As part of the Council's work programme for 2008/9, a *Statement on Education and Training* (forthcoming, 2009) will address these and other issues (pre-primary to fourth level) in greater detail.

47 At leaving certificate level, participation in chemistry and physics is falling. The amount of time spent teaching mathematics, science and technology to 9-11 and 12-14 year-olds in Ireland is among the lowest of the OECD countries, despite a high number of total teaching hours. In 2006, Ireland has fewer computers per student than the EU-15 average. Irish 15 year olds ranked well among OECD countries in terms of reading literacy (5th) but less well in terms of scientific literacy (14th) and mathematical literacy (16th).

laboratories directly affects the quality of learning in schools, and improving facilities may help address the relatively low levels of interest in science in Irish schools.

- The availability and use of ICT within schools will have a direct impact on the supply of IT skills in the labour market, of particular importance in the context of the growing services sector. Despite the harsh fiscal climate, the NCC believes that innovative action (potentially leasing IT equipment) combined with the school broadband targets can deliver on the promise of the *Strategy for ICT in Schools.*
- The current and forecasted rise in unemployment places new pressures on existing structures for skills specific training (*e.g.* construction related apprenticeships), retraining and upskilling. This involves a shift from the provision of construction based training to a focus on training which supports displaced construction workers and others to find opportunities in other sectors of the economy such as environmental management systems and energy efficiency.
- Potential may also exist to incentivise participation in life long learning and create a culture of up-skilling, through effective use of the taxation system. It is notable that those workers who are most vulnerable during the current downturn are least likely to upgrade their skills' set.

5.2 Securing Our Energy Supply and Competitiveness

Ireland remains particularly exposed to rising international oil and gas prices due to our dependence on imported fossil fuels. One of the key actions identified in the 2007 *Energy White Paper* is a 500MW east-west interconnector linking the Irish and British transmission systems by 2012. The timely delivery of this interconnector and the North-South tie line is critical to improving Ireland's energy competitiveness as it will support greater security of supply and potentially introduce greater competition in the Irish electricity market.

Adapting our Fuel Mix

The development of a cost-effective basket of renewable sources of energy, and the technology to harness our considerable endowments of wind and wave power, can play important roles in reducing Ireland's dependency on imported fossil fuels in future. The NCC believes there is a need for a comprehensive review of all energy sources, underpinned by robust analysis, to determine Ireland's future fuel mix. The review should focus on reducing our dependence on imported fossil fuels, halting our deteriorating energy cost competitiveness and protecting security of supply through greater diversification.

A comprehensive review would address the fact that Ireland has limited additional opportunities for hydro generation, that nuclear generation is not currently permitted under legislation and that none of Ireland's municipal waste is converted into energy (compared to approximately half of Danish and Swedish waste). Other important issues include the fact that, as renewables require significant conventional back-up, Ireland's reliance on gas as a fuel source is increasing. This implies a reduction in the diversity of the fuel mix and a greater exposure to the volatility of global gas markets. The UK has become a net importer of natural gas and this lengthening of the supply chain means Ireland will become increasingly dependent on natural gas sourced from more distant and politically unstable suppliers. Access to liquefied natural gas (LNG) opens different market sources and supply pathways for gas[48]. Enhanced storage facilities for LNG have the capacity to raise LNG inventories and enhance security of supply.

ESB's coal-fired Moneypoint generation plant, which accounts for 21 percent of ESB's generation capacity, is due for decommissioning in 2020-2025. The options for replacing this source need to be carefully examined, including analysis of the potential of nuclear power and clean coal technologies. While there is currently a statutory prohibition on the production of energy from nuclear technology in Ireland, the NCC believes that in light of the need to enhance security of supply and diversify to sustainable low-carbon energy sources, a technical study on the feasibility of nuclear should now be conducted as part of a comprehensive review of our fuel mix. For this to occur within the envisaged timeframe of Moneypoint closure, action on technical assessment and planning/legal considerations would be required immediately. However, as fossil fuels are likely to play a key role in Irish energy for many decades, it is important to support efforts to make them cleaner and more efficient. This will entail ways to manage associated pollution and greenhouse gas emissions, including the development and adoption of carbon capture and storage technologies for power stations.

New Business Opportunities and Energy Efficiency

In light of the strengths of the existing enterprise base in Ireland and opportunities that are expected to arise in the future, a number of environmental goods and services sub-sectors offer opportunities for Ireland[49]. Some of these sub-sectors have high export potential (renewable energies, clean technologies and processes and energy efficiency products and services) while others are sub-sectors with strong domestic potential (waste management, water supply and wastewater treatment and environmental consultancy). Potential exists to attract investment in niche environmental goods and services areas such as renewable energies and clean technologies and processes[50]. It is encouraging that some large Irish-based multinationals are already investing heavily in this area[51].

A coordinated strategy of ensuring policy and regulatory certainty in the various environmental sub-sectors, continuing public commitment to investment in environmental and energy-oriented R&D, developing key skills relevant to this sector, and building on Ireland's strong information and communication technologies (ICT) capabilities are central to benefitting from the growth of the sector. The budgeted increase in spending on the *Strategy for Science, Technology and Innovation* (additional €15.4 million during 2009) should support the development of the environmental goods and services sector and accelerate the deployment of renewables technology. Equally, proposed

48 The Government recently published a study which assesses the medium to long-term security of supply on an all-island basis, including the scope for a common approach to gas storage and LNG.
49 Forfas/InterTrade Ireland, 2008, *Environmental Goods and Services Sector on the Island of Ireland*.
50 A broad term for clean technology goods and services. For example: energy efficiency, energy/environmental consultancy/auditing, goods that lower energy use or carbon emissions.
51 Including Airtricity, FLI Environmental, Bioverda, EPS.

reductions in energy research arising from *Budget 2009* will be offset by greater investment in targeted sustainable energy programmes.

Energy efficiency is one of the most effective tools to jointly address cost competitiveness, security of supply and environmental sustainability objectives.

- Improving energy efficiency will require the development of new skills sets in terms of the design, building and operation of more energy efficient systems, including buildings, equipment and transportation. The downturn in the construction sector provides an opportunity to train/retain people to take advantage of these opportunities.
- Setting stricter building standards and codes with the ultimate aim of reaching passive energy houses and zero-energy buildings, in conjunction with schemes to support investment in retrofitting existing houses, offices and other buildings[52]. The expansion of Sustainable Energy Ireland's *Home Energy Saving Scheme* is particularly welcome in this regard.

5.3 Moving Towards a Lower Carbon Economy

Much of the focus to date has concentrated on the electricity generation and industrial sectors as targets for carbon reduction. As large individual carbon emitters, their initial prioritisation was justified; however agriculture and transport are together responsible for 47 percent of total greenhouse gas (GHG) emissions. While the agricultural sector has stabilised greenhouse gas emissions, emissions from the transport sector have increased by 170 percent since 1990. Given that the European Commission is seeking a 20 percent cut in domestic (non ETS) emissions by 2020, sector specific measures are required to meet targeted emissions reductions[53].

Transport Sector

Road transport accounts for 97 percent of total transport emissions. Nothing less than a paradigm shift will be required to reverse the rising trend in greenhouse gas emissions from this sector. There are a number of policies that could be used to reduce emissions from this sector, such as greater investment in sustainable public transport (*e.g.* continued electrification of rail, hybrid buses, quality bus corridors, etc.); renewable energy sources (*e.g.* bio-fuels) for transport; electric and hybrid vehicles; cycling, car-pooling and mobility management schemes; flexible working patterns and the infrastructure required to enable this (*e.g.* high quality broadband); and sustainable land-use planning.

Some of these measures may be included in the Department of Transport's *Sustainable Travel and Transport Action Plan* which is currently in preparation. Fiscal instruments, such as road pricing (a

52 DCENR have recently announced a significant pilot scheme.

53 These measures should be cognisant of the varying marginal costs of abatement across sectors – particularly in sectors where the relatively inexpensive clean-up and energy efficiency has already occurred and where further abatement is likely to be high-cost at the margin. In other sectors it is likely that there remain relatively painless opportunities to improve energy efficiency and curb emissions of greenhouse gases.

congestion charge) and higher parking charges may also have a role in reducing private commuting and greenhouse gas emissions from this sector. Revenue recycling measures may be required for certain sectors to avoid adverse cost competitiveness impacts (for example in road haulage). To enhance the attractiveness of bus transport in the Greater Dublin Area, there is a clear need to improve existing service levels. Opportunities for better serving the interests of the travelling public should be explored, for example through imposing regulated performance targets on operators.

Agricultural Sector

Despite the stabilisation of emissions over the past decade, the agricultural sector remains the largest source of greenhouse gases in Ireland. The competitiveness of the agriculture sector is important to Ireland — it contributes €4.2 billion to Gross Valued Added in the economy, employs over 123,000 people and is regionally dispersed[54]. Although there are very few cost-neutral options available to this sector, a more serious engagement with improving the carbon performance of the agricultural sector is now required. A number of steps are essential, including: better utilisation of nutrients, reduced reliance on nitrogen fertilisers and adoption of new slurry-spreading technology.

Better Land-Use Planning

Good land planning can play a key role in terms of supporting sustainability and competitiveness. Ireland has not been successful in developing cites of scale outside the Greater Dublin Area (GDA), instead opting for a policy of land-use planning which enables the sprawl of low-density housing developments around the GDA and surrounding counties. This approach is not sustainable from energy, environmental, climate change or quality-of-life perspectives. While the NCC welcomes the recent publication of *Planning Guidelines on Sustainable Residential Development in Urban Areas*, the focus now needs to be on implementation. The NCC specifically recommends prioritisation of the following elements of the Guidelines:

- Provision of adequate public transport to meet existing demand and provision of new public transport services in tandem with proposed developments;
- Development or Local Area Plans must encourage more efficient use of energy and a reduction in greenhouse gas emissions; and
- Sustainable patterns of urban development should be promoted, particularly higher residential densities in locations which are, or will be, served by public transport.

Proposals to Introduce a Carbon Tax

There are proposals to lower carbon emissions by phasing in on a revenue-neutral basis a carbon or CO_2 tax. The NCC cautions that Ireland needs to proceed carefully on the introduction of a carbon tax given the high cost of doing business here. Businesses already face high energy costs and are making significant progress in reducing their energy and carbon intensity. The NCC believes that if a carbon tax were to be introduced it should be introduced at a relatively low rate, phased in over a sufficiently long adjustment period and should exempt firms already engaged in EU-ETS or

54 CSO, 2008, *National Income & Expenditure*, Table 3. Quoted in 2007 current prices, includes agriculture, forestry and fishing. CSO, 2008, *Quarterly National Household Survey*, Quarter 2.

alternative binding energy-efficiency agreements. Finally, the NCC believes that revenues raised should be used to incentivise further reductions in carbon emissions, to ameliorate the competitiveness impacts of the proposed tax (for example through financing PRSI reductions), and to promote the development of firms and sectors in newly emerging markets for environmental goods and services.

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