National Economic
Social Council NESC

The Irish Economy in the Early 21st Century

NO. 117 JUNE 2008

National Economic & Social
Development Office NESDO

National Economic and Social Council

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June 2008

Published by the National Economic and Social Council

Copies of this Report may be obtained from

The National Economic and Social Council, 16 Parnell Square, Dublin 1
or the Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2

Price: €20.00 Students: €10.00 Pn. A8/0741 ISBN: 978-1-4064-2157-6

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Abbreviations

ALMPS
Active Labour Market Policies

ASPO
Association for the Study of Peak Oil and Gas

BTEA
Back to Education Allowance

C&AG
Comptroller and Auditor General

CSETs
Centres for Science, Engineering and Technology

DA
Disability Allowance

DEHLG
Department of the Environment, Heritage and Local Government

DES
Department of Education and Science

DETE
Department of Enterprise, Trade and Employment

DSFA
Department of Social and Family Affairs

DTA
Dublin Transport Authority

EGFSN
Expert Group on Future Skills Needs

EPO
European Patent Office

ESG
Enterprise Strategy Group

ESL
Early School Leavers

ETS
Emissions Trading Scheme

Eurofound
European Foundation for the Improvement of Living and Working Conditions.

FAPRI
Food and Agricultural Policy Research Institute

FDI
Foreign Direct Investment

FET
Further Education and Training

FETAC
Further Education and Training Awards Council

GFCI
Global Financial Centres Index

GGB
General Government Balance

GHG
Greenhouse Gas

GIF
Gateway Innovation Fund

GMS
General Medical Services

GNDI
Gross National Disposable Income

HEI
Higher Educational Institution

HETAC
Higher Education and Training Awards Council

HICP
Harmonised Index of Consumer Prices

IALS
International Adult Literacy Survey

IEA
International Energy Agency

IEBI
International Education Board Ireland

JSA
Job Seekers Allowance

LMT
Low-Tech and Medium Low-Tech

LYIT
Letterkenny Institute of Technology

MANs
Metropolitan Area Networks

MiFID
Markets in Financial Instruments Directive

MLPSI
Modern Languages in Primary Schools Initiative

NFQ
National Framework of Qualifications

NGN
Next generation networks

NHS
National Health Service

NIE
New Institutional Economics

NPRF
National Pensions Reserve Fund

NUTS
Nomenclature of Territorial Units for Statistics

ODI
Outward Direct Investment

OFP
One-Parent Family Payment

ONS
Office of National Statistics (UK)

OPEC
Organisation of the Petroleum Exporting Countries

PCI
Printing Consortium of Ireland

PISA
Programme for International Student Assessment

PLC
Post Leaving Certificate

PRTLI
Programme for Research in Third Level Institutions

PPS
Purchasing Power Standards

QAA
Qualified Adult Allowance

QNHS
Quarterly National Household Survey

SGP
Stability and Growth Pact

SIF
Strategic Innovation Fund

SMET
Science, Mathematics, Engineering and IT

SSIA
Special Savings Incentive Scheme

SSTI
Strategy for Science, Technology and Innovation

UCLA
University of California Los Angeles

USPTO
US Patent and Trademark Office

VTOS
Vocational Training Opportunities Scheme

Preface

NESC Strategy 2006 was published two and half years ago (December 2005). A key theme that emerged from it was the need to up-date and enrich the shared understanding among the social partners of Ireland's economy. This was for two principal reasons. In the first place, social and environmental factors have acquired a growing economic salience; previously, they were monitored largely because economic growth could damage them, now they are major potential factors that can contribute to economic strength and resilience. In second place, significantly higher stakes – dangers and opportunities – have been brought into play by the widening and deepening globalisation of economic activity. Both factors invite the Council to articulate afresh its understanding of how Ireland's economy can and should develop in this early part of the 21st century. This is what this Report attempts to do.

The central part of the Report weaves much of the important work already underway – on, for example, the challenge of raising productivity, the significance of innovation, the role of research and development, the steps to carbon efficiency, the improvement of marketing and management skills, workforce development, strategies for SMEs, etc., – around four central story lines. These are the future of manufacturing (Chapter 3), the rise of services (Chapter 4), the changing spatial distribution of economic activity (Chapter 5) and the new capabilities and needs of Ireland's workforce and population (Chapter 6).

As the Council attempted to keep a strong focus on the medium- to long-term in order to capture the essential contours of the emerging economic landscape, the immediate road ahead became steadily more difficult for the economy to travel with each month the Report was in preparation. Without wanting to become largely a commentary on rapidly evolving trends, 'events' have imposed the need for the Report to give significant attention to the challenge of managing what is a highly uncertain conjuncture without losing its character as a reflection on the medium-to long-term structure of Ireland's economy. The trends include, principally, the extent and implications of the decline in domestic house-building, the impact on the real economy of flaws in international financial markets, and the rapid rise in oil and other commodity prices. Therefore, the Report also includes a detailed review of recent economic performance (Chapter 1), a reminder of the contribution that a shared understanding of core mechanisms and priorities for the economy made to successfully surmounting previous challenges (Chapter 2), and conclusions as to how preparing the next phase of Ireland's economic development and the need for short-term adjustments in response to a rapid slow-down in growth should be balanced (Chapter 7).

The Report seeks to build on the manner in which Ireland's economic development strategy, European policy and major domestic programmes interacted effectively to surmount major structural constraints in previous decades. It outlines the ways in which public governance (at the national, European and international levels), institutions and capabilities must interact over the coming decades to meet the challenge of new developmental constraints and ensure that the current phase of globalisation is positive for Ireland's economy and society.

Acknowledgements

This Report draws on the work of numerous authors and organisations. In addition to appropriately citing them, and while retaining full responsibility for how it has used sources, the Secretariat of NESC would like to record its appreciation of assistance at different times from staff in Forfás, the ESRI, the CSO, HEA, Teagasc and the Central Bank. The Council and Secretariat are also grateful for the close attention paid to drafts by senior officials in government departments, in particular the Department of Education & Science, the Department of Enterprise, Trade & Employment, the Department of Finance, the Department of the Environment, Heritage & Local Government, and the Department of Communications, Marine & Natural Resources. As always, the Secretariat is particularly indebted to the engagement and quality of contributions from Council members themselves and appreciative of the sustained support of the Council's administrative staff.

Executive Summary

Introduction

Ireland's economy in the early twenty-first century is in transition to a new phase in its development. A combination of factors in 2008 is creating a particularly difficult policy context in which to continue managing this transition. The vulnerabilities that are present must not distract attention from the policies and actions that matter most for economic prosperity and well-being in the long-term.

A deeper shared understanding of the transition the economy has to make, and of the economic and social policies that will support it in doing so, helps ensure that policy adjustments in the short-term do not damage the economy's potential growth path. This transition is from a period of exceptionally rapid growth, turbo-charged in the second half of the 1990s by exports and in the early part of this decade by high levels of house-building; it is towards a period of robust but slower growth led by exports once again but with domestic demand remaining significant, and services exports from Irish-owned business as well as multinationals making a major contribution. This report presents the Council's shared understanding of the changing structure of the Irish economy and of what that entails for the workforce and population.

Two overarching policy priorities arise out of the analysis:

- first, the need to fine tune some of the strategic investments in the National Development Plan, 2007-2013, and the social partnership agreement *Towards 2016,* elements of which need modification in the light of new information and understanding; and
- second, the need to manage a difficult transition for the economy during what is a uncertain conjuncture.

These policy priorities build on existing strategic approaches in the National Development Plan (NDP) and the partnership system. The NDP combines a programme for investment in physical infrastructure with critical investments to underpin enterprise performance, human capital, social infrastructure and social inclusion. The most fundamental proposition in the report is that investment across this spectrum must be maintained, even if economic conditions and revenue buoyancy worsen further. Any other approach would be to ignore the central thrust of the analysis – that skills and capabilities are the most important assets in an advanced modern economy. This is the context in which the Council proposes some fine tuning of strategic investments. Addressing the second policy priority – managing a difficult transition in a highly uncertain economic context – can be

aided by social partnership. The partnership approach, from its inception, aims to resolve difficult immediate issues not only in a cooperative fashion, but also in a way that is informed by strategic thinking and supportive of, rather than at the cost of, long-term economic and social success.

Globalisation and Climate Change

Long after the restoration of health to international credit markets and the crisis of 2008, the Irish economy and the EU economy will continue deep restructurings that, in the final analysis, arise because the global economy is having to 'make room' for the large populations of China, India, Brazil, Russia and elsewhere that have new productive capabilities and purchasing power.

The Council does not believe that globalisation must or should undermine the prosperity and social cohesion of advanced European countries. It takes confidence from the evidence that several of the European countries with the strongest competitive advantage in the world are countries with high levels of participation and effective systems of social protection, and whose populations are confident about globalisation. At the same time, NESC does not believe that globalisation automatically produces economic and social benefits. It can damage countries, social groups, individuals and the environment and can, ultimately, fuel conflict. It is mainly public governance (at national and international level), institutions and capabilities that determine whether the current phase of globalisation will have positive or negative effects.

Climate change also presents serious global risks and it demands an urgent global response. Addressing it will have far reaching economic and social effects. Ireland's target for greenhouse gas emissions by 2020 is still to be finalised and will pose considerable challenges. The move to a low-carbon economy will also create many new economic opportunities and it is highly desirable that Ireland participates in what is increasingly seen as a 'new industrial revolution'. A shift away from fossil fuels and towards renewable and efficient energy use will be a key characteristic of development in future decades. This is required both because of climate change and imbalance between the supply and demand for oil. The Council is soon to begin a separate study on 'Sustainable Energy and Climate Change' which will include policy recommendations.

The Future of Manufacturing (Chapter 3)

Manufacturing continues to have a key role in Ireland's future economic development. However, the current wave of globalisation is profoundly affecting the types of activities that most characterise it.

Manufacturing in High-Cost Countries

Increasingly, *tasks* within global manufacturing supply chains are being traded internationally rather than completed *products*. The tasks offshored from higher cost countries like Ireland can include production itself, when based on routinised work. The tasks retained and expanded include R&D, design, logistics, marketing, after sales service and corporate financial functions. Considered in isolation,

moving business functions out of the Irish economy means the loss of the jobs and income arising from those activities. However, the remaining business functions may become stronger and new ones, with higher value-added, take the place of those that migrate.

The continuing development of Ireland's high-tech manufacturing sector requires that multinational companies here continue to upgrade their Irish operations. This occurs particularly when they locate advanced functions – R&D, trials and testing, sales and marketing, supply chain management, corporate financial services – in Ireland.

Some indigenous companies, providing products no longer profitable to manufacture in a high-cost economy (e.g., electrical appliances and clothing), are prospering in Ireland because they have specialised in the higher value tasks (design, logistics and marketing) and offshored the lower value ones (production, assembly). Research to date suggests that the net effects of overseas direct investment for the companies practising it and the Irish economy are positive. For higher-wage, higher-skilled economies like Ireland, there are not really 'sunset industries' only 'sunset activities'.

Yet, as demonstrated by the Expert Group on the Future of Manufacturing, rising costs – particularly for energy, waste-management, local authority and professional services – are seriously threatening the competitiveness of Irish manufacturing. While increased innovation and higher productivity are necessary for industry to thrive in a high-cost environment, escalating costs can shrink Ireland's manufacturing sector.

Irish-Owned Industry

While productivity in Irish-owned industry is good by EU standards, the propensity to export is low. As noted by the Enterprise Strategy Group (2004), manufacturing in Ireland has significant expertise in operations and manufacturing but more limited capabilities in applied R&D and new product development and in sales and marketing. Growing more Irish-owned companies to a scale where they can invest adequately in R&D and marketing remains a major objective of policy.

This is particularly the case for Ireland's largest indigenous manufacturing sector, the food industry. Rising food prices internationally, the continuing reform of the EU's Common Agricultural Policy (CAP) and the changes being discussed for international trade in food at the World Trade Organisation (WTO) present opportunities and threats to Ireland's food industry and agricultural sector. Their exposure to global market pressures and volatility could be significantly increased. It is important that the 'European Model of Agriculture' is not undermined and that the EU has a key role in ensuring that the process of globalisation is accompanied by sufficient international governance to achieve both stability and respect for social and environmental goals.

Innovation and Research

Innovation is key not just in high-tech manufacturing, but also in lower-tech sectors. Innovation is enabling some lower-tech firms to remain significant employers within manufacturing in Europe, and their prospects in Ireland are also reasonably promising.

Innovation is distinct from research but, in key instances, much more likely in the wake of research.

Ireland's success in attracting foreign direct investment in the past two decades offset the need for a well-developed research infrastructure. The Strategy for Science, Technology and Innovation (SSTI) now aims to build this infrastructure in Ireland. In increasing funding for research, it is important to understand the different channels through which it can bring economic and social benefits. The SSTI needs to be monitored and adapted over time to ensure that the investment is yielding benefits and that there is increased innovation and new product development in enterprises. It will take several years for the benefits of this investment to be realised.

The future of the manufacturing sector depends on the skills and attributes of those engaged in and attracted to the sector. The future success of high-tech manufacturing requires a supply of people pursuing careers in engineering and science. The enhancement of skills at all levels is essential to enabling the ongoing innovation essential for success in rapidly changing markets.

The Rise of Services (Chapter 4)

The rise of services is a hallmark of contemporary economic development in every high income country and has profound implications for most areas of economic and social policy. As real incomes rise, the proportion spent on services increases. Indeed, there is no discernible limit to the growth in demand for services or to the ingenuity with which new needs can be met.

Services Employment

By 2006, services accounted for 71 per cent of total employment in the Irish economy. Ensuring that services employment continues to grow is now central to achieving Ireland's economic potential. In this regard, it is important to recognise the close relationship between the employment level in services and the strength of the traded sector. Low international demand for Ireland's exports will result in many more jobs being lost in the labour-intensive, non-traded, sectors of the economy – including public services – than in the traded sectors themselves. Furthermore, the impact of low growth is particularly negative for occupations that require relatively modest and easily-acquired skill sets, such as clerical and sales work. Thus, a competitive economy exporting on a large scale is particularly good news for lower-skilled workers in services and the public sector, while a slump in Ireland's export trade hits them particularly hard.

Services Exports

Services have also accounted for a huge proportion of the growth in exports in recent years. In 2005, Ireland was the world's 9th largest exporter of services and the single largest in two areas – 'Computer and Information Services' and 'Insurance Services'. In a relatively short space of time, Ireland has become a attractive location from which multinationals serve their subsidiaries and customers across Europe and wider afield. There are several significant benefits when the composition of exports

shifts towards services: it stems deterioration in the terms of trade; given their low import content, services exports provide a bigger injection into the domestic economy than do exports of goods; service exports are, in general, more consistent with a low-carbon economy. The skills, competence and stability of people are critical in sustaining a successful service-intensive, small open economy.

Services in Domestic Demand and Well-Being

The Council endorses the view that, driven principally by unsustainably high levels of residential construction, the balance between domestic demand and net exports tilted too much in favour of the former in the first half of this decade, and that a re-invigoration of net exports is now required. At the same time, the crucial role of domestic demand in maintaining a high level of employment needs to be acknowledged. In addition, domestically-provided and consumed services have an indispensable role in enhancing well-being. So long as the balance of payments is not a binding constraint, circular flows in which people sell services to each other, and which are largely domestic, can be as generative of value, higher living standards and well-being as the circular flow in which manufactured goods are exported in exchange for imported goods.

Policy Implications

Software, financial and business services are high-value added, akin to high-tech manufacturing. There is potential for significantly higher foreign exchange earnings in services where opportunities hinge primarily on organisational and institutional innovations. Tourism has now been joined by other significant indigenous sectors exporting services, such as insurance, air travel and education. In addition, a widening set of service providers are realising that they are capable of operating in other countries because of what they have learned in and through serving the Irish domestic market.

Productivity in services: productivity in services is central to maintaining economic competitiveness and improving living standards. This applies not only to internationally traded services, but also to domestic market services and public services. In the public sector, the quality and speed of strategic decision-making and the quality and effectiveness of service delivery vitally affect national economic performance. It is critical that tax revenue is used efficiently to produce outcomes that improve the wider environment for business in order to ensure that the net impact of the public sector on international competitiveness is positive.

Innovation in services: Policy must recognise that innovation in services can result from processes that differ from innovation in manufacturing. The factors that are particularly important include user involvement and feedback, speed in seizing opportunities, multi-party dialogue, and advanced telecommunications, which includes access to high speed broadband on the part of SMEs and households. There is need for a step-change in Ireland's ambition to have an economy and society in a position to reap the innovative and productivity-enhancing capabilities of ICT.

Innovation in public services and the wider not-for-profit sector can contribute directly to advancing core national objectives such as improving the quality of human settlement, containing urban sprawl, promoting healthy living, protecting the environment, developing an age-friendly society and enhancing social cohesion and social inclusion. Innovation in public services frequently entails deep change in organisational cultures that are risk-adverse and in which accountability is traditionally based on conformity in how inputs are used rather than on the outputs produced and their effectiveness in supporting the outcomes sought.

Human capital and services: The rise of services has major implications for human capital. It makes 'soft' or people-handling skills increasingly important requirements, alongside 'hard' skills and qualifications. Widespread services innovation requires the educational system to impart foundation skills, high levels of participation in first-time and further education, management and organizational cultures that value and competently guide innovation, and social policies that are seen to protect people while rewarding change.

Regional Dynamism (Chapter 5)

A traditional approach to regional policy, that viewed it as *distributing* the fruits of a successful national economic strategy, may need to shift to viewing it as *constitutive* of a successful national economy. The principal reason is that the scope for productivity enhancements and the potential for innovation in economies that are services-intensive and knowledge-intensive require dynamic urban regions.

Agglomeration Effects

A new emphasis is now placed on the way knowledge-intensive service activities benefit from features that can potentially arise in any high-density urban area. This is not clustering by sector, so much as the ability of concentrations of high-skilled and professional workers – employed across a diversity of sectors – to attract more such workers because they contribute to each other's employment prospects and quality of life. Research suggests that the main reason for regional productivity differences are not to be found in differences in levels of educational attainment or public infrastructure endowments but in these agglomeration effects

Regional Developments within the State

The extent to which growth in economic activity and population has taken place in every region is noteworthy. There is little evidence of a dramatic divergence, either in growth rates or in living standards, between the Greater Dublin Area (GDA) and other regions. However, in absolute terms, the additional jobs created in the GDA between 1997 and 2006 were greater than the stock of employment in any other region, with the single exception of the South West.

Ireland's regions differ most in their employment structures. For example, 20 per cent of employment in the GDA in 2006 was accounted for by financial and other business services, significantly ahead of the South West with the next highest share at 11 per cent. The other regions, by contrast, had significantly higher shares of their total employment in construction, manufacturing and agriculture.

Perspectives on the Growth of the Greater Dublin Area

The most significant finding for Ireland in the OECD's first global study of metropolitan regions is the inclusion of Dublin (OECD, 2006). Its recent and current dynamism emerge as impressive, even in the global context. This is despite the GDA not having a strong form of metropolitan governance and the emergence of significant congestion and other externalities.

There is considerable potential for Dublin to have both a larger population and a higher quality of life, if the benefits of higher density are brought on stream to replace the costs of urban sprawl. A larger and more compact population will, in turn, make it easier to develop further knowledge-intensive services and manufacturing and a greener regional economy. This poses major interrelated challenges – to increase housing densities, produce step-changes in the quality of public transport, bring Dublin airport's new terminal and road improvements on-stream, address water infrastructure requirements, make a success of integration and social inclusion policies, and much else. Failure to surmount the challenges of urban sprawl in the GDA would not see benefits displaced to other regions within Ireland but to metro-regions elsewhere in Europe, to which the businesses, young professionals and migrant workers currently attracted to Dublin are more likely to move.

Dublin can and must continue to be an engine of national economic growth; paraphrasing the OECD report, 'it would be hard to imagine a strong national economy for Ireland without a thriving and innovative Dublin' (OECD, 2006: 211). But the quality of spatial development in the GDA needs to be monitored and improved

Perspectives on the Gateways

The National Spatial Strategy's (NSS) aims to ensure that the potential of the GDA is fully realised and greater regional balance is achieved through development of the gateways. The gateways are key to addressing the vulnerabilities in the economic structures of the regions, namely the extent of their employment reliance on construction, manufacturing and, in some cases, agriculture. The development trajectory of each gateway will be shaped by the energy, vision and effectiveness of all the gateway actors working in concert to identify and harness their region's economic assets. This will include exploiting the opportunities latent in each urban centre's current pattern of connectedness with the global economy (building on its existing foreign investors, tourist profile, Irish diaspora, etc.), its proximity to a European/global metro-region (the GDA), and the commitment and readiness of the states' development agencies and other public bodies to assist their urban centre in exercising gateway functions.

The development of governance frameworks that will allow key actors in the gateways to take coordinated and effective action together is, probably, the greatest and most urgent challenge facing the implementation of the NSS. Most important of all, the unique development trajectory of each gateway requires the local authorities who share responsibility for promoting it to co-ordinate their goals, strategies and actions. Currently, county loyalties can get precedence over strategic regional issues. A much stronger pooling of power and resources by local

authorities in the common interest of implementing a gateway development plan should go hand in hand with a recasting of regional structures.

A degree of false opposition between Dublin's development and that of the other gateways can be created when developments in the latter are exclusively benchmarked against the former. Consolidation of the GDA as a metropolitan region in the global economy should lead to metrics that are unique by Irish standards, but a fair assessment of its performance and what it needs should be based on comparison with other European metro-regions – not, for example, Cork or Limerick. In a similar way, dynamic and balanced growth in the regions should be assessed primarily against standards they generate themselves of what is deemed attainable and compatible with their distinctive characters, while their gateways should be benchmarked against successful international cities of a scale to which they can realistically aspire.

The Economy of Rural Areas

The economy of rural Ireland need not be considered as endangered by the trends outlined in this report. In the first place, there are multiple ways in which larger and more affluent urban populations generate additional demand for rural goods and services. The challenge is to manage the economic activity this demand generates in a way that is sustainable and in the interest of year-long residents. In second place, the same ICT technologies that fuel agglomeration economies and urbanisation offer a new wave of opportunities in the on-going search to find sources of economic activity that compensate for declining employment in agriculture, forestry and fishing. Micro-enterprises and self-employed activities can be viable from rural locations where the quality of internet access enables rural service providers to interface as effectively with service users as any urban-based provider.

Supporting People in an Open Economy (Chapter 6)

A central theme of the Council's work in recent years is that the inter-dependence between economic and social policy is critical in in the next stage of Ireland's development: 'in a globalised world, the strength of Ireland's economy and the attractiveness of its society will rest on the same foundation – the human qualities of the people who participate in [each of] them' (NESC, 2005: xxiii). Bringing this about will be the tri-partite achievement of Ireland's educational system (beginning in the early years and serving people through their adult lives), its training system and labour market policies, and its social policies and welfare state. Measures that address the needs of the Ireland's migrant population must be integral to improvements on each of these three fronts.

A landmark report from the Expert Group on Future Skills Needs (EGFSN), *National Skills Strategy Research Report,* sets objectives for education and training that, in being attained and when achieved, will have profound social and economic consequences. The Council wholly endorses its high ambitions and believes they need the widest possible ownership to be delivered on. The Council underscores the pivotal significance of two perspectives in particular: (i) educational success

is cumulative – for example, quality early childhood education improves school completion rates, raises the transfer rate to third level and increases the number of fourth-level researchers; (ii) many of the skills and qualities which enterprise needs for the new economy are skills for life as well as for the workplace.

Education

There is justifiable pride in the contribution that Ireland's education system has made to economic development. However, our educational system is being called upon to innovate and change in several specific and profound ways if it is to meet the new and higher demands coming from the general population, people in work and employers.

The insight that quality early childcare services have the character of a public good – in a similar fashion to primary education – as Ireland gears up for the knowledge economy and learning society deserves to be taken more seriously. While the jury must remain out on how effectively existing measures will contribute to reducing the cost and improving the quality of childcare, the Council is aware of major long-term costs that may result if existing provision proves too little too late. It is urgent to renew and restate Ireland's vision for early education and childcare services as a whole so as to ensure the coherence of the new and old measures being taken and how they interact with one another.

A significant number of young people struggle to leave school with the competences and confidence to lead full and productive lives. The effectiveness of the additional resources being given to schools to address educational disadvantage needs to be ascertained and assured. Priority should be given to learning, from the experiences of Irish schools and from international best practice (for example, in Finland), how the work of Special Needs Assistants, learning support teachers and others who promote school attendance and 'catch up' learning can best be integrated most effectively by schools.

The student numbers in Higher Education Institutions (HEIs) are set to grow strongly for some time, and there are significant changes underway in undergraduate teaching. It is important that the most successful initiatives are evaluated to the benefit of learning across the entire third level sector, and that they are sustained, with the funding implications for institutions and learners being identified and addressed. Hugely increased capital and current spending on higher education research and teaching in Ireland over the last decade register Ireland's serious intent to develop a learning society and a knowledge-based economy. Rapid catch-up is taking place with the higher levels of educational spending in the best-performing EU member states. However, the levels reached in 2004 (latest available OECD comparative data) were still some way off from placing Ireland among the highest-spending five or six states at any level of the educational system (primary, second level or third level).

Training and Labour Market Policies

Sixty per cent of those who will be in the labour force in 2020 are already in employment. Consequently, what people learn on the job, on release from work or while in-between jobs will critically influence productivity growth and living standards over the coming decades. Yet the older age groups in Ireland's workforce have much lower formal educational attainment, on average, than in most advanced countries. It is important to communicate the inclusive and feasible nature of the up-skilling challenge and to counter any perception of the knowledge economy as exclusive or elitist.

The EGFSN *Research Report* should lead to a clearly-articulated National Skills Strategy in consultation with all the relevant stakeholders. The Council urges the Inter-Departmental Committee to underline the need for coordinated action by the large number of actors – employers, training and education providers, unions, professional associations, regional bodies, the community and voluntary sector – without whose active and expert participation the required mobilization of the adult population, in particular of those with the lowest starting qualifications, is unlikely to take place.

It is important to protect workers rather than jobs. This implies three immediate elements: freedom for enterprises with developed technological and marketing capabilities to restructure, high levels of unemployment benefit during periods of job-search, and active labour market policies effective in helping people unable to find employment on their own. However, other factors are essential to ensure that these elements combine effectively – principally, systems for the retraining of workers and a range of services (childcare, public transport, health care, housing, etc.) on which people can rely, in or out of work, and which support their mobility and flexibility in employment. It is in ensuring these background conditions that Ireland, in particular, continues to have considerable ground to make up.

It is prudent to expect higher levels of employment churn in the Irish economy over the coming years and urgent to improve support to individuals and regions accordingly. Quality research is needed to throw more light on the factors that compound or mitigate the effects of plant closures. The role of regional actors in activating, co-ordinating – and where necessary re-designing and supplementing – the supports and expertise available from statutory bodies should be given a more prominent place.

Social Policies and the Welfare State

The current downturn in the economy, rise in unemployment and fall in state revenues is not the time to doubt the core objective of the National Development Plan's Social and Economic Participation Programme or withhold the resources necessary to implement it.

In order to foster the confidence and expectations of its clients and provide income support that is integrated with access to services in the context of progression pathways, the Department of Social and Family Affairs (DSFA) requires the wholehearted engagement of the principal service providers (FÁS, HSE, local authorities, VECs, HEIs and others). This demands that all organisations adopt the same positive vision and objective for social welfare recipients, but also clear and

effective procedures for their collaboration and positive incentives for the personnel who are critical to making it happen. It will also be important that the purchasing power of social welfare payments is protected so that recipients can co-operate and benefit fully from the profiling, personal attention and tailored pathways to which the DSFA is committed.

The search to subsume the One Parent Family Payment (OFP) into a wider parental allowance has the potential to be a landmark initiative in modernising Ireland's income support arrangements. Success in overcoming acknowledged weaknesses in the OFP will yield significant learning on how to reform other programmes.

Managing a Difficult Transition and Uncertain Conjuncture (Chapter 7)

A combination of developments in 2008 created a more difficult policy context than has been experienced for many years. These include a global credit market contraction, greatly increased energy and commodity prices, a strong euro, a sharp contraction of the domestic construction sector and a definite weakening of current tax revenue. The fall in construction employment looms particularly large over the short-term outlook for the economy; largely because of it, there will be little if any net employment growth in 2008 and a rise in unemployment.

This uncertain current conjuncture makes it more difficult to continue managing the economy's transition to a new phase in its development and underlines the continuing value of a consistent policy framework.

The relationships between the macro-economy, distribution and structural factors in 2008 and the coming years are more complex than have existed since the late 1980s. This creates a number of temptations that, if followed, would yield a deeply inconsistent policy approach. As outlined in Chapter 7, several of these would involve the repetition of policy mistakes made in past decades. Each neglects aspects of the interdependence underlined by the Council over recent decades – between the public and the private sectors, between the indigeneous economy and the international economy, between the economy and society, and between the economic and the political. The Council believes that a shared strategic analysis can assist Irish policy actors in steering a prudent course through these risks.

Macro-Economic Policy

The Irish economy has experienced a loss of cost competitiveness in recent years, substantially exacerbated by the strength of the euro in 2008. Many general business costs are now relatively high in Ireland. In recent years, some loss of cost competitiveness was not in itself a problem for the economy, which grew strongly despite it and had continuing success in attracting high levels of inward investment. Relatively strong wage growth in Ireland, also, increased living standards and underpinned growth in domestic demand and employment in the services sector. However, future growth will need to have a stronger component of net exports so that further losses of cost competitiveness are likely to have greater effects on the economy than the experience to date.

In successive Strategy reports, the Council has agreed that the public finances must be managed in accordance with three principles: sustainability, stabilisation and the Stability and Growth Pact. Sustainability requires that the public finances are in a position to absorb the normal budgetary pressures that arise as well as the longer-term costs associated with the population ageing. Stabilisation means that policy needs to take account of the economic cycle and on no account should it be pro-cyclical.

The Council's current recommendations on the public finances are informed by the integrated view of economic and social strategy articulated in the National Development Plan and *Towards 2016*. The Council proposes that:

- Capital investment should be maintained at the level of at least 5 per cent of GNP;
- Overall taxation should be set at a level that is consistent with a dynamic economy and to maintain a level of expenditure adequate to support economic and social development; and
- The management of the public finances should provide scope for current expenditure to invest in the services required in critical areas identified in *Towards 2016,* including making progress towards the services envisioned in the Developmental Welfare State and the delivery of the National Disability Strategy.

A critical concern is the efficiency, effectiveness and flexibility of the public sector. Quality and accountability in public services can be seen as central not only to maintaining a strategic direction in the medium-term, but also to managing the current difficult transition and uncertain current conjuncture.

Distributional Policy

Short – and, possibly, medium-term – factors are bringing distributional tensions to the surface. The factors include slower earnings growth, higher than anticipated inflation, high childcare costs, increasing eldercare costs, rising unemployment, unequal access to healthcare, poor pensions prospects for many, anxieties about employment, significant job losses in more vulnerable regions, and a perception of a widening gap between the earnings of many and the very high incomes achieved by those at the top of the professions and some enterprises. The conditions which made distributional tensions relatively minor in the 1990s – reflected in the ability to simultaneously reduce taxes, increase public spending and lower the debt/GNP ratio – may not recur.

The Council believes that collective bargaining remains appropriate, given the dynamics of wage-setting and the open nature of the Irish economy. Indeed, experience shows that the positive changes in employment relations can be combined with collective bargaining.

Structural Policy

Sustained investment in physical and social infrastructure is beginning to ease bottlenecks and further benefits can be expected. However, many supply-side challenges remain serious. In the next decades, the medium and long-term strength of the economy will depend not only on investment in infrastructure and scientific research, but also on a deepening of capabilities across a wide spectrum, greater participation, an infrastructure of care that improves both the quality of life and the ability to participate, internal as well as external connectivity, social inclusion, more social mobility, the successful handling of diversity including immigration, and high environmental standards not only in large manufacturing enterprises but also in a range of arenas influenced by the behaviour of thousands of households, farms and businesses.

It is of great significance that the NDP combines a programme for investment in physical infrastructure with critical investments to underpin enterprise performance, human capital, social infrastructure and social inclusion. As noted at the outset, the most fundamental proposition in this report is that investment across this spectrum must be maintained, even if economic conditions and revenue buoyancy were to worsen further. Narrowing or reducing this range of investments would be to ignore the central thrust of the analysis – that skills and capabilities are the most important assets in an advanced modern economy. These arguments have important implications for the way in which various elements in the NDP are monitored and evaluated. In particular, it demands that new systems for designing programmes, monitoring outcomes and evaluating actions and agencies be developed, equally rigorous, but not necessarily the same, as those now in place for physical capital investments.

Developing and Implementing *Towards 2016*

A central theme in the Council's policy advice over the past two decades has been the importance of seeing interdependence between the economy and society. In developing the partnership perspective, it has always sought to place wage bargaining not only in the wider economic and policy context, but also in the context of the analysis and understandings that the partners bring to the wage bargaining process. Analysis of wage bargaining systems suggest that these understandings are as important as the degree of centralisation or decentralisation. In addressing ongoing public policy and wage bargaining issues, government and the social partners need to be able to rely on, and take into account, a set of inter-related developments and understandings. The medium-term perspective on the economy, and recognition of its dependence on effective social and skills policies, set out in this report, is one important element of that understanding.

1

Recent Economic Performance

1.1 Introduction

This chapter reviews recent economic developments and considers the emerging challenges facing the economy. Section 1.2 provides an overview of recent growth performance while employment developments are surveyed in Section 1.3. Developments in incomes and earnings are described in Section 1.4 and the evolution of public and private wealth is examined in Section 1.5. Section 1.6 examines how the cost competitiveness of the economy has evolved and the public finances are discussed in Section 1.7. The emerging challenges facing the economy – from both domestic and international sources – are considered in Section 1.8

1.2 Economic Growth

The Irish economy continued up to 2007 to perform strongly. The growth of GNP averaged 4.6 per cent between 2000 and 2007 which was the fastest growth rate among the EU (15) countries. There has been strong growth not only in the size of the economy but also in terms of intensive growth; i.e. growth in average living standards. The growth of GNP per head has continued to be stronger than in other EU (15) countries and in 2006 the level of GNP per head in Ireland was 10 per cent in excess of the EU average (using GDP per capita for the EU countries).

These figures refer to the flow of income or output which is distinct from the accumulation of wealth. The richer European countries have had high incomes for substantially longer than Ireland so will generally have larger accumulations of wealth, including wealth in the form of public infrastructure and human capital.

There has been a marked shift in the composition of demand in the current decade. During the 1990s there was exceptionally strong export growth along with strong growth in domestic demand. Export growth peaked in 2000. With slower export growth in the current decade, economic growth has relied substantially more on domestic demand. Many commentators have drawn attention to the negligible contribution of net export growth in recent years. However, net exports understate the contribution from exports to recent growth. This arises because all of the imports generated by domestic demand are netted out when computing

net exports[1]. Exports have continued to grow in recent years. The annual average rate of growth of exports between 2000 and 2007 was 5.4 per cent (Figure 1.1). There was stronger export growth of an estimated 8.2 per cent in 2007 while the housing slowdown in 2007 led to slower growth in domestic demand of just over 3 per cent

The continuing expansion of exports in recent years has derived from very buoyant growth of services exports. Between 2000 and 2007, goods exports grew by a total of around 5 per cent in nominal terms while the nominal value of services exports almost tripled. Services exports now account for over 40 per cent of total exports. Revenue from goods exports over this period has been affected by the strengthening of the euro and falling prices for many goods exports (for example, IT equipment).

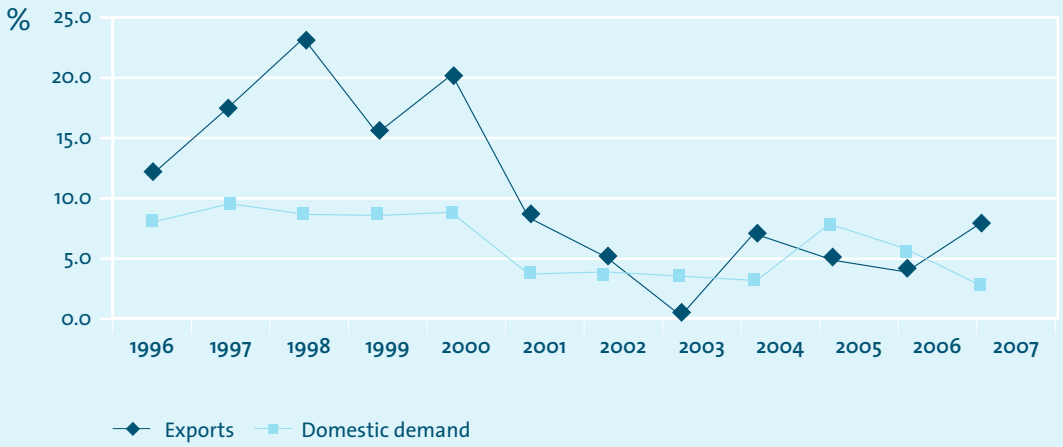
The role of domestic demand in driving economic growth is reflected in the emergence of a substantial current account deficit in the balance of payments. The current account in the balance of payments is the difference between foreign earnings and payments abroad, broadly defined[2]. The current account of the balance of payments has gone from a surplus in the mid-1990s to a substantial deficit (in excess of 5 per cent of GNP in 2007) (Figure 1.2). It is a matter of accounting arithmetic that the current account in the balance of payments is equal to the gap between domestic savings and domestic investment. If, for example, a country has a level of savings in excess of its level of domestic investment, this surplus will be invested abroad and be equal to the balance of payments surplus. Conversely, if a country invests in excess of its domestic savings, this will be financed by borrowing abroad or by investment from abroad; there will be a deficit on the balance of payments equal to the net capital inflow from abroad[3].

1. Domestic demand is defined as gross expenditure on consumption, investment and government current expenditure on goods and services. Net exports are defined as gross receipts from exports of goods and services less all imports (both producer and consumer imports). If, for example, exports and imports both rise by similar amounts, then there is no increase in net exports and no contribution by trade to an expansion in demand. However, the increase in gross exports in this scenario would have facilitated an expansion of income by financing increased imports.

2. The current account of the balance of payments incorporates both the balance of trade (exports and imports of goods and services) and the net balance on investment income and migrant remittances. Current international transfers (from the EU and outward payments of development assistance) and EU subsidies and taxes are also included.

3. In the case of Ireland some of the current account deficit is financed by capital transfers from the EU. These transfers were substantial in the 1990s; in 1995 for example Ireland received net capital transfers of 1.4 per cent of GNP. In 2007 net capital transfers were 0.1 per cent of GNP.

Figure 1.1 Annual Percentage Change in Exports and Domestic Demand, 1996-2007



Source CSO, *National Income and Expenditure Tables 1995-2006,* (website only); *Quarterly National Accounts,* Fourth Quarter 2007.

Figure 1.2 Current Account of the Balance of Payments (% GNP), 1996-2007

Source CSO, *National Income and Expenditure Tables 1995-2006,* (website only); ESRI *Quarterly Economic Commentary,* Spring 2008.

An analysis in the ESRI's *Quarterly Economic Commentary* (Spring, 2007) illustrated the contribution of changes in savings and investment to the emergence of the deficit in the balance of payments. It can be seen from Table 1.1 that the level of national savings as a share of GNP (combining households, corporate and government sectors) increased during the 1990s and has fallen slightly in the current decade. Total investment as a share of GNP on the other hand has risen steadily. During the 1990s the increase in investment exceeded the rise in savings and led to a fall in the surplus in the balance in the payments. Since 2000 the investment share of GNP has continued to rise without an increase in the savings share and this has resulted in a deficit in the balance of payments.

The rise in the investment share has been driven by building and construction, in particular housing investment. Between 2002 and 2006 the housing share of GNP increased by 5.5 percentage points. This large increase in housing investment in turn required an inflow of foreign investment (shown as net foreign disinvestment in Table 1.1) to fund it and is the driving force in the emergence of the balance of payments deficit. Honohan (2006) has drawn attention to the large increase in the net foreign borrowings of Irish credit institutions that have financed the housing boom.

In 2007 there was a fall in the investment share of GNP due to the fall in investment in housing. However, there was also an increase in the share of consumption in that year so that there was a further increase in the deficit in the current account.

A balance of payments deficit is often related to a deficit in the public finances ('twin deficits'). This was the case in Ireland in the 1980s but this has not been the case with Ireland's recent balance of payments deficit. Ireland's public finances have been in surplus in almost every year since 1998. In 2008 there will be an overall deficit in the public finances – the target in the budget for the general government deficit in 2008 was 0.9 per cent of GDP – but this is far below the balance of payments deficit.

The level of housing output peaked in 2006 with total (private and public) housing completions of over 93,000. Housing completions fell to 78,000 in 2007. Hence the process of a shift in the composition of growth away from housing is well underway. During 2007 a fall in housing output was consistent with strong overall economic growth. This was possible in that year due to increased output of other construction and a strong increase in consumption, boosted by the ending of SSIAs. A more substantial fall in housing output in 2008 – in conjunction with slower consumption growth – will have a more pronounced effect on economic growth.

There was a substantial fall in the growth rate of manufacturing output in the early years of this decade. Since 2004 there has been a recovery in manufacturing growth. Output growth in this sector has been driven by the 'modern' sectors. The other sectors have had average annual growth of 1.5 per cent between 2000 and 2007 but have shown somewhat stronger growth since 2004. The performance and prospects of the manufacturing sector are discussed in Chapter 3.

Table 1.1 Savings and Investment as a Share of GNP, 1995 to 2006

	1995	2000	2001	2002	2003	2004	2005	2006
Saving								
Net National Savings	11.8	16.7	14.7	13.8	15.9	15.5	14.2	15.3
Depreciation	11.2	11.9	12.1	12.2	12.1	12.2	12.8	12.4
Gross national savings	23.7	28.0	26.9	26.8	28.6	27.9	26.9	27.0
(including statistical discrepancy)								
Investment								
Building and construction	11.1	17.8	18.5	18.9	19.8	21.6	23.7	24.4
- Housing	5.6	9.2	9.7	10.1	11.7	13.5	15.5	15.6
Machinery and Equipment	8.3	9.7	8.4	7.7	6.7	6.5	7.3	6.4
Gross Investment	20.5	28.4	27.4	27.2	27.5	28.3	31.1	31.9
Savings less Investment/ Current Account Balance	3.2	-0.4	-0.5	-0.4	1.1	-0.4	-4.2	-4.9
Net Capital transfers	1.4	1.3	0.7	0.5	0.1	0.2	0.2	0.1
Net foreign disinvestment	-4.5	-0.9	-0.2	-0.1	-1.2	0.2	4.0	4.7

Source Calculated from CSO, *National Income and Expenditure Tables 1995-2006* (CSO website).

Agricultural output has been fairly stable in recent years; the level of real gross output in 2007 was 3.4 per cent lower than in 2000. Total income in the sector has shown large fluctuations in recent years, due to the timing of payments and the introduction of the single payment. Since 2000 total operating surplus has risen by 22 per cent in nominal terms, implying a decline in real terms.

There has been consistently strong growth in the output of the services sector in recent years. This reflects both strong growth in domestic services, deriving from the growth of domestic demand, and strong growth in services exports. The implications of the growing role of services in Ireland's economic development are examined in Chapter 4.

Figure 1.3 Manufacturing Output: Annual Percentage Change, 1996-2007

Source CSO Industrial Production Index from www.cso.ie.

1.3 Employment And Unemployment

1.3.1 Employment

The Irish labour market has shown continued strong performance in recent years. The annual average rate of employment growth between 2000 and 2007 was 3.3 per cent. Labour participation has continued to increase. The share of the working age population in employment has risen to almost 69 per cent in 2007 and, for the first time, the share of the female working-age population in employment now exceeds 60 per cent.

The dominance of construction and services is most evident in employment trends. The construction sector was responsible for over one quarter (29.3 per cent) of the growth in employment between 2000 and 2006 while all of the other employment growth was in various services sectors. Between 2000 and 2006, employment grew by an annual average of almost 8 per cent in construction, followed by health (7.0 per cent), education (5.1 per cent) and financial and business services (4.4 per cent). Employment in agriculture, forestry and fishing has fallen by an annual average of 1.3 per cent and these sectors now represent around 5 per cent of total employment. Employment in manufacturing declined by an annual average of 1.6 per cent.

Table 1.2 Employment by Sector ('000s), 2000 and 2006

	2000 (Q4)	2006 (Q4)	2000 as % of total	2006 as % of total	Annual % Change 2000-2006	Percentage of Growth 2000-2006
Agriculture, forestry, fishing	125.3	115.8	7.3	5.6	-1.3	-2.7
Manufacturing	320.9	292.1	18.7	14.1	-1.6	-8.1
Construction	178.1	281.6	10.4	13.6	7.9	29.3
Wholesale and retail trade	241.9	288.3	14.1	14.0	3.0	13.1
Hotels and restaurants	108.6	116.6	6.3	5.6	1.2	2.3
Transport & communications	106	117.2	6.2	5.7	1.7	3.2
Financial and other business services	214.7	278	12.5	13.5	4.4	17.9
Public admin and defence	79.5	105.1	4.6	5.1	4.8	7.2
Education	103.6	139.6	6.0	6.8	5.1	10.2
Health	140.1	210.2	8.2	10.2	7.0	19.8
Other services	94.1	121.6	5.5	5.9	4.4	7.8
Total	1712.6	2066.1	100.0	100.0	3.2	100.0
Public Service	254.5	314.7	15.0	15.0	3.6	

Source CSO, *Quarterly National Household Survey* and CSO, *Public Sector Employment and Earnings.*

Note The public service employment figure excludes commercial bodies (such as the ESB). In 2000 public service employment figures are only available for the final quarter so for this reason the final quarter has been used for all of the employment data shown. The public service employment figures in some cases refer to whole time equivalents while the QNHS figures refer to numbers employed. These factors introduce some differences between the public service and QNHS figures.

Total employment continued to grow during 2007, with an increase of 3.6 per cent. During 2007 there was a marked slowdown in the growth of construction employment and this turned negative in the final quarter of the year. Construction employment fell by 2 per cent (5,600 people) in the year to the final quarter of 2007, compared to an increase of almost 12 per cent in the year to the same quarter of 2006. Manufacturing employment fell by 1.4 per cent. Employment in services, both public and private, continued to show strong growth in 2007.

Public service employment is not shown separately in the Quarterly National Household Survey (QNHS) and commentators sometimes use the combined sectors of health, education and public administration as a proxy for the public service. However, this considerably overstates the size of the public service as the health and education sectors contain substantial private sector employment including crèches, private nursing homes, training companies, language schools and health professionals. There is a separate CSO survey of public service employment and this is shown in the final row of Table 1.2. This shows that the public service contributed around 17 per cent of employment growth between 2000 and 2006 with an expansion of around 60,000. There are some methodological differences between the QNHS and the public service series[4]. Insofar as the two series can be compared, the growth rate of public service employment (3.1 per cent annually) appears similar to, but somewhat faster, than the growth of total employment over this period (2.7 per cent annually).

The growth rate of public service employment has fluctuated considerably in the period since 2000. There were particularly large increases in the years 2001 and 2002 (7.9 and 5 per cent respectively) and the share of public service employment in total employment increased substantially in these years, from 14.9 per cent in 2000 to 16.2 per cent in 2002. The years 2001 and 2002 also showed increases in the size of the public service relative to the population. Since 2002 the growth of public service employment has lagged somewhat the growth of total employment. However, the level of public service employment has on average grown at a similar rate to the population. This illustrates the significance of a rising population in driving demand for increased public services.

In terms of the composition of employment, the manufacturing, building, wholesale-and-retail and financial-and-business services are all of similar size with each contributing 13-14 per cent of total employment. The public service accounts for around 15 per cent of total employment.

1.3.2 Unemployment

Unemployment began to rise in late 2007 and early 2008 following an extended period of low and stable unemployment. Between December 2007 and April 2008, the Live Register increased by over 28,000 or 16 per cent, on a seasonally adjusted basis. The Live Register is not in itself a measure of unemployment as it includes people working part-time and on a casual basis who are allowed to sign on the Live Register. The official measure of unemployment is based on the QNHS; this showed that unemployment in the final quarter of 2007 was 4.6 per cent. Based on the trend in the Live Register, the CSO estimated that this had risen to 5.5 per cent by April 2008.

The Live Register rose in all regions in the year to April 2008. The largest increase was in the Midlands region with an increase of over 37 per cent compared to the national average increase of 27 per cent. The next largest increase was in the Mid

4. In some cases the CSO public sector employment figures are based on whole time equivalents while the QNHS is based on numbers employed. In addition, staff employed by employment agencies would not be included in the numbers for public service employment. This affects the comparability of the two series.

East region with an increase in the Live Register of 34 per cent. The smallest increase was in Dublin (19 per cent). In terms of age, young people have been the most affected. In the year to April 2008, the number of persons aged under 25 and signing on increased by 33 per cent, as against 24 per cent for persons aged over 25.

The construction slowdown is a major influence on the increase in the Live Register. The fall in construction employment reinforces concerns of regional and rural balance. The construction boom has been significant in contributing to employment growth across regions and across urban and rural areas. Rural areas have the challenge of absorbing the fall in construction employment with less benefit from the expansion of services. The challenge of achieving regional dynamism is addressed in Chapter 5 while the issues of education and upskilling are examined in Chapter 6.

1.3.3 The role of migration in employment in Ireland

Confirmation of the quantitative role of migration in the Irish labour market is presented in Tables 1.3 and 1.4. By the summer of 2007, 16 per cent of all jobs in the Irish economy were held by the nationals of other countries, one-half of whom were from the new EU Member States (MS) (Table 1.3). Between 2004 and 2007, almost 85 per cent of the additional 245,000 jobs created were filled by foreign nationals, with an increase of almost 140,000 in the number of employed nationals from the new EU Member States alone (Table 1.4).

Migrant workers continue to be concentrated in some sectors of the economy more than in others (Table 1.3). By 2007, they accounted for 37 per cent of total employment in the hotels & restaurants sector, 18 per cent of manufacturing employment and 17 per cent of employment in both construction and wholesale & retail. In each of these four sectors, the concomitant presence of Irish nationals has developed in a different way (Table 1.4). The evidence is of a significant replacement of Irish workers in manufacturing where the employment level of Irish nationals dropped by some 39,000 between 2004 and 2007, while that of foreign nationals grew by over 28,000. In hotels and restaurants, the employment level of Irish nationals showed a smaller fall of 9,000 between 2004 on 2007, while that of foreign nationals was 29,000 higher. In construction, the employment levels of Irish and foreign nationals both substantially increased (by 19,000 and 32,000 respectively), with the latter accounting for 63 per cent of the expansion in employment between 2004 and 2007. The wholesale and retail sector also had growth in employment of both Irish and foreign nationals, with the dominant share (83 per cent) of increased employment from foreign nationals.

Table 1.3 Percentages of Total Employment Held by Nationals of other Countries, by Economic Sector, 2004 and 2007.

	All Nationals of Other Countries		New EU Nationals only	
Sector	2004	2007	2004	2007
	%	%	%	%
Agriculture, forestry & fishing	2.9	6.2	1.3	3.2
Production Industries (inc. Manufacturing)	7.7	17.7	2.1	11.0
Construction	6.9	17.2	2.6	12.6
Wholesale & retail trade	5.8	17.3	1.5	10.0
Hotels & restaurants	18.4	37.3	5.1	20.7
Transport, storage & communications	5.3	13.2	0.7	6.4
Financial & other business services	6.7	15.5	0.7	5.9
Public administration & defence	1.3	2.0	*	*
Education	4.7	6.7	*	0.7
Health	6.9	14.4	0.4	2.3
Other Services	6.5	15.7	0.9	5.5
Total	**6.7**	**15.6**	**1.5**	**7.8**

Source CSO, *Quarterly National Household Survey.*

Table 1.4 Numbers Employed, 2004 and 2007, and Changes, by Sector and Nationality.

	Total Employment	Employment Changes 2004-2007				Total Employment
	2004	Irish Nationals	New EU Nationals	All Other Nationals	Total Change	2007
Sector	'000s	'000s	'000s	'000s	'000s	'000s
Agriculture, forestry & fishing	112.5	+2.0	+2.3	+1.8	6.2	118.7
Production Industries (inc. Manufacturing)	301.0	-38.6	+25.6	+2.7	-10.3	290.7
Construction	227.5	+19.2	+29.1	+3.2	51.5	279.0
Wholesale & retail trade	265.4	+7.7	+27.1	+11.4	46.2	311.6
Hotels & restaurants	112.7	-9.0	+21.7	+6.9	19.6	132.3
Transport, storage & communications	115.7	-4.8	+6.9	+3.0	5.1	120.8
Financial & other business services	247.7	+19.9	+15.7	+13.8	49.4	297.1
Public administration & defence	94.4	+9.7	*	+0.9	10.6	105.0
Education	118.4	+17.0	*	+3.7	20.7	139.1
Health	182.4	+19.6	+4.3	+15.0	38.9	221.3
Other Services	116.3	-4.8	+5.7	+6.0	7.0	123.3
Total	**1894.2**	**37.9**	**138.4**	**68.4**	**244.7**	**2,138.9**

Source CSO, *Quarterly National Household Survey.*

1.4 Incomes and Earnings

This section reviews developments in incomes and earnings in recent years. It begins by examining developments in earnings and the impact of migration on earnings. Next the growth of household income and income distribution are examined. Macro-level indicators of per capita income are then examined, followed by a comparison of income levels in Ireland to other countries.

1.4.1 Trends in Earnings

The CSO's National Employment Survey, undertaken every three years, provides an overview of hourly earnings across the economy. Some of its findings are presented in terms of *median, hourly* earnings – the hourly rate that separates all employees into two equal groups, one half earning less and the other half more. This has two advantages: it prevents small numbers of extremely high (or low) paid employees from disproportionately influencing the results (the advantage of the median over the mean) and it removes individuals' choices of the numbers of hours they work from affecting comparisons of what they are paid (the advantage of the hourly rate over weekly earnings).

Median hourly earnings in the economy grew by 17.7 per cent in nominal terms over the three-year period 2003 to 2006 (Table 1.5). This was some 10 per cent in real terms[5] and ahead of estimates of overall productivity growth expressed in terms of hours worked (Sexton estimates 6.3 per cent growth between 2002 and 2005[6]). The value of take-home pay over this period was further boosted by tax reductions. Workers in the different sectors of the economy, however, had hugely different experiences of earnings growth over the years 2003 to 2006. Exceptionally strong growth occurred in hourly median earnings in Health and in Public Administration & Defence, but growth did not keep pace with the rise in the cost of living in four sectors – Other Services (a poorly paid sector to begin with), Business Services, Construction, and Education (the highest paid sector in both 2003 and 2006). In all other sectors, growth was ahead of inflation. Further evidence on the prevalence of low pay is discussed below.

5. Cumulative growth in the CPI *and* HIPC was approximately 7 per cent between March 2003 and March 2006.

6. J.J. Sexton (2007), 'Trends in Output, Employment and Productivity in Ireland, 1995-2005', Table 1.5, in Aylward and O'Toole, *Perspectives on Irish Productivity.*

Table 1.5 Median and Mean Hourly Earnings by Sector of the Economy, 2003 and 2006

	Median Hourly Earnings			Mean Hourly Earnings		
	2003	2006	Increase	2003	2006	Increase
Sector	€	€		€	€	
Manufacturing, mining & quarrying	12.50	14.78	18.2%	15.5	17.92	15.6%
Electricity, gas & water supply	21.57	25.90	20.1%	22.88	27.04	18.2%
Construction	14.89	15.73	5.6%	16.15	17.78	10.1%
Wholesale & retail trade	10.17	11.92	17.2%	12.29	15.07	22.6%
Hotels & restaurants	8.75	9.98	14.1%	10.3	11.96	16.1%
Transport, storage & communications	14.98	16.83	12.3%	16.72	18.99	13.6%
Financial intermediation	18.53	21.74	17.3%	24.5	30.29	23.6%
Business services	13.55	13.91	2.7%	17	18.47	8.6%
Public administration & defence	14.70	19.94	35.6%	16.15	21.79	34.9%
Education	26.77	28.33	5.8%	27.24	32.27	18.5%
Health	12.98	18.36	41.4%	15.88	21.25	33.8%
Other Services	10.83	10.92	0.8%	14.88	14.03	-5.7%
Total	**13.08**	**15.39**	**17.7%**	**16.41**	**19.47**	**17.9%**

Source CSO, *National Employment Survey*, 2003 and 2006.

In the case of three of the four sectors with the lowest increases in median earnings, the increase in mean or average earnings was higher. The contrast was most pronounced in education with an increase in mean earnings in this sector of 18.5 per cent between 2003 and 2006 (median: 5.8 per cent). For construction the increase in mean earnings over this period was 10 per cent (median 5.6 per cent) and in business services the increase for the mean was 8.6 per cent (median 2.7 per cent). The final sector with a low increase in median earnings, 'other services', had a reduction in mean earnings of 5.7 per cent.

There are a number of possible reasons for differences between the growth of median and mean earnings. Increases for a particular group of workers can increase the mean while leaving median earnings unchanged. Changes in the composition of employment can also lead to differences between the growth of mean and median earnings. In relation to the education sector, the slow growth in median earnings could be due to the increase in employment of special needs assistants who are lower paid than others in education.

It is also of interest to compare the growth of earnings in Ireland to other countries. For reasons of data availability, these comparisons are based on trends in average earnings rather than more detailed comparisons across the wage distribution. The real growth in average wages in Ireland over the period 2000 to 2005 was the second highest in the EU (15) and fifth highest across the OECD (see OECD *Employment Outlook 2007,* Table I).

1.4.2 Migration and Earnings

The data on employee earnings provided by the National Employment Survey 2006 is a particularly valuable opportunity to revisit some of the tentative conclusions reached in the earlier NESC study on migration's impact on earnings. As the first such survey was carried out by the CSO in 2003 and Ireland opened its labour market to nationals of the new EU Member States from 1st May 2004 onwards, the impact of EU migration on aggregate and relative earnings may be expected to have emerged over the three-year period spanned by the two surveys.

Table 1.6 Median Hourly Earnings by Nationality, March 2006

Nationality	€	Total Median = 1.00
Irish	15.85	1.03
UK	14.83	0.96
Other EU 12	12.82	0.83
EU 15 to 27	10.09	0.66
Other	12.29	0.80
Total	**15.39**	**1.00**

Source CSO (2007), *National Employment Survey*, 2006.

In 2006, the median hourly earnings of nationals from the new EU Member States were one third below that of Irish nationals (Table 1.6) (Note that two-thirds of median is the conventional indicator of low pay). Earnings of UK nationals were broadly in line with their Irish counterparts, while the other national groupings had median earnings one-fifth lower. Further scrutiny of the differences between pay by nationality *within* sectors is possible but only on the basis of average earnings and by grouping all non-Irish nationals together. Table 1.7 shows there were only two sectors of the economy in which the average hourly earnings of foreign nationals were similar to their Irish counterparts, namely, the health sector and wholesale and retail trade (the Table ranks sectors by the proportions of their workforces made up of foreign nationals in 2007). The next sector with the least difference is particularly interesting given that it has the single largest representation of foreign nationals in its workforce – the average hourly earnings of staff from overseas in hotels and restaurants were 91 per cent of their Irish counterparts. Average hourly earnings of migrants were most behind their Irish counterparts in manufacturing. There is only one of the lower paying sectors in which foreign workers worked significantly longer hours than their Irish counterparts; they worked five hours more a week on average in hotels and restaurants than did Irish staff.

Table 1.7 Mean Hourly Earnings and Weekly Paid Hours, March 2006: Irish and Other Nationalities by Sector

	Mean hourly earnings €			Weekly paid hours		
	Irish	Other	Irish = 1.00	Irish	Other	Irish = 1.00
Hotels & restaurants	12.28	11.19	0.91	27.8	32.7	1.18
Manufacturing, mining & quarrying	18.41	14.26	0.77	39.5	40.3	1.02
Construction	17.99	15.34	0.85	39.0	40.8	1.05
Wholesale & retail trade	15.07	15.09	1.00	32.0	34.5	1.08
Other Services	14.30	11.74	0.82	31.2	33.2	1.06
Business services	18.99	15.47	0.81	35.0	38.1	1.09
Health	21.20	21.77	1.03	31.4	34.3	1.09
Transport, storage & communications	19.26	15.94	0.83	39.0	40.7	1.04
Financial intermediation	30.46	26.17	0.86	34.7	38.7	1.12
Education	32.50	28.31	0.87	27.6	30.4	1.10
Total	**19.86**	**15.80**	**0.80**	**34.6**	**36.5**	**1.05**

Source CSO (2007), *National Employment Survey*, 2006.

Note 1. Sectors ranked by descending proportion of migrant workers.

Data on the distribution of earnings *within* sectors is also provided by the National Employment Survey, though not broken down by nationality. In the economy at large 18 per cent of all employees were earning less than €10 per hour in 2006 and, thus, on low pay (approximately two thirds of the median) (Table 1.8). Almost half of employees earned €10 to €20 per hour while around two thirds of employees earned less than €20 per hour. The incidence of low pay varied hugely across sectors from a high of one half of all employees in hotels & restaurants – the sector with the highest concentration of migrant workers – to a low of 3 per cent in financial intermediation. Sectors in which public employers dominated (education, health and public administration itself) had small incidences of low pay while the wholesale & retail trade had the next highest (30 per cent) after hotels & restaurants and double the proportions in construction (15 per cent) and manufacturing (14.6 per cent). The highest paid sector (as indicated by the proportion of all employees being paid €30 or more an hour) was, by some distance, education (46.8 per cent) with financial intermediation coming second (29.6 per cent).

Since 2003 the share of employment earning below €10 an hour has fallen by ten percentage points. This exaggerates the real extent of the fall in low wage employment as the purchasing power of €10 obviously fell over this period. However, allowing for this the share of low-wage employment still fell over this period. The share of employment for those with hourly earnings of €10 to €20 remained broadly stable at around one half of the labour force.

Ireland's minimum wage is now € 8.65 per hour and this provides a significant safeguard of minimum wages in the labour market and one which the Council continues to endorse. Under current tax arrangements, the minimum wage is outside the tax net. Notwithstanding the minimum wage there remains a problem of poverty for some people in employment, as discussed below.

Table 1.8 Distribution of Employees by Hourly Earnings, 2003 and 2006

Sector	Less than €10	€10 to < €20	€20 to < €30	€30 to < €40	€40 to <€50	€50 or more	Total
Hotels & restaurants 2003	60.9	35.3	3.2	*	*	*	100
Hotels & restaurants 2006	50.1	42.7	4.6	*	*	*	100
Manufacturing etc. 2003	28.4	53.1	11.9	3.6	1.5	1.6	100
Manufacturing etc. 2006	14.6	60.6	15.8	4.9	1.9	2.3	100
Construction 2003	19.2	60.8	14.8	3.0	1.1	1.2	100
Construction 2006	15.0	57.7	18.6	5.8	2.0	1.0	100
Wholesale & Retail Trade 2003	47.0	43.5	6.0	2.1	0.6	0.8	100
Wholesale & Retail Trade 2006	30.6	52.4	9.7	4.8	1.4	1.2	100
Other Services 2003	43.8	37.8	8.6	5.5	1.5	2.8	100
Other Services 2006	39.0	46.2	9.2	*	*	*	100
Business Services 2003	26.8	47.6	15.8	6	2.1	1.8	100
Business Services 2006	22.1	50.4	15.6	6.1	2.4	3.4	100
Health 2003	24.0	54.7	14.8	3.3	1.5	1.7	100
Health 2006	8.8	48.1	27.6	10.2	2.8	2.5	100
Transport, Storage & Communication 2003	15.9	61.3	16.8	4.0	1.2	0.9	100
Transport, Storage & Communication 2006	8.8	58.3	24.7	5.4	1.3	1.6	100
Financial Intermediation 2003	10.8	44.3	21.2	10.8	5.4	7.6	100
Financial Intermediation 2006	3.2	41.3	25.9	12.7	6.3	10.6	100
Education 2003	10.5	25.2	25.9	20.4	12.7	5.4	100
Education 2006	5.2	20.8	27.2	15.7	14.8	16.3	100
Public Admin. & Defence 2003	14.6	66.8	13.2	3.9	1.1	0.4	100
Public Admin. & Defence 2006	3.7	46.6	35	10.2	2.9	1.7	100
Total 2003	28.4	48.9	13.4	5.1	2.3	1.9	100
Total 2006	18.1	49.4	18.8	7.2	3.1	3.4	100

Source *National Employment Survey*, 2003 and 2006.

Table 1.9 Median Hourly Earnings by Level of Educational Attainment, 2003 and 2006

	2003	2006	Cumulative growth 2003-06	2003 median = 1.00	2006 median = 1.00
Education	€	€			
Primary or lower sec.	10.92	13.36	22.3%	0.83	0.87
Upper sec.	11.47	13.44	17.2%	0.88	0.87
Post Leaving Cert.	13.58	15.77	16.1%	1.04	1.02
Third non-degree	14.04	16.49	17.5%	1.07	1.07
Degree or higher	21.91	24.65	12.5%	1.68	1.60
Overall	**13.08**	**15.39**	**17.7%**	**1.00**	**1.00**

Source CSO, *National Employment Survey*, 2003 and 2006.

Table 1.10 Median Hourly Earnings by Age Group, 2003 and 2006

	2003	2006	Cumulative growth 2003-06	2003 median = 1.00	2006 median = 1.00
Age Group	€	€			
15-24	9.30	10.27	10.4%	0.71	0.67
25-29	13.09	14.61	11.6%	1.00	0.95
30-39	14.83	17.25	16.3%	1.13	1.12
40-49	15.10	17.98	19.1%	1.15	1.17
50-59	14.80	18.24	23.2%	1.13	1.19
60+	12.81	16.40	28.0%	0.98	1.07
Total	**13.08**	**15.39**	**17.7%**	**1.00**	**1.00**

Source CSO, *National Employment Survey*, 2003 and 2006.

There has been a slight compression in earnings inequality across levels of educational attainment (Table 1.9). The median hourly earnings of employees with the least formal education increased by more than 22 per cent over the three years as against a 12.5 per cent increase for employees with degrees or higher; the latter still received an hourly rate almost double that of the former. By contrast, there has been an accentuation in the inequality of earnings across age groups, with the median hourly earnings of those aged 15-24 and 25-29 slipping further below the overall median while more senior workers, particularly those aged 50-59, improved their relative position (Table 1.10).

Some conclusions on the contribution of in-migration on a large scale to the evolution of earnings in the Irish economy can be drawn. It is clear that earnings prospects and levels in the Irish economy, even after adjustment for the level of domestic prices, have been attractive to workers in Poland and other of the EU Accession States. However, they entered an economy with a highly unequal distribution of earnings before their arrival and disproportionately occupy the lower paying jobs. In its study on migration, the Council judged that there has probably been some moderation of wage growth in certain areas. Despite the large scale of the inflow, overall earnings growth has continued, but at a slower pace than earlier years. The institutions and policies governing wage settlements in the public sector have enabled relative earnings of public sector workers to develop independently of the levels of migration. There continues to be a significant incidence of low pay in the economy and it is increasingly associated with migrant workers. The long-standing challenge of increasing mobility out of low-paying jobs, thus, has become integral to making a success of migration also. It is probably young entrants to the workforce aspiring to entry-level jobs who are experiencing most competition from migrant workers.

The Council has previously noted that:

> Although we know a lot about recent migration, we remain uncertain about some of the facts, many of its economic and social effects and its future scale. For example, we do not know how much migration is temporary, how effectively migrants will progress to jobs that reflect their education, nor the impact of migration on the distribution of wages in recent years. Consequently we remain uncertain about the effects of migration on Ireland's long-run growth and prosperity (NESC, 2006: xii).

There continues to be substantial uncertainties regarding migration.

1.4.3 Earnings Growth over the Past Two Years

It is of interest to examine earnings trends over the past two years as this period overlaps with the implementation of *Towards 2016* which was published in June 2006. The increase in nominal earnings in 2006 (full year) and 2007 (first three quarters only) for a range of sectors and types of employee is shown in Table 1.11. The situation varies by category but it can be seen that the increase in nominal wages have for some groups (including industrial workers and skilled construction workers) lagged inflation (based on the CPI)[7]. Earnings growth generally has been close to inflation. For the economy as a whole, the ESRI's estimate of the cumulative wage increase over these two years (10.7 per cent) exceeded the growth of the CPI (9 per cent).

The basic pay increases agreed for the first phase of *Towards 2016* – a period of 27 months – were equivalent to a cumulative increase of 10.4 per cent. This lagged the increase in the CPI over this period. For the most part this situation has arisen not because of slow growth in nominal wages. The growth in nominal wages has been generally strong and faster than in Ireland's trading partners. However, inflation in this period in Ireland has been relatively high. This is particularly the case for inflation as measured by the CPI. This period has seen a substantial difference in inflation as measure by the CPI (the generally accepted measure of inflation in Ireland) and the EU measure of the Harmonised Index of Consumer Prices (HICP). The cumulative increase in the CPI in 2006 and 2007 was 9 per cent compared to an increase in the HICP of 5.6 per cent.

7. The CSO earnings data only cover direct employees. The construction sector in particular is characterised by a substantial share of employment not consisting of direct employees.

Table 1.11 Average Weekly Earnings by Sector, 2007 and Change 2006-2007

	2007	2006 % change	2007 % change	2006-2007 % change
Industry (all employees)	€729.37	3.1	6.7	10.0
Industrial workers	€610.90	3.5	4.8	8.4
Managerial & Professional	€1,066.84	1.0	6.4	7.4
Public Sector	€917.76	4.5	4.4	8.7
Education	€920.78	2.7	4.5	7.5
Regional Bodies	€813.37	5.1	5.9	10.7
Construction				
Skilled Operatives	€915.26	0.0	4.4	4.4
Unskilled and Semi-Skilled Operatives	€808.39	3.6	7.5	11.4
Banking and Financial Services	€871.92	6.9	4.6	12.4
Distribution and Business Services	€704.11	5.8	4.7	9.2
Real estate	€852.65	9.0	4.0	11.9
Accommodation and Catering	€441.07	3.0	2.8	5.4
Economy-wide wages		4.9	5.5	10.7
CPI		4.0	4.8	9.0
HICP		2.7	2.8	5.6

Source CSO earnings series and ESRI, *Quarterly Economic Commentary*, Spring 2008 for the economy-wide wage figures. The economy-wide wage figure is a national accounts based measure. The 2007 figures are based on the first three quarters, except for construction where the 2007 figures are available.

The major source of difference between the CPI and the HICP is the treatment of owner-occupied housing. Mortgage payments are included in the CPI but not in the HICP. The mortgage component of the CPI contributed 1.5 percentage points to the increase of 4.8 per cent in the CPI in the year to February 2008. Even after house prices stopped rising, the methodology used to calculate the CPI means that there continues to be a lagged effect in the CPI from previous house price increases (Mc Carthy, 2007).

The high growth of the CPI stems in part from decisions by the European Central Bank (ECB) to increase interest rates which ultimately serve to reduce inflation. Ireland is more affected than other EU countries by this, due to the relatively high level of owner occupation, high house prices and the prevalence of variable rate mortgages in Ireland.

Changes in tax also affect the trend in take-home pay. Over the past decade, this has been a major influence on the growth of take-home pay in Ireland. In the case of a single worker earning the average industrial wage in manufacturing – a measure typically used in NESC Strategy reports – there has been almost no increase in real take-home pay in 2006 and 2007, when the CPI is used to compute real take-home pay. A wider category of industrial earnings – all employees in industry[8] – recorded a cumulative increase in average real take-home pay of 3.4 per cent over the past two years.

Tax reductions have continued to contribute to the growth of take-home pay. The gross cumulative increase in earnings for all employees in industry over the past two years was 10 per cent while the increase after tax was almost 13 per cent, both measured in nominal terms. Those with mortgages have also benefitted from substantial increases in the value of mortgage interest relief in the 2007 and 2008 budgets. The maximum value of mortgage interest relief for a single person has increased from an annual value of €800 in 2006 to €2000 in 2008. For married couples these amounts are doubled.

Over the longer run there has been very substantial growth in real take-home pay. Between 2000 and 2007 real take-home pay for a single person on average industrial earnings increased by almost 19 per cent while since 1994 it has grown by around 50 per cent.

1.4.4 Wage and Profit Shares

Another way of looking at the labour market is to track movement of wage and profit shares in national income. A well-documented feature of the Irish economy over the past two decades has been a significant increase in the profit share and a fall in the wage share (Lane 1997/1998; NESC, 2003). This is shown in Figure 1.4 which tracks the factor shares from 1995 to 2005. The rise in profit share was driven by the exceptionally high profitability in the multinational sector of the economy. It can also be seen that there has been a change in this trend in the last few years with an increase in the wage share and a fall in the profit share. This is related to continuing

8. In addition to industrial workers, this measure also includes professional, clerical and managerial employees in industry. The employees of utility companies are also included.

strong nominal wage growth and the slowdown in aggregate productivity growth. This has been significantly influenced by the change in the composition of growth. A larger share of growth has been from construction and a smaller share from the high productivity manufacturing sector.

Figure 1.4 Factor Shares Of Non-Agricultural Income, 1996-2006

Source CSO, *National Income and Expenditure 2006, Tables 1995-2006*, available at www.cso.ie

1.4.5 Household Income

In addition to earnings, household income also includes social welfare and investment income. The growth in average and median household income is influenced by other factors including the composition of households and the proportion of the population in employment. Between 2000 and 2006, median equivalised household disposable (after-tax) income[9] grew by an annual average of just over 2 per cent in real terms. This follows the exceptionally strong growth of the core Celtic Tiger years when median household income increased by an extraordinary 8 per cent annually in real terms between 1994 and 2000. The growth of median household disposable income in these years considerably outpaced wage growth as household income was significantly influenced by the increase in share of people in employment, the rise of two-earner households and reductions in tax.

9. Equivalised household disposable income is a sophisticated measure of all household income (from employment, social welfare and investments) that is adjusted for household size in a way that is designed to take account of the needs of the composition of households. An equivalence scale is used to adjust for household composition. The household income data used here are based on the national equivalence scale that attributes a weight of 1 to the first adult, 0.66 to each subsequent adult and 0.33 to each child less than 14. This measure refers to income after taxes and includes all social welfare transfers.

Table 1.12 Percentage of Persons Below 60 Per Cent Median Income Line by Age, 1994-2006

Age Group	1994	1997	2000	2003 (revised)	2006
0-14[1]	24.5	23.5	23.7	21.0	20.2
15-64[1]	12.1	14.7	16.4	17.6	16.6
65+	5.9	24.2	38.4	29.8	13.6
All	15.6	18.2	20.9	19.7	17.0

Source Whelan *et al.* (2003); CSO, *EU Survey Income and Living Conditions*, various issues.

Note 1. Until 2000 inclusive, the figures are for 0-17 year olds and 18-64 year olds.

The social impact of income depends on its distribution as well its level. A significant measure of the distribution of household income is the share of the population in households with median incomes less than 60 per cent of median equivalised household disposable income. In the years since 2000, the share of the population in households below the 60 per cent median income line has declined by almost four percentage points (Table 1.12). This fall is mostly due to a sharp fall in the share of the elderly population below this line. There was a more modest fall in the share of the child population in households below the 60 per cent line, while the share of the working age population below the line was broadly stable. The fall in the share of the population with incomes below the 60 per cent threshold partly reverses the increase that took place during the 1990s.

People at work have a lower risk of being in poverty than other groups in society (such as people who are unemployed, retired and so on). In 2006 the percentage of people who were at work and below the 60 per cent median income line was 6.5 per cent compared to 17 per cent for the total population (see Table 1.13). The highest risk of poverty was for people who are unemployed (44 per cent). While the risk of poverty is relatively low for the employed population, a 6.5 per cent rate in 2006 means that were over 130,000 people below the 60 per cent median income line. This implies a substantial 'working poor' population.

Consequently, people at work constitute a substantial proportion of the adult population at risk of poverty. In 2006 over one fifth (22 per cent) of the adult population at risk of poverty were in employment. This was second only to the proportion in home duties. Over one quarter of the people at risk of poverty are children. It is also possible to consider the composition of the population that is at risk of poverty in terms of households, where households are classified on the basis of the status of the head of household. On this basis, around 30 per cent of people in 2006 at risk of poverty were in households where the head of household was in employment.

Table 1.13 Risk of Poverty and Composition of Adult Population Below the 60 Per Cent Median Income Line, 2006

	Risk of Poverty	Composition of Adult Population Below Poverty Line
At work	6.5	22.0
Unemployed	44.0	11.2
Student	29.5	20.5
Home Duties	23.8	25.1
Retired	14.8	7.9
Ill/Disabled	40.8	10.9
Other	32.1	2.5
Total	17.0	100.0

Source CSO (2007), *EU Survey of Income and Living Conditions*, 2006, Tables 4 and 8. The total figure for risk of poverty refers to the entire population.

While the lowest household incomes are regularly examined with the aid of such datasets as EU-SILC, top household incomes are also receiving attention internationally and in Ireland. The income distribution data collected in household surveys do not show much change in the income share of the top decile of the income distribution. However, Nolan and Maitre (2007) point out that household surveys may not adequately capture developments at the very top of the income distribution. Therefore, to examine trends in top incomes, they analyse Revenue Commissioner data, based on income tax returns. The Revenue Commissioner data show a different situation to the household survey data. According to the Revenue Commissioner data the share of the top 10 per cent of the income distribution increased substantially during the 1990s, from 33 per cent in 1989 to 38 per cent in 2000. This growth was concentrated in the top 1 per cent so that by the end of the 1990s the share of the top 1 per cent was more than twice the level prevailing through the 1970s and 1980s.

These figures indicate a marked shift in the share of income towards those at the top of the income distribution. Nolan and Maitre raise the possibility that changes in the reporting of top incomes may have played a significant role in increasing the recorded income share of those at the top.

Other evidence of a widening income distribution is provided by the work of the Review Body on Higher Remuneration in the Public Sector. As part of its most recently-published review, detailed information was collected on the remuneration of senior management positions in the private sector. While this information is not

published in the report, the report states that, 'in the period since our last general review, the remuneration of the most demanding jobs in the private sector has increased to a greater extent than that of less demanding posts or posts below the chief executive level' (Review Body on Higher Remuneration in the Public Sector, 2007: 25-26).

There is, therefore, some evidence, of an increase in income share by those at the top of the income distribution. Further research on Ireland's income tax data would be desirable to clarify the extent to which the trends observed from the Revenue Commissioners' data represent a real shift in the income distribution. It is clear that the situation in Ireland is not comparable to the US where the share of income growth going to top earners has been so high that there has been little growth in median earnings over several decades (see Box 1.1). The Council believes that entrepreneurship and high performance need to be rewarded, but that pay and performance should be linked in an objective and transparent manner.

Box 1.1 High Incomes in the US

The phenomenon of disproportionate income growth at the top of the income distribution is most pronounced in the US. Long-run trends in the top level of the US income distribution are described by Piketty and Saez (2006). The share of the top 10 per cent of the income distribution (i.e. top decile) was flat at around 31 to 32 per cent in the post-war period until the 1970s. Since then it has increased and had reached well over 40 per cent by 2002. Most of the rise in the top decile is due to the top 1 per cent. This share was about 8 per cent during the 1960s and 1970s and rose very substantially to almost 17 per cent by 2000.

The change in the US income distribution has meant that a huge share of the income growth has gone to those at the top of the income distribution. Another paper by Dew-Becker and Gordon (2005) showed that median wage and salary earnings in real terms in the US grew by only 0.3 per cent annually over the period 1966 to 2001. This occurred despite substantial productivity growth for the economy as a whole, with annual growth of 1.6 per cent. Hence, the US has experienced a breakdown of the traditional economic relationship between median earnings and average productivity growth. Over the same period the earnings of the top 0.1 per cent grew by over 5.6 per cent annually. These authors also show that over the shorter period 1997 to 2001, the top 10 per cent received 49 per cent of income growth that occurred and the top 1 per cent received 24 per cent of the income growth.

1.4.6 Macro-level indicators

National income per head of population is a more comprehensive, but more aggregate, measure than household income. In addition to household income, national income includes the income derived from public services and the income of the corporate sector[10]. GNP per head is widely used as a measure of national

10. The income of the corporate sector is ultimately owned by households. Some of the corporate element of Ireland's GDP is owned by households abroad and some of Ireland's national income is from the corporate sector in other countries.

income per head. This measure has continued to grow in recent years, with average annual growth of 2.6 per cent between 2000 and 2006. The growth of GNP per head can be disaggregated into two primary factors: (i) the growth of real income generated per person at work and (ii) the share of the population in employment. This arises from the following identity:

$\frac{\text{GNP}}{\text{Population}}$	=	$\frac{\text{Employment}}{\text{Population}}$	x	$\frac{\text{GNP}}{\text{Employment}}$
(GNP per person)		(the share of the population in employment)		(GNP per person at work)

Over the period 2000 to 2006, these two factors have made similar contributions to the growth of GNP per head, with annual average growth of each of 1.3-1.4 per cent. In the more recent years, since 2004, most of the increase in GNP per head has come from an increased share of the population in employment.

While GNP per head is a widely used measure of average income, there are other adjustments that can be made to give a somewhat more accurate measure of real income. First, it is desirable to adjust for changes in the terms of trade; i.e. changes in the prices of Ireland's exports relative to imports as these affect the real purchasing power internationally of Ireland's income. A second adjustment that can be made is to take account of changes in international transfers. In recent years, inward transfers to Ireland have fallen as EU receipts have declined while outward transfers have increased with an increase in international development funding and to a lesser degree remittances by immigrants. Gross national disposable income (GNDI) in constant prices takes into account both of these effects. In the period since 2000, GNDI per head has grown at a slower pace than GNP per head but there was still fairly strong growth with an average annual increase of 1.9 per cent between 2000 and 2006.

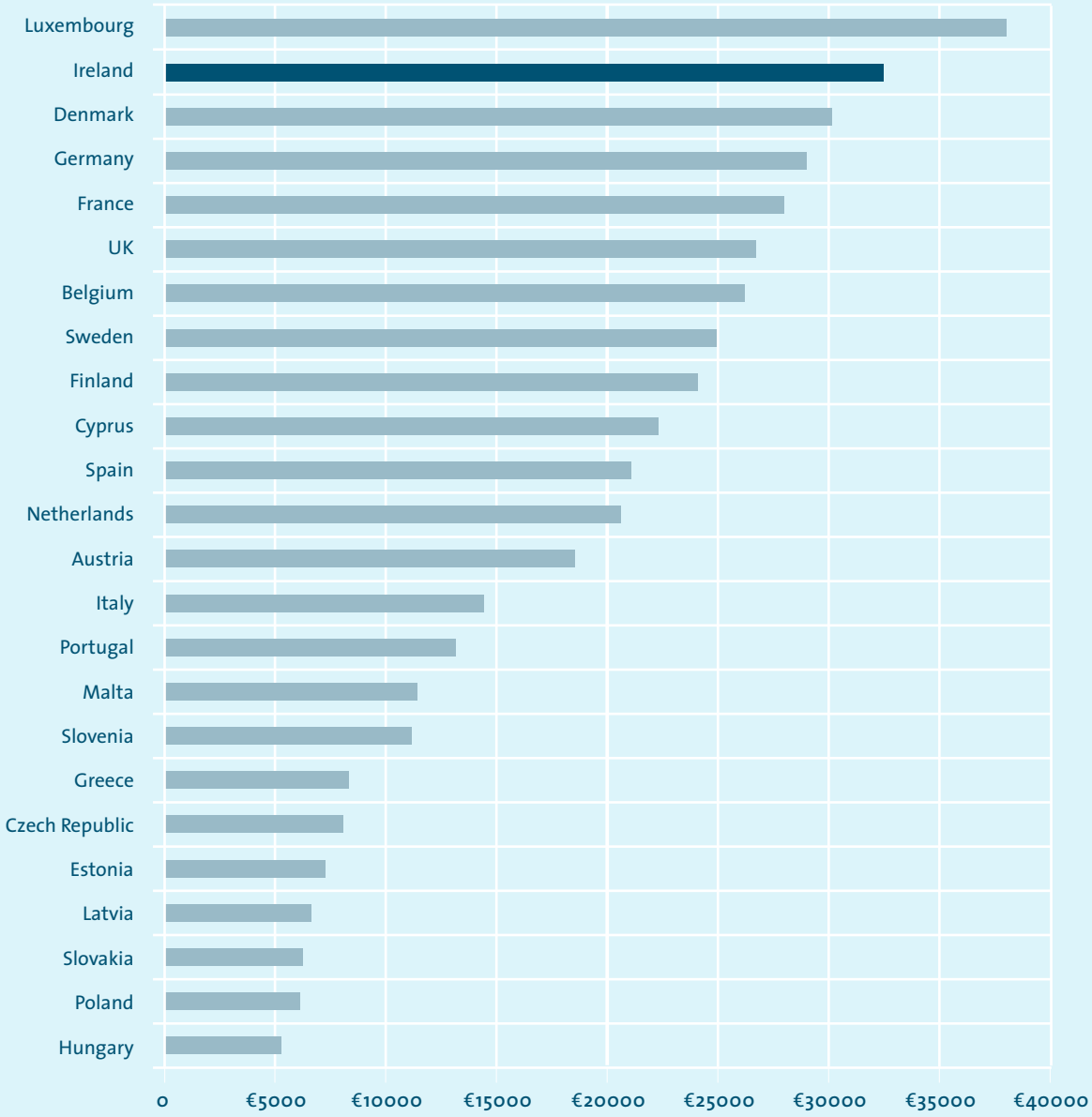
1.4.7 International Comparisons of Income Levels

A report by Deloitte compares earnings and disposable incomes (i.e. after-tax) across European countries. This report is based on a survey of earnings in enterprises employing ten or more people. Disposable income is then computed by applying the tax rules in each country to one household type, one-earner couples with two children. According to this survey, gross earnings in Ireland were the joint sixth highest (with Sweden) among EU countries in 2007. Disposable income (for the household type referred to) in Ireland was the second highest in the EU with only Luxembourg having a higher level (see Figure 1.5). Ireland's ranking for disposable income was boosted by Ireland having the lowest tax and social security

contributions among EU countries. For a one-earner couple in Ireland on average earnings, these deductions represent just 7 per cent of average earnings.

The relative level of total labour costs – including employer social security and pension costs – in Ireland is lower than Ireland's ranking in respect of disposable income. The situation with regard to total labour costs is examined in Section 1.6 below.

Figure 1.5 Annual Disposable Income (€) by Country for One-Earner Couples with Two Children, 2007



Source Deloitte (2008), *EU Employee Remuneration Survey*, 2007.

Note Table refers to gross average income less income tax and social security contributions. Child Benefit not included.'

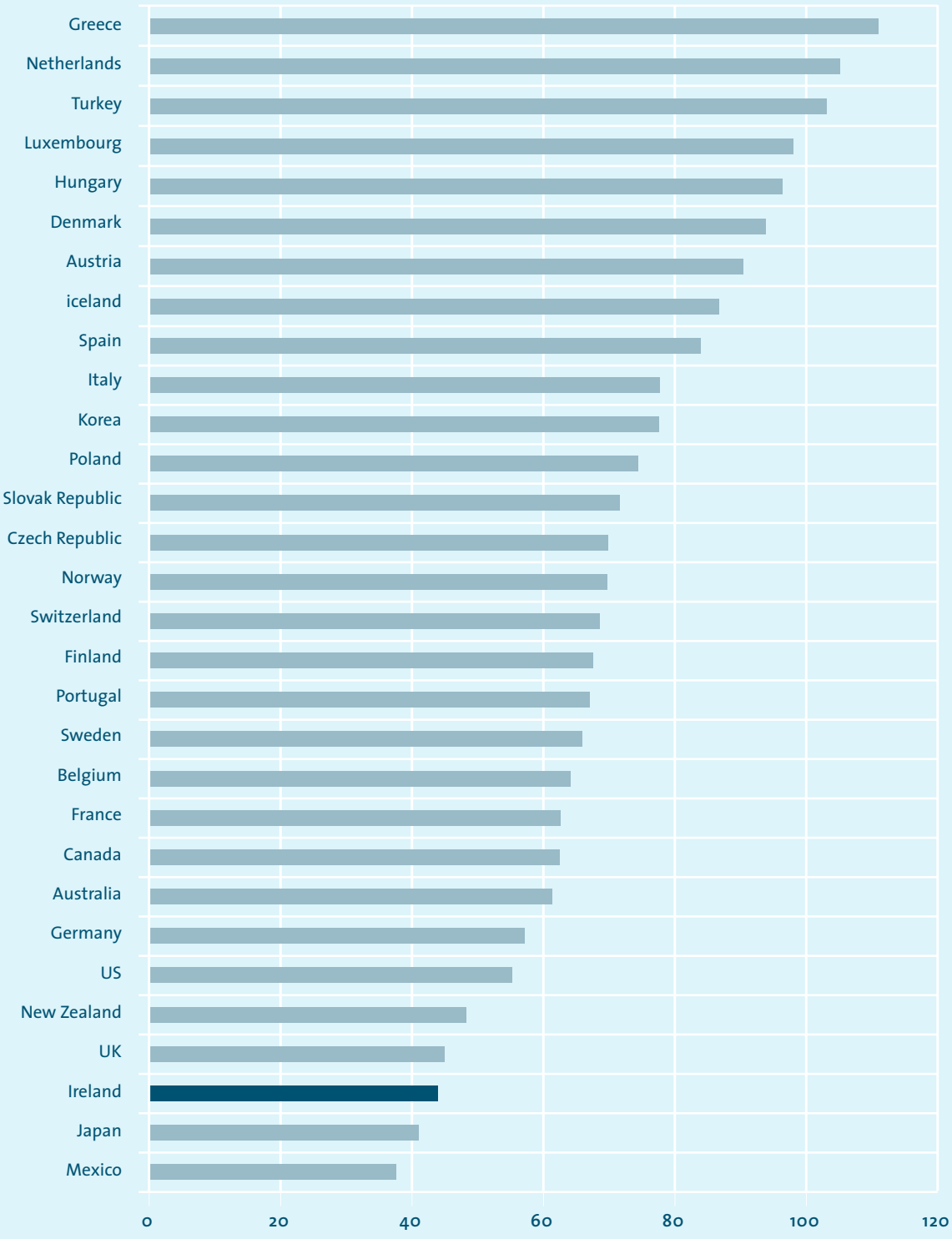
Some of the benefit of Ireland's higher disposable income is absorbed in higher prices. Furthermore, these comparisons do not take account of differences in social benefits such as income transfers, health, education or the provision of childcare. The concept of the social wage encompasses the other social benefits that affect real living standards. The higher taxes and social security contributions in other European countries provide the basis for higher income transfers, although to some extent higher social security contributions are required for a larger elderly population. The higher tax contributions also fund greater provision of services for employees including childcare. The provision of better services enhances the social wage for employees. From the employer perspective, enhanced services may increase the productiveness of employees, thereby offsetting the higher costs of tax and social security contributions. Indeed it is shown later in this chapter that Ireland has one of the lowest levels of public capital stock in the OECD.

There is information available that encompasses tax and cash transfers to different types of households from the OECD publication, *Benefits and Wages*. In terms of the net balance of taxes and cash transfers, households in employment with children in Ireland compare generally favourably to other countries. These data show that, in the case of one-earner households with two children on average earnings in Ireland, net income (after tax and including transfers) is in excess of gross income. Ireland was one of only two countries in the OECD for which this is the case in 2005. In the case of a two-earner couple with a combined income of 167 per cent of average earnings, net earnings (post tax and transfers) in Ireland as a percentage of gross incomes were also the highest in the OECD in 2005. These OECD calculations do not take account of transfers in kind. Childcare costs are relatively high in Ireland which significantly affects the level of disposable income for some people.

Pensions are a significant component of the social wage when viewed over the life cycle. Information on the value of pensions across countries is available from the OECD publication, *Pensions at a Glance* (2007). This publication provides information on replacement rates; these measure the extent to which mandatory pension schemes replace income in retirement. The OECD defines the net replacement rate as the individual net pension entitlement divided by net pre-retirement earnings, taking account of taxes and social security contributions. The net replacement ratio in Ireland from *mandatory* pensions – in Ireland's case this refers to the social welfare pension – of 44 per cent is one of the lowest in the OECD (Figure 1.6). This mainly results from the absence of an earnings-related mandatory pensions scheme in Ireland. For those on half of average earnings, the net replacement rate in Ireland is higher (66 per cent) but still well below the OECD average (84 per cent).

The latest published OECD data use 2004 figures. Substantial increases in Ireland's state pension since then will probably have improved Ireland's relative replacement ratio, particularly for those on low earnings.

Figure 1.6 Net Replacment Rate for a Median Earner through Mandatory Pensions, 2004



Source OECD (2007), *Pensions at a Glance.*

In Ireland many people benefit from pension provision that is additional to the mandatory social welfare scheme. In fact, Ireland has the fourth highest level of voluntary[11] pension coverage in the OECD, with over half of the workforce covered by an occupational pension. The OECD estimates that a person in Ireland who contributed at an assumed contribution rate of 10 per cent for their career would have a replacement rate of 73 per cent, well above the OECD average. Hence, for those workers in Ireland with adequate occupational pensions, the replacement rate appears satisfactory. This is based on achieving a reasonable rate of return from the pension fund investment; the investment risk is borne by employees in the increasingly widespread defined contribution pension schemes. In addition, almost half of the workforce lacks a supplementary pension and many who have a supplementary pension have an inadequate level of supplementary pension provision.

Another important dimension of living standards is the affordability of housing and the accessibility that housing affords to employment and services. The Council has expressed concerns in relation to the sustainability of much housing development in Ireland. In its housing report the Council argued that the challenge of achieving a more sustainable pattern of housing development bears comparison with other great challenges that Ireland faced and met in the past half century (NESC, 2004).

1.4.8 Conclusion

There has been continued growth in average earnings and incomes in Ireland in recent years. However, the past two years (2006 and 2007) have seen more limited growth in real earnings if deflated by the CPI, though partly offset by increases in mortgage interest relief. Since 2000 the incomes of lower income households have grown faster than median household income; substantial increases in pensions were a key factor in this outcome. A relatively low share of people in employment is at risk of poverty (6.5 per cent) but there are a substantial number of people (over 130,000) who are both at work and at risk of poverty. The level of disposable income in Ireland is the second highest in the EU. The data are not available that would enable comparisons of a broadly defined 'social wage' that would encompass social benefits. Despite the high level of inward migration, overall earnings growth has continued. The share of employees on low pay (below €10 per hour) declined between 2003 and 2006 but is still substantial at 18 per cent.

11. Voluntary in this context means that employers are not required to provide an occupational pension plan or individuals do not have to take out a personal pension plan.

1.5 Developments in Private and Public Wealth

The evolution of public and private wealth is the focus of this section. In recent years there has been a very substantial increase in household debt but a balanced perspective also needs to consider developments in relation to the assets of households. This section presents some key findings on household assets and liabilities in Ireland and other countries, drawing on recent research from Kelly *et al.* (2007) and O'Sullivan (2007).

Human capital is the most important form of wealth in modern economies. Some indicators on human capital in Ireland are also presented in this section. Finally the section presents evidence on the situation in regard to the development of public wealth in the form of infrastructure.

1.5.1 Trend in Net Assets of Households

Information on the financial assets and liabilities of Irish households is available from the CSO's Institutional Sector Accounts. Kelly *et al.* (2007) combine this with information on housing assets.

Since 2002, gross financial assets (deposits etc) have grown faster than personal disposable income. The ratio of gross financial assets to net disposable income increased from around 3:1 in 2002 to a ratio of 3.75:1 in 2006. Financial liabilities in the form of loans to households increased from 117 per cent of disposable income in 2002 to 212 per cent of disposable income in 2006. Notwithstanding the large increase in household financial liabilities, the absolute increase in household assets was even higher so that net financial assets of households increased by around 20 per cent between 2002 and 2006. As a share of disposable income, net financial assets declined from 175 per cent 2002 to 161 per cent in 2006.

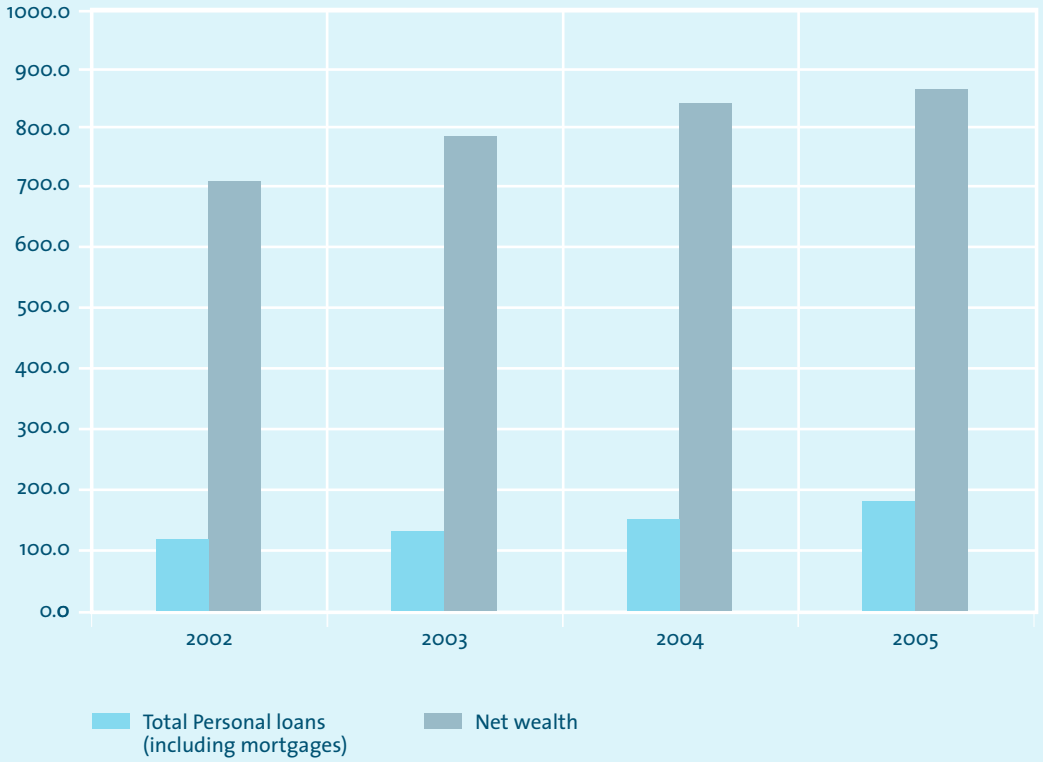
This is before taking into account housing assets. When housing assets are added in, the net assets of Irish households show a substantial increase, from 705 per cent of disposable income in 2002 to 865 per cent in 2005. Households on average in 2005 had assets worth around 5.6 times their liabilities.

The above data applies to the household sector as a whole. There are obviously significant differences across households. The increase in household liabilities is concentrated among younger households while older households have gained more from the rise in asset values, including the rise in pension fund assets that occurred up to 2006

Returning to financial assets alone, there are three main categories of household financial assets: (i) deposits and currency; (ii) shares and other equity; and (iii) pension and life insurance funds. Since 2002 the proportion of assets in deposits and currencies has been stable at around 31 to 32 per cent. There has been some decline in the proportion of financial assets in shares and other equity from 34 per cent of total financial assets in 2002 to 25 per cent in 2006. The largest and fastest growing component of financial assets is pension and life insurance funds. This element represented around 43 per cent[12] of household financial assets in 2006.

12. This also includes prepayments of insurance premiums.

Figure 1.7 Loans and Net Wealth as a Percentage of Personal Disposable Income, 2002-2005



Source Calculated from Kelly *et al.* (2007) and CSO (2007), *Institutional Sector Accounts.*

The implications of increases in the loans incurred by households depend on the use of loans. Loans that are used to acquire houses are of less concern than loans that are used to fund higher consumption. The mortgage share of total household loans has increased in recent years from 65 per cent in 2002 to 71 per cent in 2006. The increase in mortgages accounts for the bulk of the increase in household debt. Mortgages as a share of personal disposable income rose from 75 per cent in 2002 to 150 per cent in 2006. The increase in other household loans was more modest. Other household loans increased from 41 per cent of personal disposable income in 2002 to 61 per cent in 2006.

The level of wealth is affected by changes in asset values. The decline in housing and share values that occurred from 2007 will have reduced asset values. The underlying picture however is unlikely to be greatly changed. Households had assets worth around 5.6 times their liabilities in 2005 as noted above. This was before taking account of the increase in asset values in 2006 as well as the declines in 2007 and 2008. Assets – for households as a whole – continue to exceed liabilities by a very substantial margin.

1.5.2 International Comparisons

International comparisons of financial assets, excluding housing, are presented by Kelly *et al.* (2007) using Eurostat data. The gross financial assets of Irish households are close to the average of advanced European countries. Household financial assets per capita in Ireland in 2005 were €65,775 while the average for the EU (15) plus Switzerland was €61,430. Ireland ranked sixth on this measure among the EU (15) plus Switzerland. Measured relative to GNP, total household financial assets in Ireland in 2005 were around 200 per cent of GNP, marginally below the average (206 per cent). Claims that households have on social security funds are not included in the financial assets of households. On the other side of the balance sheet, the financial liabilities of Irish households are relatively high among European countries. Household loans relative to GNP in Ireland in 2005 were the fourth highest among the EU (15) plus Switzerland. The countries with higher household loans relative to GDP (using GDP for other countries) were Switzerland, the Netherlands and Denmark.

As a result of relatively high loans, the net financial assets of Irish households in 2005 at 94 per cent of GNP were well below the average for the EU (15) plus Switzerland. Net financial assets include outstanding mortgages but do not include housing assets, thus depressing Ireland's position.

International comparisons of household wealth more broadly defined, including housing assets, are available from a recent study by the United Nations University's World Institute for Development Economics Research (Davies *et al.,* 2006). These data showed that in 2000 the net worth of Irish households – including housing and adjusting for differences in purchasing power – was $89,327 which was the tenth highest among advanced countries. More recent international comparisons of household wealth have been published by Bank of Ireland Private Banking (O'Sullivan, 2007). These estimates include financial assets and liabilities along with housing assets, commercial property and business equity. These estimates have been produced using a number of different approaches and involved some estimation by the author. It is estimated by this source that the net wealth per head in the Irish economy in 2006 was €196,000; on a per capita basis Ireland ranked second in terms of wealth among OECD countries. This is a far higher relative ranking compared to the international comparisons presented above on gross and net financial assets. Housing assets are the major source of the difference between these rankings. Insofar as housing assets are over-valued this can give an exaggerated impression of relative Irish wealth levels.

Notwithstanding the level of wealth of Irish households in the form of housing, the level of Ireland's housing stock relative to the population continues to be below average. There were in the region of 425 housing units in Ireland per person in 2005

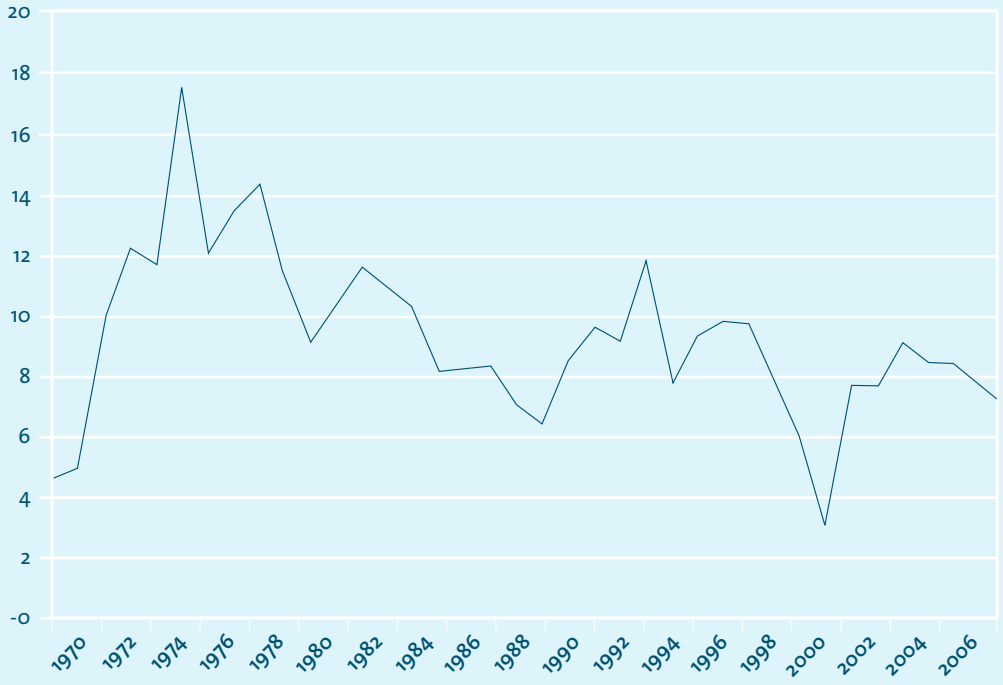
compared to an EU (15) average of over 550 units (Figure 4.41 in NCC, 2007a). Housing completions in Ireland up to 2007 have been at an exceptionally high level.

1.5.3 Wealth, Consumption and Savings

There is experience from other countries that increases in housing wealth support higher levels of consumption. A recent paper by Hogan and O'Sullivan (2007) shows that this has not been the case for Ireland. Their results show that the increase in real disposable income explains the rise in personal consumption and the addition of housing wealth does not add any extra explanatory power.

Over the long run, the data on household savings show some decline in the savings ratio. A notable feature though is that in the current decade there has been an increase in the savings ratio, which reached 8.3 per cent in 2005. The rising savings ratio illustrates that large scale borrowing for consumption has not generally been a major factor underpinning the growth of consumption in Ireland (as against investment in housing). There has been a fall in the savings ratio since 2005 to an estimated 7 per cent in 2007.

Figure 1.8 Personal Savings as a Percentage of Personal Disposable Income, 1970-2006



Source CSO, *National Income and Expenditure*. 2006 and 2007 are Davy estimates.

1.5.4 Human Capital

The education and creativity of the population are crucial dimensions of wealth. The real value of human capital is not captured by statistics but it is of interest to note some key indicators of the education levels of the population. The share of the Irish population that has not completed second level education is relatively high at 35 per cent, reflecting the relatively late arrival of free secondary education in Ireland. Among the younger age cohort, those aged 20 to 24, the share of the population that has completed secondary education is above the EU average and (marginally) above the Lisbon target of 85 per cent. The share of the cohort aged 25 to 34 that has completed third level in Ireland is substantially above the EU and OECD averages. The attainment of third level qualifications is lower among older cohorts in Ireland and is below the OECD average for those over 45 and particularly those aged 55 to 64 (NCC , 2007a).

Surveys produced by the World Economic Forum (Porter *et al.*, 2007) provide evidence on the perceived quality of Ireland's education (as perceived by business leaders). The quality of Ireland's education system got a high ranking in this survey with Ireland ranked as the seventh highest in the most recent survey.

1.5.5 Public Wealth

The quality of life and economic prosperity can be affected as much by public wealth as private wealth. An important element of public wealth is in the form of public infrastructure. Ireland has one of the lowest stocks of public capital per head in the OECD, as the recent OECD review of Ireland's public services has pointed out. This reflects Ireland's relatively low income levels among industrialised countries prior to the post-1987 phase of strong economic growth. The OECD notes that rapid increases in population and economic activity have demanded significant and urgent improvements in infrastructure. Bottlenecks have emerged that the OECD says may be restraining economic growth. For example, 'public transport systems have not kept pace with the growth in population and largely followed rather than preceded, growth areas, particularly in the Greater Dublin area' (OECD, 2008a: 58). As a result of these deficits, the current level of investment in new public capital in Ireland is the highest in the EU (15); this investment is being delivered through the National Development Plan (NDP)

Evidence presented in the Annual Competitiveness Report by Forfás also points to limitations in many key areas of infrastructure. For example, peak travel speeds (for cars) in Dublin are among the lowest in the OECD, although marginally higher than in London. The penetration and speed of broadband among both households and enterprises is low in Ireland.

The World Economic Forum surveys referred to above also provide survey evidence on the perceived quality of Ireland's infrastructure by business leaders. The most recent of these shows that the perception of Ireland's infrastructure by this group was poor: Ireland's infrastructure was ranked in 49th position (out of 131 countries) in the survey while Ireland's overall competitiveness position was 22nd. Rankings for different types of infrastructure were as follows: quality of air transport infrastructure (45th); roads (60th); railway infrastructure (55th) and port infrastructure (64th).

1.5.6 Conclusion

The data on the wealth of Irish households provide grounds for optimism concerning the resilience of the Irish economy. Kelly *et al.* (2007) show that the assets of Irish households were worth over 5.6 times the value of the liabilities of households in 2005. When housing assets are included, there are unofficial estimates that the average wealth of Irish residents in 2006 was the second highest in the world. This is subject to the significant qualification that the high level of house prices in Ireland exaggerates the real value of Irish wealth. Indeed high house prices can give people an exaggerated impression of their real wealth. A study by the World Institute of Development Economics Research (Davies *et al.*, 2006) using data for 2000 placed Ireland as the tenth richest country in the world.

There has been a large increase in the household loans, mostly due to mortgages. For the economy as a whole, consumption growth is not mainly being driven by consumer loans. Even without taking housing assets into account, the aggregate assets of Irish households exceed in total the financial liabilities.

There is a lack of comprehensive current data on the distribution of wealth across households. There are obviously large differences between households across both income and age groups. Financial liabilities are disproportionately concentrated among younger households while financial assets are disproportionately concentrated in older households.

Survey information shows that perceived quality of public infrastructure in Ireland is relatively low. This should increase given the relatively high level of infrastructure at present in Ireland. Ireland's younger adult population has above average levels of educational qualifications but older age cohorts have lower attainments.

1.6 Costs And Competitiveness

The competitiveness of an economy is essentially the ability to achieve and sustain sufficient presence in markets subject to international competition to ensure full employment and adequate living standards. There are many dimensions to competitiveness, including the skills and adaptability of the labour force, infrastructure, attractiveness as a destination for mobile employees and the level of corporation tax. Concern has been voiced in Ireland in recent years that cost increases of various kinds and the high returns available in the property market are reducing the economy's ability to compete in international markets.

This section is organised as follows. First, developments in inflation and Ireland's relative price level are examined. Second, the evidence on general business costs and labour costs is reviewed. This is followed by consideration of the evidence on competitiveness outcomes.

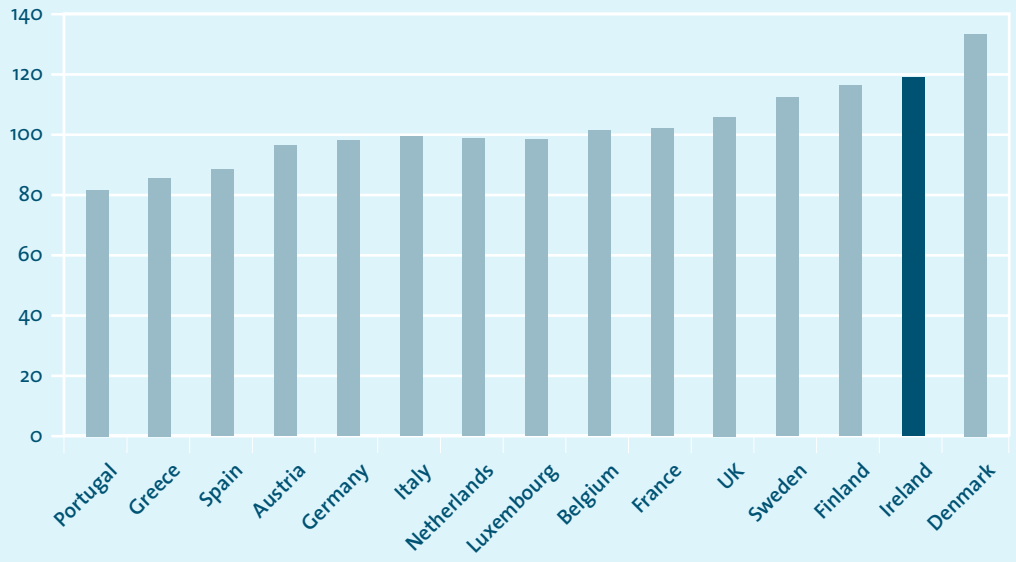
1.6.1 Consumer Price Level and Inflation

Consumer price inflation and the level of consumer prices are not direct measures of competitiveness in that consumer goods and services are not the primary inputs bought by companies. However, there are influences through the effects on wages,

and consumer prices also affect the competitiveness of tourism. Consumer prices are also indicative of cost pressures on the economy so are worthwhile analysing in an examination of competitiveness.

The level of consumer prices in Ireland in 2006 was 19 per cent above the EU average (Figure 1.9). Both goods and services prices are above average but this is particularly the case for services which were around 23 per cent above the EU average in 2006, while goods prices were around 15 per cent above average. The consumer price level in Ireland is the second highest in the EU – the highest price level is in Denmark – while the price level in Finland is similar.

Figure 1.9 Relative Consumer Price Level, 2006
EU (15) =100



Source Eurostat, http://epp.eurostat.ec.europa.eu/.

In 1999, Ireland's price level was 6 per cent above the EU average (Cassidy and O'Brien, 2007). The substantial gap that now exists between Irish and EU prices reflects several years of above average inflation in Ireland. Since the establishment of the euro in 1999 up to 2007, the rate of inflation in Ireland has averaged 3.5 per cent – using the standardised Harmonised Index of Consumer Prices (HICP) measure – which was the highest among euro-area countries. Inflation in, Greece (3.3 per cent) and Spain (3.2 per cent) was almost as high as in Ireland. The average inflation rate for the euro area over this period was 2.2 per cent.

Initially, Ireland's relatively high inflation within the euro area reflected high inflation in both goods and services – in 2000 goods inflation in Ireland was double the euro-area average while services inflation was more than three times the euro

average (Table 1.14). Subsequently, goods inflation in Ireland fell sharply so that in 2004 and 2005 goods inflation in Ireland was below the euro area inflation. Services inflation also moderated but continued above average in these years. The overall rate of inflation for 2004 and 2005 converged with the euro average. In 2006 and 2007 Ireland again had somewhat higher inflation than the euro area. The above average inflation in Ireland since 2006 results from higher services inflation; goods inflation has continued below the euro average. The rate of inflation in the year to February 2008 was 3.5 per cent in Ireland and 3.3 per cent in the euro area, with both measured on an HICP basis.

Table 1.14 Inflation in Ireland and Euro-area (HICP), 2000 to 2007

	Goods		Services		Total	
	Ireland	Euro area	Ireland	Euro	Ireland	Euro
2000	5.0	2.5	5.6	1.5	5.3	2.1
2001	2.6	2.3	6.1	2.5	4.0	2.3
2002	2.6	1.7	7.6	3.1	4.7	2.2
2003	2.4	1.8	6.1	2.5	4.0	2.1
2004	1.2	1.8	3.7	2.6	2.3	2.1
2005	1.3	2.1	3.2	2.3	2.2	2.2
2006	1.7	2.3	3.8	2.0	2.7	2.2
2007	1.5	1.9	4.4	2.5	2.9	2.1

Source Eurostat, http://epp.eurostat.ec.europa.eu.

The question arises as to why inflation has been higher in Ireland than other euro countries. Two major influences have been the depreciation of Ireland's exchange rate between 1997 and 2000 and the strength of demand in the Irish economy, putting upward pressure on prices and wages. Honohan and Lane (2003) emphasise in particular the role of the weak currency in explaining above average inflation in Ireland in the early years of the euro. They point to Ireland's much greater reliance on imports from non-euro countries (the UK and the US mostly) and hence the disproportionate impact of a weaker currency on Ireland's import costs. The decline in Irish inflation in 2004 and 2005 following the strengthening of the euro is consistent with this perspective. On the other hand, continuing high services inflation in Ireland points to the significance of demand as an influence on Irish inflation. Pro-cyclical fiscal policy has been another contributor to Ireland's above average inflation.

The strengthening of the euro is not yet fully reflected in Irish inflation. Between August 2007 and March 2008 the euro appreciated by 13 per cent against sterling. The limited impact of a strong euro could be partly an issue of timing but may also reflect weak price competition in parts of the distribution sector in Ireland.

Components of the Price Level

Given the dynamics of the Irish economy since 1999 it is not surprising that Ireland has had relatively high inflation within the euro area and the EU. This does not in itself explain how Ireland has become the country with the second highest price level in the EU. The following are possible factors that explain Ireland's relatively high price level:

(i) Indirect taxes: Ireland has a relatively high reliance on indirect taxes. In 2005 the share of tax revenue in Ireland derived from indirect taxes was almost 38 per cent. This was substantially above the norm for other countries and the second highest in the EU (15). Some of the Scandinavian countries also have relatively high reliance on indirect taxes but the indirect tax share for the Scandinavian countries is lower than for Ireland (see Figure 1.10)

(ii) Lower productivity: If productivity levels in Irish services are lower than the EU average, then in conjunction with average or above average wages, this would result in higher price levels.

(iii) Wage levels: Wages and prices have both increased faster in Ireland than other EU countries since 2000. However, relative wage levels cannot be the sole explanation of Ireland's price levels relative to other EU countries as Ireland's ranking on wage costs (including social security costs) is well below its ranking in terms of prices (see below). Ireland's higher wage levels (a new phenomenon) in conjunction with some other factors seem to give rise to the above average price level. Ireland's minimum wage is relatively high among EU countries and this could be a factor in the prices of some services.

(iv) Competition: Notwithstanding stronger enforcement of competition law in Ireland in recent years, competitive forces still appear to be fairly weak in parts of the domestic economy. The OECD 2006 Review of the Irish economy observed that:

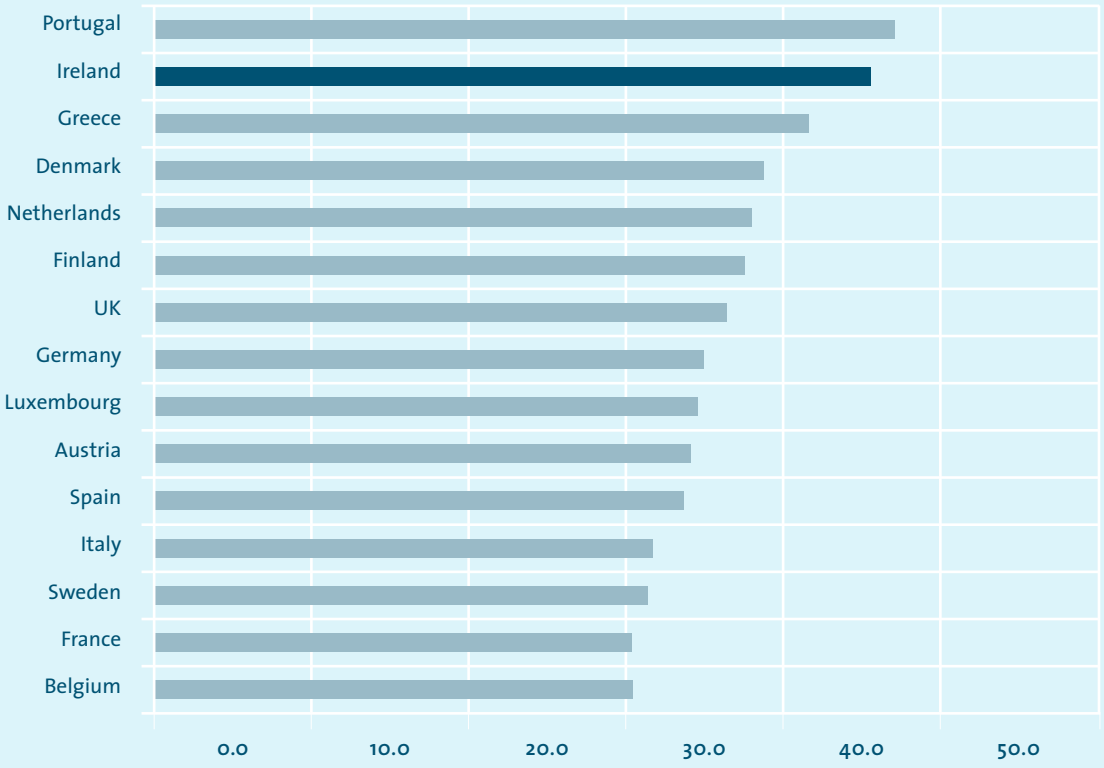
> While the overall regulatory environment is relatively business friendly and pro-competitive, there are still too many sheltered sectors where competition is inadequate and the interests of producers and suppliers take precedence over the interests of consumers and the wider economy (OECD, 2006a: 31).

The work of the Competition Authority has identified scope to strengthen competition across several sectors of the economy including banking, non-life insurance, solicitors and barristers and dentists.

(v) Scale: Another potential factor is that there are higher costs resulting from a small, low density population. This factor increase utility costs outside major urban centres and also results in higher distribution costs.

The above factors are simply listed here as possible explanations. An understanding of the role of each of these factors requires considerable research.

Figure 1.10 Indirect Tax Revenue as a Percentage of Total Tax Revenue, 2005



Source OECD (2007), *Revenue Statistics 1995-2006.*

Food and Energy Inflation

Over the past year food and energy prices have become significant contributors to inflation globally and in Ireland. In the twelve months to March 2008, the rate of inflation in Ireland for food and beverages was 9.3 per cent and for energy was 8.6 per cent. These exceed the increase in the CPI for the same period of 5.0 per cent. Over the year to March 2008 food contributed more than one percentage point to the growth of the CPI and energy contributed two thirds of a percentage percentage point.

The rise in global food inflation is due to underlying long term trends exaccerabated by bad weather. First, changing dietary habits in Asia are boosting the demand for meat (and hence grain) and dairy products. Second, the rise in energy costs is also part of food inflation as energy is a key input in producing and transporting food. Third, the demand for biofuels has reduced the land available for food production. Fourth, there has been bad weather in key growing areas, notably drought conditions in Australia. Australia is normally the world's second-largest food exporter.

Food and commodity price inflation have resulted in the European Commission substantially revising its forecast for inflation for the euro area in its Spring 2008 forecasts. The Commission now expects inflation in the euro area to be 3.2 per cent in 2008 compared to a rate of 2.1 per cent in 2007. The Commission expects food and commodity inflation to taper off over the course of 2008, although price levels will remain high. It projects that inflation in the EU will peak in the second quarter of 2008 and will gradually decrease throughout the rest of the year. It forecasts inflation in the euro area of 2.2 per cent in 2009.

Expenditure on food and non-alcoholic beverages in Ireland was estimated in the 2004/2005 Household Budget Survey (HBS) to represent 13.5 per cent of consumer expenditure. For lower income households the share of expenditure is substantially higher. It was estimated in the HBS that food represented around one fifth of expenditure for households in the lowest three deciles. For energy products the HBS estimated that on average households devoted 7.5 per cent of their expenditure to this area. For lower income households this was also higher; expenditure on energy was in the range of 10 to 12 per cent for households in the lowest three deciles.

As an agricultural exporter, there are benefits to Ireland on the producer side from food inflation; these are evident in the strong growth in the value of dairy exports in 2007. This aspect is further examined in Chapter 3.

Outlook for Inflation

There is uncertainty in the outlook for inflation. Some factors still point to lower inflation. First, the strength of the euro should exercise a downward pressure on Irish goods inflation. Second, slower economic growth globally and in Ireland also contributes. Third, the growth of mortgage costs is moderating. However tighter credit markets internationally are beginning to put upward pressure on Irish interest rates. Still, mortgage increases will contribute less to inflation in 2008 than in 2007 since mortgage costs rose sharply in 2007 and this is unlikely to be repeated to the same extent. On the other hand, energy and commodity prices are rising rapidly. Not all of the increases that have taken place in oil and gas prices in world markets have yet been passed onto consumers. However, there is considerable volatility and uncertainty in energy and commodity markets.

During most of the period since 2000, Ireland's inflation rate has exceeded the euro average. This points to the significance of Irish factors in Ireland's inflation, including Ireland's trade-weighted exchange rate. By February 2008 Ireland's inflation on an HICP basis had almost converged with the euro average. This implies that common external factors have become increasingly significant to Irish inflation. Chapter 7 below will discuss the challenge of achieving a consistent policy approach in an uncertain conjuncture.

1.6.2 General Business Costs

The situation with regard to a wide range of non-wage costs in Irish cities relative to other cities is benchmarked in the Annual Competitiveness Report by Forfás[13]. This report shows that a range of business costs are relatively high in Irish cities compared to those abroad. In particular, property costs, utility costs, IT, accountancy and legal services, electricity, waste and professional services are all relatively high in Dublin. For example, the costs of buying office space in Dublin was the third highest of the cities benchmarked. The cost of buying industrial space was more competitive with Dublin ranked sixth and well below London. After Copenhagen, electricity costs were highest in the Irish cities. Hourly legal costs were highest in Dublin (NCC, 2007a).

1.6.3 Wage Costs

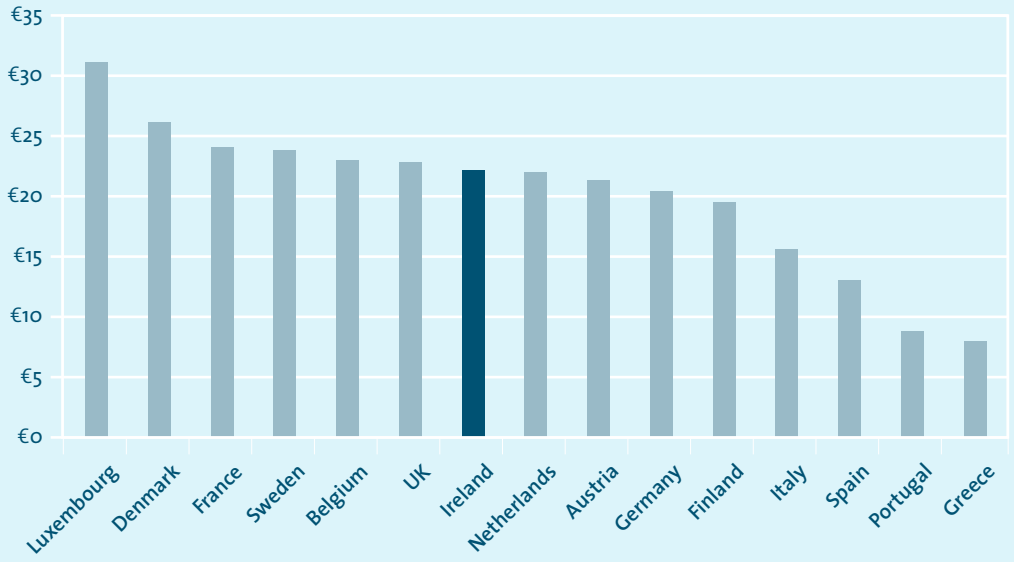
International Comparisons of Wage Costs

The previous section examined Ireland's comparative wage levels and disposable incomes. Here the focus is on wage costs to employers which include employer social security and pension contributions. Estimates of hourly wage costs across the economy are presented in Figure 1.11 below[14]. These estimates show Irish hourly wage costs as the seventh highest in the EU (15) and similar to the UK and several of the richer European countries. Irish wage costs for the manufacturing sector are lower in relative terms than for the economy as a whole (Figure 1.12). Hourly earnings of production workers in manufacturing in Ireland in 2006 were the sixth lowest in the EU (15).

13. The cities included are Copenhagen, Budapest, Maastricht, Boston, Manchester, Limerick, Cork, Galway, Dublin, Derry, Singapore, . Bangalore, Belfast and London.

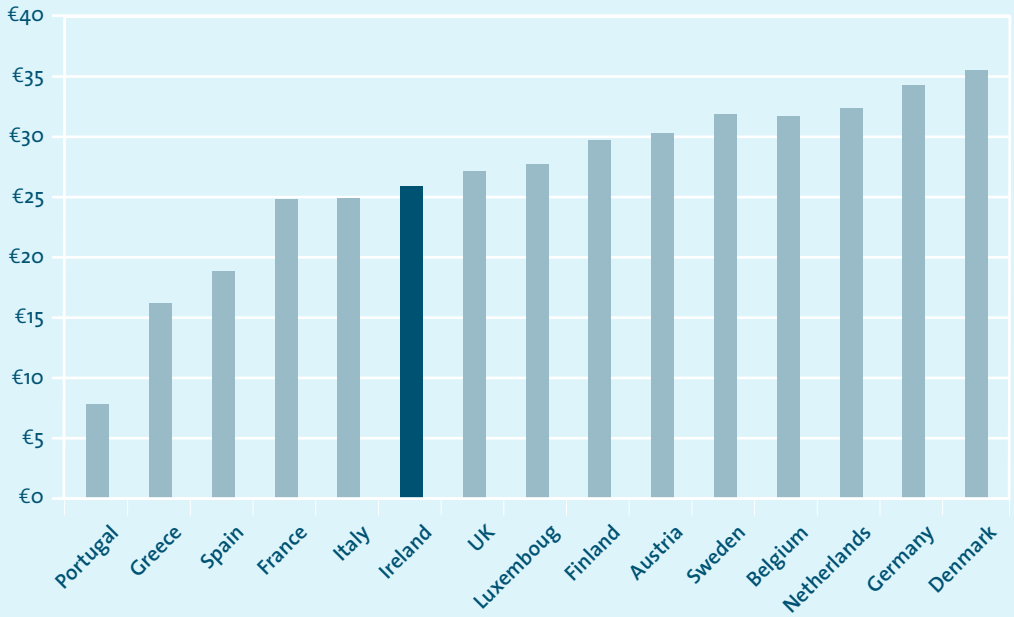
14. These hourly wage estimates are derived from the European Commission's AMECO data base which provides data on annual remuneration per employee and the Groningen data base which provides data on hours worked. The remuneration per employee data in the AMECO database is derived from the national accounts. Remuneration in the national accounts is defined more comprehensively than in typically the case for earnings series. All forms of remuneration are included.

Figure 1.11 Hourly Gross Labour Costs per Employee (€), 2006



Source Calculated from European Commission, AMECO database (data on total wage bill), available at, http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database/ameco_applet.htmand Gronigen database (data on hours worked), available at, www.ggdc.net/index-dseries.htm.

Figure 1.12 Hourly Gross Labour Costs for Production Workers in Manufacturing (€), 2006



Source US Bureau of Labour Statistics, available at, www.bea.gov.

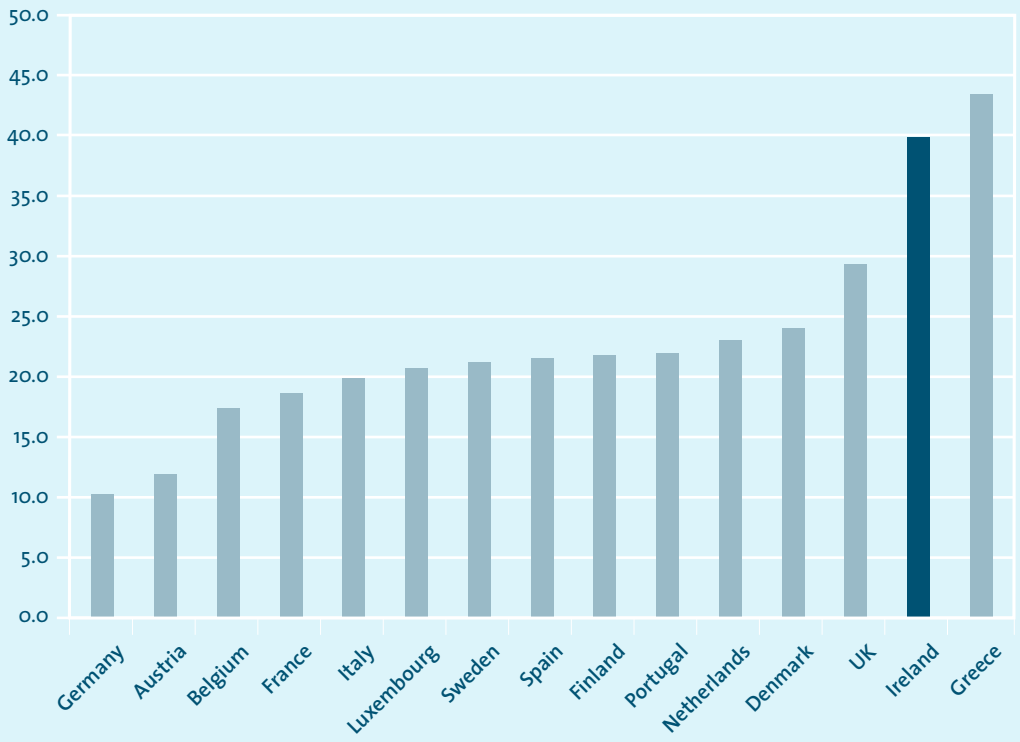
Ireland's comparative ranking in terms of labour costs is lower than its ranking in regard to wages paid to employees. This reflects Ireland's relatively low employer social security contributions.

The wage costs presented above do not take account of differences in productivity. Cassidy and O'Brien (2007) compared hourly wages costs to hourly productivity levels for the EU (15) countries in 2005, using a GNP-based measure for Ireland. The ratio of labour costs to productivity for Ireland was close to the EU average.

Growth of Labour Costs

In recent years, the average growth of total labour costs in Ireland has considerably outpaced the growth in other EU countries and Ireland's trading partners. Over the period 2000 to 2006 the increase in gross labour costs per employee (including social security contributions) in Ireland was approximately 40 per cent compared to the increase for the euro area of 15.9 per cent and for the EU (15) of 15.8 per cent.

Figure 1.13 Total Increase in Gross Labour Costs per Employee, National Currencies, 2000-2006

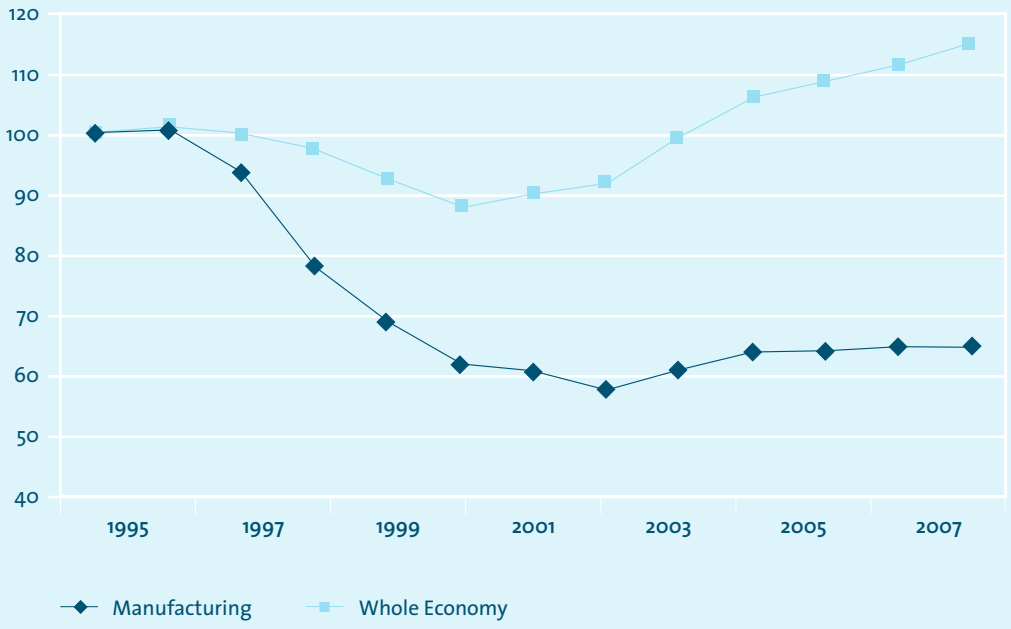


Source European Commission, AMECO database.

Some of the faster wage increase in Ireland was absorbed by a higher rate of inflation. However, average real wages in Ireland also grew strongly, with an increase of over 17 per cent between 2000 and 2006 (using the internationally comparable AMECO data) compared to an increase for the EU (15) of 5.1 per cent and the euro area of 2.5 per cent. Real wages in Germany barely increased at all in this period which has been a factor in holding back the growth of domestic demand in Germany. There is evidence that, since 2006, German wage settlements have begun to increase again.

Unit labour costs in common currency terms incorporate the effects of both wage and productivity growth in Ireland relative to Ireland's trading partners as well as exchange rate movements. The trend in this measure for the economy as a whole and the manufacturing sector is shown below (Figure 1.14). During the 1990s relative unit labour costs in Ireland declined (signifying gains in cost competitiveness) while in recent years there has an increase in relative unit labour costs for the economy as a whole. The increase since 2002 has been around 25 per cent using this index.

Figure 1.14 Irish Unit Labour Costs Relative to Main Trading Partners in Common Currency Terms, 1995-2007



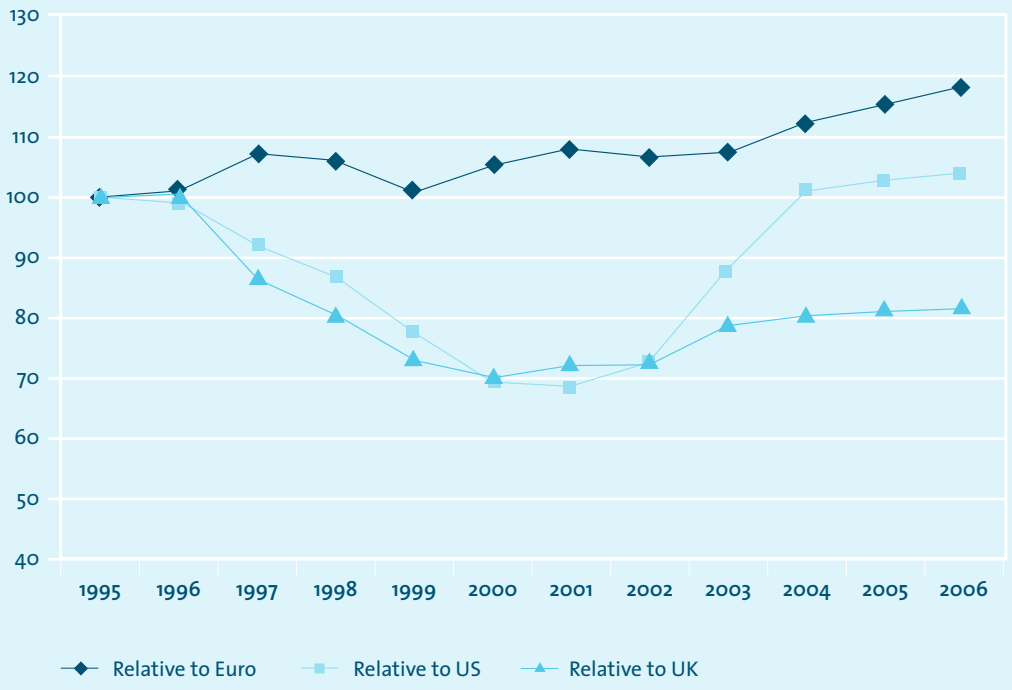
Source Provided by the Central Bank.

Productivity growth is faster in the manufacturing sector than in the economy as a whole. For the manufacturing sector as a whole, the data do not a much loss of cost competitiveness. Productivity growth in manufacturing sector is dominated by the high-tech sectors – the chemicals sector has a particularly disproportionate influence – so that other parts of manufacturing have been subject to greater pressure of cost competitiveness.

Exchange Rates

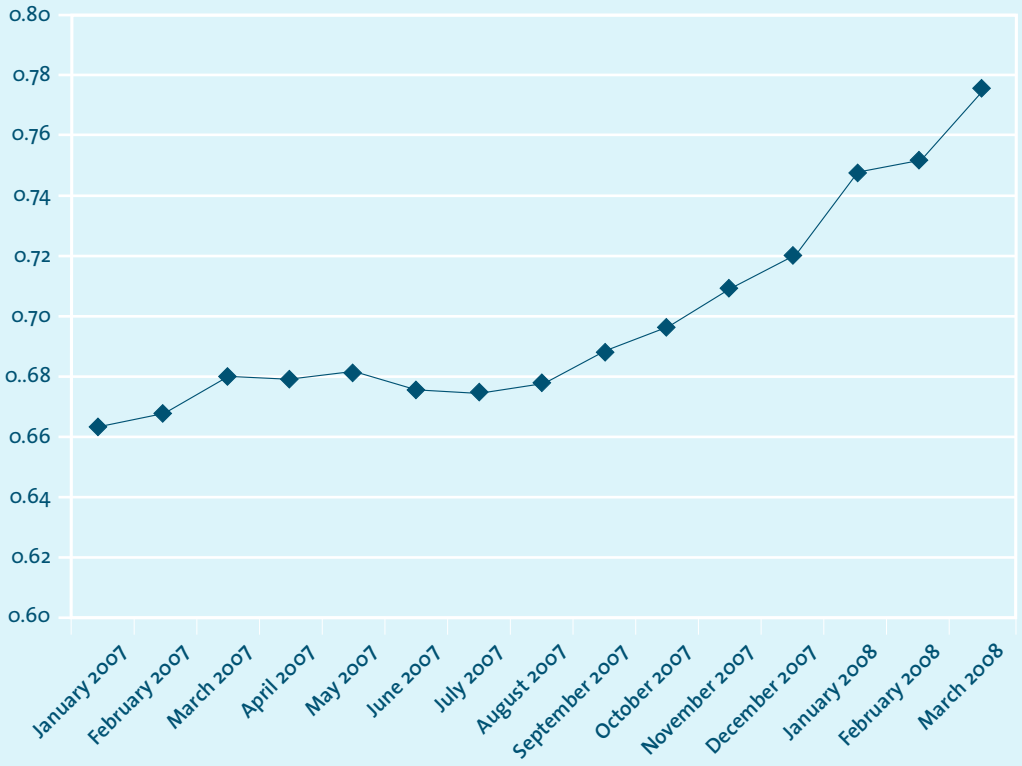
The trend in unit labour costs relative to countries outside the euro area is strongly influenced by exchange rate movements. The fall in real unit labour costs relative to the US in the 1990s evident in Figure 1.15 was partly the result of the weakness of the EMS currencies/euro while the subsequent increase reflected the strengthening of the euro. The recent strengthening of the euro against the dollar will have resulted in a further increase in costs relative to the US.

Figure 1.15 Unit Labour Costs in Ireland in Common Currency Terms Relative to Key Trading Partners, 1995-2006



Source European Commission, AMECO database.

Figure 1.16 Euro/Sterling Exchange Rate, Jan 07 - March 08



Source Central Bank, www.centralbank.ie.

The euro has also strengthened very considerably against sterling in recent months – the euro/sterling rate increased from around 0.68 in August 2007 to 0.77 in March 2008, an appreciation of 13 per cent. The domestic and UK markets are the key markets for indigenous Irish exporters so the appreciation of sterling is significant.

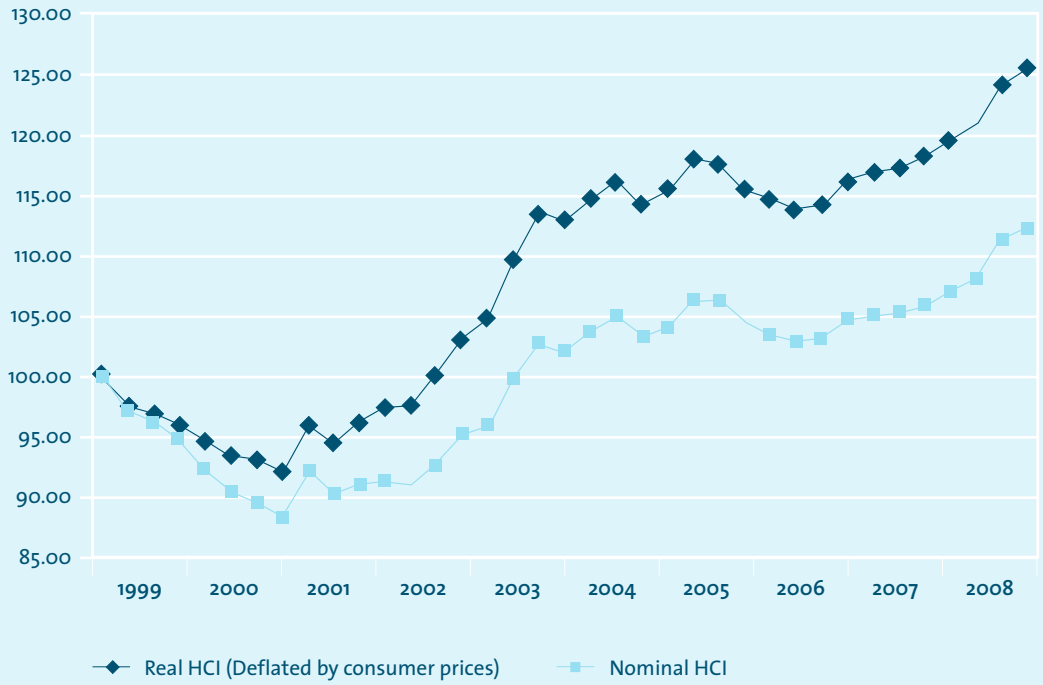
Within the euro area, the absence of exchange rate movements means the trend in unit labour costs is more stable. However there has also been a loss in labour costs competitiveness within the euro area in recent years, substantially influenced by the slowdown in economy-wide productivity growth in recent years. With this slowdown in productivity growth, the economy-wide increase in the real wage has in some years outstripped the growth of productivity.

The Central Bank's Harmonised Competitiveness Index (HCI) measures Ireland's average trade-weighted exchange rate against our trading partners. A rise in the value of the index means a loss of cost competitiveness for the Irish economy. Following a decline in the late 1990s, this index has increased since 2000. From the final quarter of 2000 to the first quarter of 2008, the nominal HCI appreciated by 27 per cent. The *real* HCI incorporates both the effects of average exchange rate movements and relative movements in Ireland's consumer prices (as measured by

the HICP)[15]. For example, if the nominal HCI appreciated by 10 per cent and consumer prices in Ireland fell by 10 per cent relative to Ireland's trading partners, then the real HCI would be stable. The real HCI has also shown substantial appreciation, with an increase of 36 per cent between the final quarter of 2000 and the first quarter of 2008. Since 1995 it has appreciated by 25 per cent.

Over the year to the first quarter of 2008, the strengthening of the euro has meant an appreciation in the HCI of 6.2 per cent. The appreciation in the real HCI was similar (6.3 per cent), indicating that Ireland's relative price inflation (in HICP terms) has returned to a similar rate to Ireland's trading partners. The substantial appreciation of Ireland's real HCI in the current decade is an indication of competitiveness pressures in the economy as well as increased relative prices for Irish consumers.

Figure 1.17 Harmonised Index of Competitiveness in Real and Nominal Terms by Quarter, 1999-2008



Source Central Bank, www.centralbank.ie.

15. The real index deflated using consumer prices is indicative of pressures on competitiveness. Ideally the real index would be based on a weighted average of input costs in the Irish economy.

1.6.4 Productivity Growth

Slower productivity growth in recent years has been a significant influence on the rise in unit labour costs in the Irish economy. Productivity growth can occur as result of increased productivity within individual sectors and changes in the composition of the economy that increases the share of higher productivity sectors. The latter effect is known as structural change. A paper by Sexton (2007) shows the crucial role of structural change in recent Irish productivity growth. Sexton's method of estimating the effect of structural change is to estimate what the level of output in the current year would be if the distribution of employment were the same as in the *base year* while output per worker (productivity) is expressed in terms of the *current year*. This yields an estimate of output and productivity for the current year that excludes the effect of structural change over the period in question. Sexton applied this method to three periods 1995-2005, 1995-2000 and 2000-2005.

Table 1.15 Total Change in Productivity: the Role of Structural Change, 1995-2005

	1995-2000	2000-2005	1995-2005
Actual Productivity Growth	14.8	12.4	28.1
Productivity Growth Adjusted for Structural Change	9.0	17.2	29.0

Source Sexton (2007).

Over the entire decade of 1995 to 2005 structural change had relatively little effect on productivity growth. Actual productivity increased by 29 per cent while productivity adjusted for structural change increased by 28.1 per cent. However there were substantial differences for the two sub-periods. In the first period 1995 to 2000, the actual increase in productivity was 14.8 while the increase adjusted for structural change was lower at 9 per cent. In other words structural change boosted productivity growth in this period. This reflects an increased share of high-productivity sectors such as modern manufacturing and financial and business services. Turning to the second period the opposite effect occurred. The actual increase in productivity was 12.4 per cent but adjusting for structural change the increase in productivity was substantially higher at 17.2 per cent. This reflects the increased prominence in the second period of sectors with lower levels of productivity; i.e., construction and some services. If the adjusted productivity increases for the two periods are compared it can be seen that – adjusting for structural change – the increase in productivity between 2000 and 2005 was in fact higher than the earlier period of 1995 to 2000.

These results on the effects of structural change provide some reassurance regarding Irish productivity growth. They indicate that the recent slowdown in productivity growth stems from the changed composition of growth. Recent growth has reflected an unusually large share of construction. As the economy returns to a more normal composition of output growth, this can be expected to lead to a recovery of productivity growth. On the other hand the more long-term shift from high-tech manufacturing to services in the composition of growth may moderate the long-run growth rate of productivity, although as discussed in Chapter 4 there is scope for faster productivity growth in services.

1.6.5 Industrial Disputes

The level of industrial disputes affects the competitiveness of an economy. Industrial disputes show a long term decline from the high levels of the 1980s and have been a very low level in recent years. The days lost through industrial disputes fell sharply in 2002 and since then have remained at a low level. In 2006 there were around 7,300 days lost in industrial disputes and the number of industrial disputes in that year was ten. In the first half of 2007 there were just three industrial disputes. During the third quarter of 2007, there were no days at all lost to industrial disputes.

1.6.6 Outcome Indicators

Competitiveness is of concern because of its effects on the economy and well being. To date the economy has performed well despite some loss of cost competitiveness. If the loss of competitiveness were to affect the economy, it would be expected to initially be reflected in export performance. Ireland has had a decline in its share of global markets for goods exports from 1.36 per cent in 2002 to 0.9 per cent in 2006. At the same time there has been very strong growth of services exports and Ireland's share of the global services market has increased substantially and reached 2.45 per cent in 2006. The gain in services market share did not fully offset the loss of goods markets so there was a decline in Ireland's share of the total goods and services global market[16].

A decline in market share for goods has been experienced by most OECD countries, reflecting the rise of China as a global exporter. Up to 2002 Ireland's export growth was among the highest in OECD. Since then Ireland's export growth has been below the OECD average. Between 2003 and 2006, Ireland's exports (goods and services) grew by an annual average in volume terms of 5.4 per cent while the OECD average was 7.7 per cent. Many advanced countries had faster export growth than Ireland during this period including the UK (8.1 per cent), Denmark (6.3 per cent) and Finland (8.8per cent).

The ability to attract FDI is a key competitiveness outcome for the Irish economy. The Irish economy has had considerable success in attracting high-value FDI in recent years. There has been particular success in attracting high-value FDI in the 'life sciences' area – this includes pharmaceuticals, health care and biotechnology. The high quality of current FDI investments is indicated by the fact that over half of the new FDI projects in 2006 had salary levels in excess of €42,000. Employment in

16. Data on export market share taken from the Quarterly Economic Commentary, Summer 2007.

IDA Ireland supported companies had been fairly stable since 2002 and increased by 2.9 per cent in 2006 to around 135,500.

While Ireland faces increasing competition for FDI, its share of US investment has in fact increased during the current decade, as has been highlighted by Gray (2008). Ireland's share of the stock total US FDI worldwide has increased from 2.7 per cent in 2000 to 3.5 per cent in 2006. Ireland's share of US FDI in Europe also increased from 5.2 per cent in 2002 to 6.7 per cent in 2006. In relation to manufacturing investment Ireland's share of US FDI in Europe has increased from 5.8 to 9.7 per cent[17]. Most of the increases took place between 2000 and 2002.

Indecon recently undertook a survey of a sample of 41 US firms in Ireland to assess the impact of Ireland's competitiveness on the prospects for investments. The survey found that 15 per cent were considering additional major investment in Ireland. The other 85 per cent were considering ongoing investment in their existing Irish plants. At the same time around 9 per cent were considering relocating all of their Irish operations.

Another indicator of competitiveness is success in attracting visitors. Tourism numbers and revenue have continued to grow. Between 2003 and 2007, visitor numbers increased by 5.4 per cent annually and revenue by 4.8 per cent (in nominal terms). Ireland's core overseas tourism markets are the UK, US, Germany and France. Ireland's share of the UK market peaked in 2003 and has since declined. Ireland's market share in the US and France has been broadly stable and there was a modest increase in German market share. Ireland's continuing success in attracting visitors is a positive indicator of competitiveness. Continued success in this sector cannot be taken for granted.

1.6.7 Assessment of Competitiveness

The Irish economy has experienced a loss of cost competitiveness in the current decade. Wage and price growth have exceeded increases among Ireland's trading partners. The level of consumer prices in Ireland is well above (by 19 per cent in 2006) the EU (15) average. Many non-wage costs, including electricity, waste and commercial rents are high by international standards. Rising congestion is another competitiveness concern. The level of wage costs in Ireland appears to be similar to the UK and some of the other advanced European countries. Since the final quarter of 2000, the Central Bank's real Harmonised Index of Competitiveness – a measure that incorporates movements in Ireland's average trade-weighted exchange rate and in relative consumer prices – has appreciated by 36 per cent. The recent strengthening of the euro against sterling is a further competitiveness pressure, particularly for indigenous industry, while the depreciation of the dollar against the Euro may make the attraction of inward investment more difficult.

In the process of catching up, it is to be expected that wages and prices will show above average increases. Given the level of wages in Ireland at the end of the 1990s and the performance of the economy, some loss of cost competitiveness was not problematic and indeed a necessary part of the adjustment process in the context

17. These data are taken from the US Bureau of Economic Analysis, www.bea.gov.

of strong economic growth. Higher wages have supported the growth of domestic demand and thereby stimulated the rise of domestic services and economic growth. The economy has grown strongly despite the loss of competitiveness with strong growth in GNP and GNP/GNDI per capita; near full employment has been sustained. Export growth has slowed but there has been continuing success in attracting high level FDI. Services exports have grown very strongly and total exports showed a substantial increase of 6.6 per cent in 2007.

While to date there is not strong evidence of negative effects from the loss of cost competitiveness, looking ahead there are reasons to be concerned that further loses of competitiveness pose risks to the economy. First, the level of wage costs is no longer low by EU standards and price levels are well above average. Future increases cannot be viewed as part of 'catching up'. Second, in the labour market, as in other markets, there is a risk of overshooting. Third, growth in recent years has relied heavily on domestic demand and construction; household debt has grown at a rate that cannot be sustained. A large balance of payments deficit has emerged. If future growth is to be sustainable it will need to have a larger component that is derived from growth of net exports; hence future growth is likely to be more affected by changes in cost competitiveness than has been the case in recent years. Ireland faces the challenge of reorienting the economy towards somewhat more export-led growth without any immediate prospect of an easing of the strong value of the euro.

1.7 The Public Finances

This section examines recent trends in taxation, public expenditure, institutional reforms and the overall approach to the public finances in an uncertain economic environment.

1.7.1 Recent Trends

Revenue

After 2000 the tax share of GNP initially declined by three percentage points of GNP but has been reversed in the years since 2003 (Figure 1.18). Looking back over the past 10 years it is of interest to note that the tax share of GNP now is approximately the same as 10 years ago. The tax share of GNP in 2007 was 35.4 per cent according to the Department of Finance's budgetary data. When non-tax revenue is included, total current revenue reached 37 per cent of GNP in 2007.

GDP is the standard measure used in measuring the size of taxation and expenditure relative to the size of an economy. However in the case of Ireland, GNP is a more appropriate measure. GNP excludes the profits of foreign-owned multinationals in Ireland which for the most part are not part of Ireland's tax base. However these profits are part of the tax base insofar as corporation tax is concerned and substantial revenue is provided from this source. Therefore to some degree GNP is an understatement of Ireland's total tax base but to a lesser degree than GDP is an overstatement. In 2006 IDA Ireland companies paid an estimated €2.8 billion

in corporation tax, equivalent to 1.9 per cent of GNP. Excluding these taxes, the tax share of GNP in 2006 was 34.3 per cent.

A slowdown in revenue growth was evident during 2007 and has continued in 2008. Stamp duty and capital gains tax revenue for the period January to April 2008 declined by over 40 per cent compared to the same period in 2007 while there were smaller falls in VAT (0.6 per cent) and corporation tax (4.7 per cent). Income tax revenue for this period was up 2.8 per cent.

While the level of the total tax share has been fairly stable, there have been substantial changes in the composition of tax revenue. The share of income tax has fallen substantially with a reduction in its share of central government tax revenue of almost seven percentage points since 1997. There have been substantial increases in the share of revenue from capital taxes (mostly capital gains tax) and stamp duties. The share of corporation tax in total revenue also increased by one and a half percentage points. The growth of stamp duty revenue and to a lesser degree capital gains tax is a reflection of the property boom.

The structure of Ireland's tax revenue continues to have distinctive characteristics.. The most substantial differences are in regard to taxes on goods and services and social security contributions. Ireland continues to have a relatively high reliance on indirect taxes (taxes on goods and services) as noted in the previous section, with almost 38 per cent of Irish tax revenue from this source compared to an EU (15) average of 30 per cent. Ireland's social security contributions from both employers and employees are substantially lower than the EU (15) average. Despite Ireland's relatively low corporation tax, Ireland derives a higher share of revenue from corporation tax (11.2 per cent) compared to the EU average (8.6 per cent). The share of Ireland's tax revenue from property tax (around 8 per cent) is also somewhat higher than the EU (15) average (around 5 per cent). This may seem surprising given the absence of a property tax on residential property in Ireland. The above average contribution of property tax in Ireland stems from stamp duty (OECD, 2007e).

Figure 1.18 Total Current Revenue and Total Government Expenditure as a Percentage of GNP, 1995-2007

Source Department of Finance (2007), *Budgetary and Economic Statistics.*

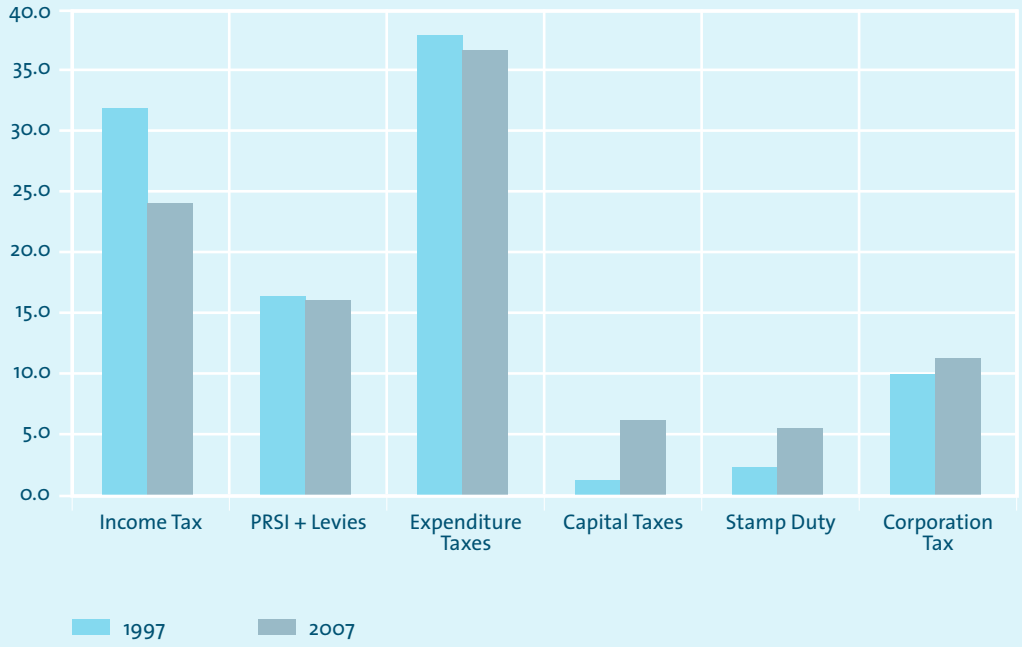
Expenditure

There has been an increase in total public expenditure relative to the size of the economy in recent years. Current expenditure on services and social transfers (gross current supply services expenditure) as a share of GNP increased by almost six percentage points between 2000 and 2007.

If public expenditure is measured in terms of changes on a year-to-year basis, there is evidence of considerable volatility. In 2001 current supply services expenditure rose by almost 20 per cent in nominal terms (13 per cent in real terms, using the GNP deflator) while its growth fell sharply in subsequent years. Growth has been less volatile under *Towards 2016*, with real increases in current supply services expenditure of 9 to 12 per cent in nominal terms. The budgeted increase in current expenditure for 2008 is 9.4 per cent in nominal terms (6.6 per cent in real terms)

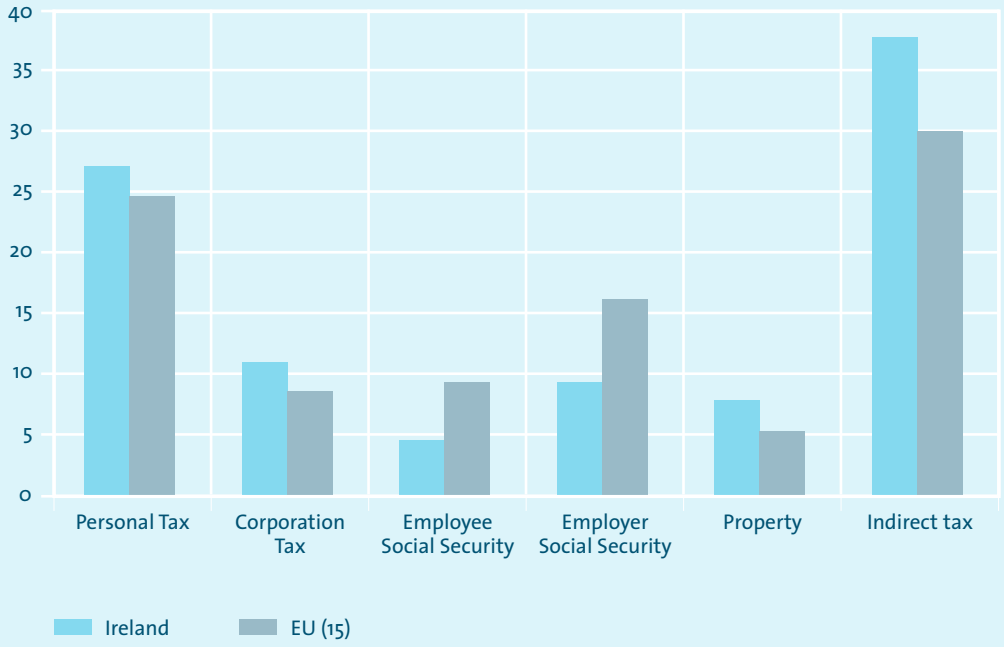
In relation to the composition of expenditure, in 2007, health, education and social welfare together represented 78 per cent of current supply services expenditure. The largest category was social welfare (32.5 per cent of expenditure), followed by health (29.3 per cent) and education (16.2 per cent). A further 6.6 per cent of expenditure was on security (gardaí, army, prisons, and legal services) and 6.7 per cent on 'economic services' (promoting industry etc).

Figure 1.19 Composition of Central Government Tax Revenue (percentage of total), 1997 and 2007



Source Calculated from Department of Finance, Exchequer Statements, 1997 and 2006.

Figure 1.20 Composition of Tax Revenue, Ireland and EU (15) 2005 (percentage of total)



Source OECD (2007), *Revenue Statistics 1965-2006.*

Capital expenditure has been more volatile than current expenditure. Following double digit increases in real terms in 2000 and 2001, there were reductions in real terms in 2003 and 2004. This volatility partly reflects expenditure outturns falling below allocations. The level of exchequer capital expenditure on the public capital programme in 2007 was 4.9 per cent of GNP and the planned level of expenditure for 2008 is 5.1 per cent of GNP. These expenditure levels approximate to the level of capital expenditure that the Council had recommended in the NESC Strategy 2006 report (5 per cent of GNP).

Public Finance Balance

With strong revenue buoyancy, the public finances have been in surplus in recent years up to 2007, with both a large current account surplus and an overall surplus after taking account of capital expenditure. An unexpectedly large increase in revenue in 2006 resulted in a general government balance (GGB) of almost 3 per cent of GDP in that year. There was a reduction in this balance in 2007 with substantial increases in both current and capital expenditure; the GGB surplus fell to 0.5 per cent of GDP in 2007. For 2008, there is a planned deficit on a GGB basis of 0.9 per cent of GDP (€1.8 billion). The planned exchequer deficit[18] is 2.9 per cent of GNP (€4.9 billion) and the current budget remains in surplus, with a projected surplus of 2.8 per cent of GNP (€4.8 billion). The current account balance, as conventionally measured by the Department of Finance, treats capital tax revenue as current income. An alternative definition of the current account balance used in the national accounts does not treat capital tax revenue as current income and also makes other adjustments. Using the national accounts definition the projected current account balance in 2008 is 2.4 per cent of GNP.

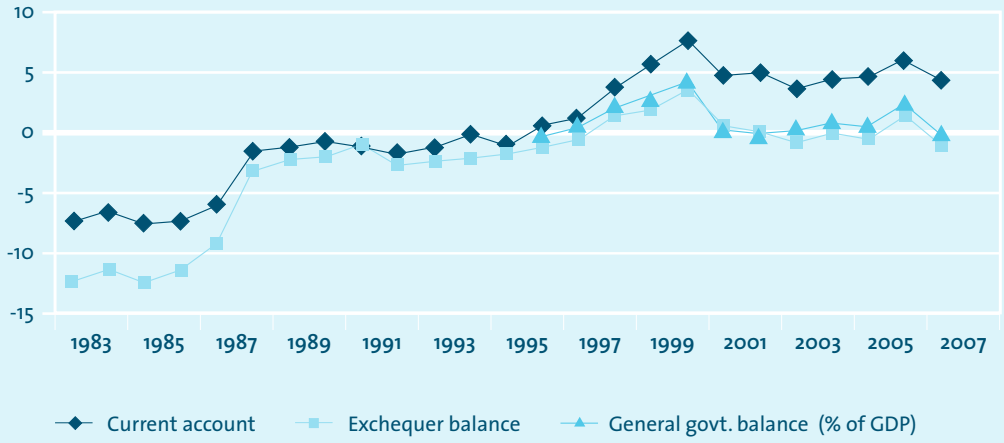
Looking back, the current level of borrowing is relatively low compared to those experienced during the 1980s. Exchequer borrowing as a percentage of GNP reached over 14 per cent in 1982. The first part of the 1980s was characterised by both high exchequer borrowing and large current account deficits.

The exchequer returns up to April 2008 imply that the financial outturn for 2008 will be a larger deficit than planned in the budget. Tax revenue for the period January to April 2008 was €736 million (approximately 0.4 per cent of GNP) less than that expected by the Department of Finance for these months. Public expenditure for this period was €81 million (0.05 per cent of GNP) above the expected level of expenditure[19].

18. The exchequer balance refers to the overall financial balance of central government. It is the gap between revenue and expenditure, both current and capital. It is measured on a cash basis. The general government balance (GGB) as a percentage of GDP is the measure used by the EU and is used in defining obligations under the Maastricht Treaty. It measures the financial balance of the 'general government' sector as a whole and thereby encompasses central and local government. This measure disregards some transactions that affect the exchequer but are viewed as internal to the general government sector. In particular, exchequer contributions to the National Pensions Reserve Fund affect the exchequer but are not counted as part of GGB. This is the major source of difference between the GGB and the exchequer balance in Ireland at present.

19. The higher than expected expenditure in this period was due to higher than expected capital expenditure (€161 million higher than expected) while current expenditure for this period was below the projected level (by €80 million).

Figure 1.21 Current Account, Exchequer Balance and General Government Balance (percentage of GNP), 1983-2007



Source Department of Finance (2007), *Budgetary and Economic Statistics* and *Budget 2008*.

1.7.2 International Comparisons

It is of interest to place Ireland's public expenditure in the context of other European countries. In drawing comparisons of public expenditure between Ireland and other EU countries, GDP is used for other countries and GNP for Ireland. The level of public capital expenditure in Ireland (around 5 per cent of GNP) is among the highest in the EU and approximately double the EU (15) average (2.5 per cent of GDP). The level of current expenditure is relatively low in Ireland compared to other EU countries and around seven percentage points less than the EU (15) average.

There are many factors that influence the level of public expenditure. The measures of expenditure presented in Table 1.17 illustrate some of the relevant influences on current expenditure; Ireland benefits from a relatively low level of national debt and this results in relatively low interest payments relative to the size of the economy. The level of transfer payments in Ireland is relatively low; the key factor here is Ireland's relatively young population. This is also influenced by relatively lower benefit levels, particularly pensions. On the other hand, Ireland devotes relatively more resources than the norm in EU countries to universal child income transfers. Taken together, interest and cash transfer payments account for around five of the seven percentage point difference in public expenditure between Ireland and the EU (15) average.

The level of government consumption is shown in Figure 1.22 below; this is current expenditure of goods and services by the government sector; it excludes interest, transfer payments and subsidies and is a measure of public expenditure on services. Using this measure of services expenditure, Ireland's expenditure in 2007 at 19.3 per cent of GNP was close to but slightly less than the EU (15) average (20.7 per cent of GDP). There is considerable variation in this measure of expenditure across countries, ranging from over 26 per cent in Sweden to just over 15 per cent in

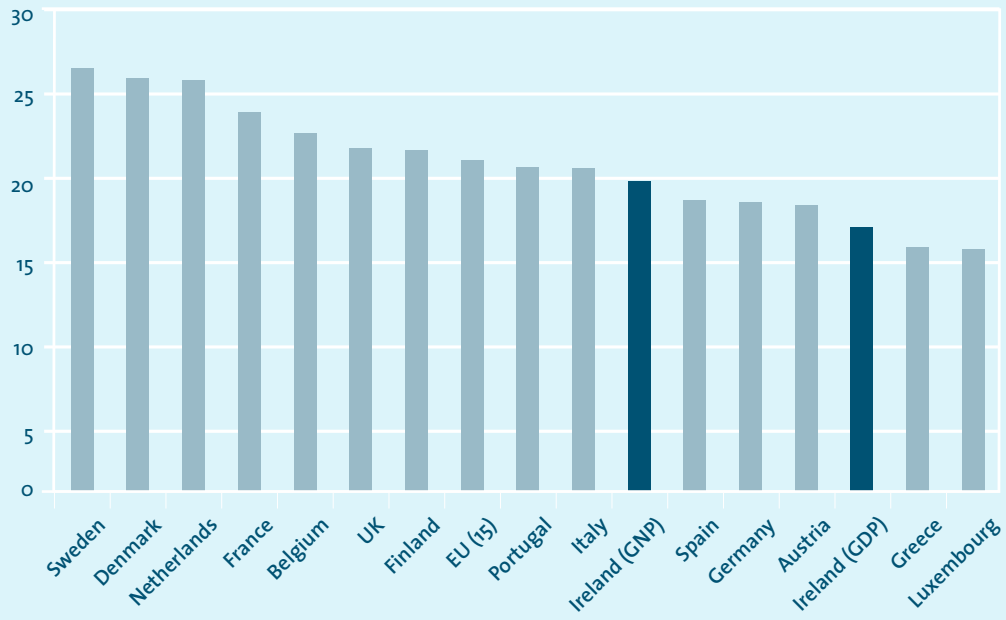
Luxembourg. Ireland's expenditure on this measure was ranked tenth in the EU (15). It was noted above that corporation taxes on the profits foreign-owned companies that are not included in GNP mean that the use of GNP somewhat overstates Ireland's share of public expenditure relative to other countries. If account is taken of this factor, this would further reduce the relative position of Ireland's core public expenditure on services in the EU (15). This is consistent with the recent findings by the OECD (2008) that employment in Ireland's public service is relatively low compared to other OECD countries.

Table 1.16 Current Expenditure Measures as a Percentage of GDP, 2007

	Total Current	Current Non-interest	Current less Interest and Transfers
Sweden	50.4	48.8	33.2
Denmark	48.7	47.4	32.6
Netherlands	42.9	40.7	29.9
France	48.9	46.3	28.5
Belgium	45.7	41.9	26.4
UK	40.7	39.0	26.4
Finland	45.0	43.6	28.3
Portugal	42.1	39.2	24.1
Italy	44.3	39.6	22.3
Ireland (GNP)	35.7	34.6	22.7
Spain	33.3	31.7	20.0
Germany	41.2	38.5	21.1
Austria	44.9	42.3	24.3
Ireland (GDP)	30.5	29.6	19.4
Greece	38.0	34.1	17.7
Lux	32.5	32.3	19.2
EU (15)	42.6	40.0	24.6

Source *European Economy*, Statistical Annex, Autumn 2007 and NESC calculations.

Figure 1.22 Government Consumption as a Percentage of GDP, 2007



Source See Table 1.17

There are a number of reasons why public expenditure on services in Ireland could be relatively low among EU countries. Ireland's expenditure on defence is lower than the norm in EU countries. Ireland's relatively young population would be expected to reduce the need for expenditure on health and on care for older people. However, Ireland's expenditure on health is not low in an EU context. Ireland's expenditure on education is relatively low compared to other EU countries.

A comparison of expenditure on social benefits in Ireland and the EU (15) is shown in below. Social benefits cover primarily public expenditure in cash or in kind to households or individuals to relief the burden of specified risks such as illness or old age. Private expenditure is included where this is undertaken by a *third party* – not by the household itself – and there is no simultaneous equivalent contribution by the household[20]. It can be seen that Ireland's expenditure on social benefits is substantially lower than the EU (15) average. Expenditure on old age is the dominant influence on this. Excluding expenditure on old age, social expenditure in Ireland in GNP terms is essentially the same as the EU average. A comprehensive discussion of Ireland's expenditure on social protection in a comparative context is provided in the NESC report, *The Developmental Welfare State*. Updated comparisons of Ireland's commitments across each of dimensions of social protections are provided in Chapter 6 of this report.

20. Pension payments by private and public employers are included in this definition.

Table 1.17 Expenditure on Social Benefits as a Percentage of GDP/GNP in Ireland and the EU (15), 2005

	Ireland (GDP)	Ireland (GNP)	EU (15)
Sickness/Health care	6.9	8.2	7.7
Disability	0.9	1.1	2.1
Survivors	0.8	1.0	1.2
Family/Children	2.5	3.0	2.2
Unemployment	1.3	1.5	1.7
Housing	0.5	0.6	0.6
Other	0.3	0.4	0.3
Sub-total of above	13.2	15.7	15.8
Old Age	3.7	4.4	11.0
Total Social Benefits	**17.0**	**20.2**	**26.7**

Source Eurostat (2008), *Social Protection Expenditure and Receipts* and NESC calculations

Tax expenditures are an alternative to conventional public expenditure and Ireland has a relatively high reliance on these, including for the purposes of social protection. An OECD study estimated that in net present value terms, tax expenditure on pensions in Ireland represented 2 per cent of national income, the highest level in the OECD (Yoo and de Serres, 2004). These were designed to act as a substitute for a publicly provided earnings-related pension.

While it is of some interest to compare public expenditure levels across countries expenditure levels should not be viewed as a target. The ambitious plans set out in *Towards 2016* will require higher levels of expenditure if they are to be realised. However realising the vision of *Towards 2016* will depend at least as much on the effectiveness of the public service as the level of public expenditure.

1.7.3 Institutional Reforms to the Public Finances

The budget and estimates process is being reformed at present. For the 2008 budget, there was an integrated presentation of the public expenditure and taxation sides of the process that replaced the traditional separate presentation of public expenditure estimates and the budget. From 2007, ministers have been required to produce output statements to accompany their public expenditure estimates giving information on performance. From 2008 these output statements will include information on outturns against performance.

A series of reforms have been introduced to the management of capital programmes. Many major capital projects are now coming in within budget and on or ahead of schedule.

The Government introduced a Value for Money and Policy Reform Initiative in 2006. This includes the preparation of formal expenditure reviews. All formal value for money reviews must be published and presented to the relevant Select Oireachtas Committee for consideration. A Central Expenditure Evaluation Unit has been established in the Department of Finance to promote best practise in the evaluation, project appraisal and compliance by departments and agencies with value for money requirements.

Pay increases under *Towards 2016* for each sector, grade and organisation are subject to verification of co-operation with flexibility and ongoing change. A potentially significant development is the proposed increased use of open recruitment at senior levels across the public service.

1.7.4 Outlook for the Public Finances

The Department of Finance has published projections in the 2008 budget for the economy and the public finances for the years to 2010. The Department projects GNP growth of 2.8 per cent for 2008, 3.3 per cent for 2009 and 3.9 per cent for 2010. The Department's projections for the public finances envisage that the General Government Balance (GGB) would maintain a modest deficit of around 1 per cent of GDP out to 2010. The likely deficit for 2008 will be higher than planned, as noted above. Public capital investment (excluding public private partnerships) would be maintained at close to 5 per cent of GNP. Tax revenue would grow in line with GNP. Within the Department's outlook, the burden of adjustment would be borne by current expenditure. The nominal growth of current expenditure (gross expenditure on services and transfers) would fall from 9.4 per cent in 2008 to 4.8 per cent in 2009 and 4.5 per cent in 2010.

This slowdown in growth implies a sharp change in experience from the past several years. If account is taken of growth in numbers claiming social transfers and provision is made for some growth in public service pay and levels of transfers, then in the absence of radical innovation to the public service or departures from the established norms in managing the public finances, there is little if any provision in these projections for improved services. When account is also taken of population growth, real service provision on a per capita basis could deteriorate. These technical and policy assumptions would imply that for a period that there would not be progress on the plans for improved services as set out in *Towards 2016* and the Programme for Government.

1.7.5 Conclusion

In its last Strategy report the Council set out two key principles on the management of the public finances. First, the public finances should be managed on a basis that is sustainable in the long term. Second, the Council emphasised that the public finances should not be managed in a way that magnifies the economic cycle. These principles continue to be relevant.

There are uncertainties to the current economic situation and economic growth over the next few years will be slower than in previous years. In this economic environment the Council advocates that a long term approach to the public finances be sustained. While migration will fluctuate, all of the CSO's scenarios are of substantial growth in population in the coming decades. There is a deficit in infrastructure even for the current population. One effect of the current downturn is that it will reduce cost pressure on investment in infrastructure and social housing. The Council recommends that the current high level of investment in infrastructure should be sustained. A long term approach to the public finances also implies planning for the eventual ageing of the population.

In relation to current expenditure, the Council also advocates sustaining the development of key strategies for development of public services, including the disability and health strategies. With slower growth in revenue it becomes even more important to achieve increases in productivity in the public services and to secure value for money in the provision of public services. The Council is of the view that there is real scope to improve value for money through, among other methods, the use of improved organisational practises in public services. There is also a need to examine more rigorously the scope to eliminate and change programmes that are no longer meeting current needs. These recommendations on public expenditure are placed in a wider context in Chapter 7.

1.8 Emerging Challenges

This section considers emerging challenges that will affect the development of the economy in the coming years:

- Turbulence in financial markets and the US slowdown;
- The adjustment in the housing market;
- Climate change policy; and
- Global oil market.

1.8.1 Turbulence in Financial Markets and the US Slowdown

Turbulence in financial markets was initially triggered by losses on US sub-prime mortgages. The IMF's Global Financial Stability Report shows how the credit crisis is spreading beyond the US sub-prime market to the prime residential and commercial real estate markets, consumer credit, and corporate credit markets. Financial institutions in other countries have also been affected. The IMF estimates that there will be losses of $945 billion on US debt.

Origins

Before discussing the possible implications of these developments it is helpful to consider the origins of the current concerns. These concerns can be related to the financial imbalances that have been a feature of the global economy for several years. The US current account deficit reached an unprecedentedly high level of 6.2

per cent of GDP in 2006. The deficit fell to 5.6 per cent of GDP in 2007 and a further fall is expected in 2008.

The US current account deficit means by definition that US investment exceeds its level of savings (see Section 1.2 above). US savings are now at an unusually low level. However an influential interpretation of the global financial imbalances by Bernanke in 2005 (now chairman of US Federal Reserve) argued that these imbalances are related to the financial crisis experienced by Asian countries in the late 1990s. In response to this crisis Asian countries choose (or in some cases were forced) to adopt conservative financial policies including large accumulation of foreign reserves. These countries have high savings rates and the net effect of their policies was to develop large current account surpluses. If some countries are developing large surpluses then by definition other countries must increase their deficits. Bernanke referred to a global savings glut.

If this perspective is valid, the question arises as to why it was the US rather than other countries where these deficits occurred. Bernanke pointed out that there were in fact increased deficits in other countries although smaller in both absolute and relative terms. Bernanke attributed the particularly large flow of the surpluses to the US to several factors. In the 1990s the US high-tech boom attracted investment to the US (and drove up equity values). Bernanke also cited sophistication of US financial markets (which facilitated household access to credit) and the special status of the dollar in the global financial system. The special status of the dollar may have meant that the savings outflow was felt disproportionately on US interest rates. In recent years the savings surplus flowing into the US has underpinned the housing boom, including sub-prime lending. The US public finances were not instrumental to the emergence of the deficit in balance of payments in the 1990s but the public finances are now in deficit and this is now part of the low overall US savings rate. The public finance deficits served to modulate the US downturn of 2001.

The US balance of payments deficit has meant that the US has contributed disproportionately to global demand for several years. Reducing the deficit will mean reducing the relative contribution of the US to global demand. It can occur through some combination of slower growth in domestic demand in the US and faster growth in the demand elsewhere. The IMF recently called for policies to stimulate domestic demand in other countries.

A paper presented at the 2008 American Economic Association conference compared the recycling of surpluses in the current situation to the 1970s petro-dollar recycling:

> While much praised at the time, 1970s petro-dollar recycling ultimately led to the 1980s debt crisis, which in turn placed enormous strain on money center banks. It is true that this time, a large volume of petro-dollars are again flowing into the United States, but many emerging markets have been running current account surpluses, lending rather than borrowing. Instead, a large chunk of money has effectively been recycled to a developing economy that exists within the United States' own borders. Over a trillion dollars was channeled into the sub-prime mortgage market, which is comprised of the poorest and least credit

> worthy borrowers within the United States. The final claimant is different, but in many ways, the mechanism is the same (Reinhart and Rogoff, 2008: 11).

It is widely acknowledged that inadequate regulation and flawed practises were important factors in the development of the problems in credit markets. Krugman has commented on the role of regulation in the US as follows:

> Wall Street chafed at regulations that limited risk, but also limited profitability. And little by little it wriggled free – partly by persuading politicians to relax the rules, but mainly by creating a 'shadow banking system' that relied on complex financial arrangements to bypass regulations designed to ensure that banking was safe (Krugman, 2008).

The problems in financial markets show that the liberalisation of these markets over the last two decades may have reached a plateau. Long-term benefits to be anticipated from the 2007/08 financial crisis include significantly improved regulatory regimes governing financial institutions globally and stronger ethical standards governing high-level remuneration practices in financial service companies. Some of the latter have enabled individuals 'earn' bonuses at levels that are multiples of the industry's own average annual earnings, for introducing strategies that boosted short-term profits but made it exceptionally difficult to assess the longer term risks.

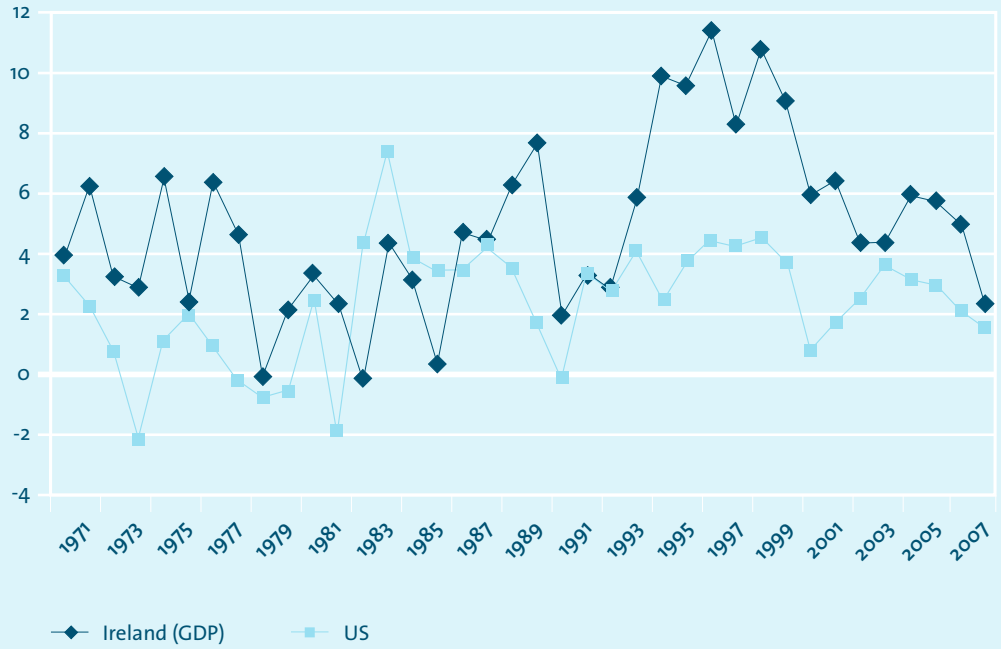
The problems with financial institutions are most acute in the US but are also evident in European countries. Honohan (2008) has drawn attention to the fragmented nature of banking supervision in the euro area. While monetary policy has been centralised in the ECB, responsibility for prudential supervision of banks remains at national level. There is cooperation among national regulators in the euro area, but Honohan regards current arrangements as inadequate and advocates a more formal established international structure to strengthen banking regulation in the euro area.

Implications

The impact of the credit problems on the real global economy is not yet clear. The IMF's Global Economic Outlook published in April 2008 has substantially revised downwards its own earlier forecasts published in January. The IMF now expects that the US economy (GDP) will grow by just 0.5 per cent in 2008 and 0.6 per cent in 2009. It also expects slow growth in the euro economy, with GDP in 2008 expanding by just 1.4 per cent and by 1.2 per cent in 2009. The UK economy is expected to grow by 1.6 per cent in 2008 and 2009. In its Spring forecasts, the European Commission forecasts GDP growth in the US economy of 0.9 per cent in 2008 and 0.7 per cent in 2009. For the euro area the Commission forecasts growth of 1.7 per cent in 2008 and 1.5 per cent in 2009.

The IMF expects that there will be a recovery, albeit a slow one, in 2009. At the press briefing on the IMF report it was stated that it would be a reasonable expectation that US growth would be above potential by 2010. The chairman of the Federal Reserve has referred to his concerns with low probability, highly negative outcomes and monetary policy is guided by the desire to ensure that these do not occur.

Figure 1.23 US and Irish GDP Growth, Annual Percentage Change, 1971-2007



Source *European Economy*, various issues.

Implications for Ireland

In discussing the implications of current developments there is a need to distinguish between the direct effects of the financial markets on the Irish economy and the wider effects arising from a slowdown in the US and global economy. Financial market turbulence directly affects the Irish economy through its effect on interest rates and availability of credit.The Central Bank, in its Spring 2008 Quarterly Bulletin, reported a tightening of credit standards on loans to households and enterprises as well as a reduced level of loan demand from enterprises and households. Higher interbank interest rates have led to modest increases in interest rates to business. The Central Bank also found that mortgage rates seemed somewhat insulated from the financial market turbulence due to competition among mortgage providers and the high percentage of tracker mortgages based on the ECB rate. However in April 2008 there were modest increases in mortgage rates. The Central Bank also notes that the yields on Irish government bonds have risen relative to Germany.

A US downturn can affect the Irish economy through a number of channels. It would affect Irish exports to the US and other countries. Another significant channel is through the FDI that Ireland receives from the US. It can be seen from the figure below that there appears to be an association between Irish and US GDP growth although it is by no means a fully predetermined relationship.

The 2005 ESRI Medium Term Review (MTR) devoted considerable attention to the potential implications of a correction of the financial imbalances in the global economy. This MTR included both high-growth and low-growth scenarios. The low-growth scenario was based on a reduction of the US balance of payments deficit and involved several years of slower US growth. In this scenario it was projected that Irish GNP would grow by close to 3 per cent for several years (to 2012). This would underpin increased living standards but would be below what is considered to be the Irish economy's potential growth. This scenario was projected to lead to some increase in Irish unemployment to a rate of over 7 per cent in 2012.

Experience of Previous Downturns

Some insight into the possible implications of current developments can be gained by considering the previous Irish experience of US and external downturns. The most recent US downturn was in 2001 and 2002, arising from the fall in high-tech investment. This was associated with slower Irish export growth and slower overall economic growth. However, it did not pose any great problems for the economy. It occurred after several years of the exceptional growth of the 1990s. Continuing strong growth of domestic demand sustained economic growth and employment growth. The success of services exports meant that there continued to be export growth (at a slower rate), despite the downturn in the ICT industry.

In the early 1990s the US and several other countries experienced recession. In Ireland this followed the initial growth spurt that occurred during the first of the social partnership agreements. Growth of Irish GNP slowed noticeably in the early 1990s and there was little employment growth. It was during this period that there was much concern about jobless growth. With strong growth in the labour force, unemployment grew sharply. Looking at the international environment, this period can be considered to have been relatively benign for the Irish economy. There was above average economic growth and Ireland avoided the falls in employment that occurred in the US and particularly the UK. Exports grew strongly at an annual average rate of almost 10 per cent in volume terms. The German economy was still experiencing its post-reunification boom and this was one factor supporting Irish export growth. In addition there was a strong relative export performance with Irish exports growing at a faster pace than Ireland's export markets so the strong export growth reflected underlying economic strengths in the Irish economy Domestic demand, particularly investment, was weak in Ireland during this period. One factor that influenced this was the fairly high real interest rates, again related to the German economy. This period also saw a currency crisis in 1992.

Going back further, the Irish economy had a very negative experience in the first half of the 1980s. This experience was related to the global downturn experienced following the second oil crisis in 1979. However, the Irish economic experience in this period was considerably worse than in other developed countries. Domestic policy, including the legacy of earlier domestic decisions, led to very poor outcomes as discussed in several NESC reports. There was a lack of consistency across macroeconomic policy, the exchange rate and the evolution of incomes and this period was characterised by low growth, high inflation and high unemployment.

This brief discussion of previous downturns confirms that the Irish economy is significantly affected by the US and other economies. However, it also illustrates that the Irish economy has fared better in some recessionary periods than others and points to the role of domestic policy in achieving this. The role of policy in steering the economy through changing environments will be explored in Chapter 2.

1.8.2 The Construction Sector and Housing Market

The short term outlook for the Irish economy is dominated by the housing sector, which accounts for around 15 per cent of value-added in the economy. Housing output fell from 93,000 completions in 2006 to 78,000 in 2007. Forecasts of housing output for 2008 are for completions in the region of 40,000 to 50,000. This fall is being factored into growth forecasts and is the primary factor behind the sharp fall in the growth rate for 2008.

The decline in house building will have a significant impact on employment. In fact, the ESRI is projecting no net growth in employment in 2008 while the Central Bank projects growth of just 0.5 per cent. With little if any net employment growth there will be a rise in unemployment. Based on the trend in the live register, the CSO has estimated that the level of unemployment has risen from 4.6 per cent in the final quarter of 2007 to 5.5 per cent in April 2008.

House prices have fallen, with affordability for first-time buyers further improved by changes in mortgage interest relief and stamp duty. However, prices remain well above building costs, other than land costs, and are above the market clearing level. It has been argued by Krugman (1994) that the sluggish adjustment of prices that often occurs in housing downturns is a result of 'near rational' behaviour. When there is a substantial stock of unsold housing, it is rational to reduce prices. Yet house prices do not fall quickly to the market clearing level:

> The seller of a house possesses an asset which is at least slightly differentiated in location, in décor, in amenities from any other house. The higher the price he demands, the longer he can expect the house to remain unsold, but there is no unique price at which the house can be sold at all... the seemingly huge irrationality of a market full of unsold houses could be the result of thousands of 'near-rational' decisions of potential sellers to hold out for just a little more than they should have' (Krugman, 1994: 211-212).

Further falls in house prices in Ireland would be desirable. This would enhance affordability and encourage more buyers to return to the market. Some developers have recently announced substantial price cuts and this is a welcome development

1.8.3 Climate Change

The recently published Stern review concluded that:

> The scientific evidence is now overwhelming: climate change presents very serious global risks and it demands an urgent global response (Stern, 2006: vi).

The report draws on the most recent scientific evidence and projects that under a 'business as usual' scenario, the global concentrations of greenhouse gas emissions could treble by the end of the century. This is estimated to give rise to at least a 50 per cent increased risk of a temperature increase in excess of five degrees in the long term. 'This would lead humans into unknown territory. An illustration of the scale of such an increase is that we are now only around five degrees warmer than in the ice age' (Stern, 2006: iv). Stern emphasised the importance of timely action: 'The investment that takes place in the next 10-20 years will have a profound effect on the climate in the second half of this century and in the next' (Stern, 2006: vi).

The European Council adopted a core climate change objective of limiting the rise in global temperature to two degrees. If achieved, this would greatly reduce the risks of serious negative impacts from global warming, although it is not possible at this stage to eliminate all effects and risks of global warming. The scientific consensus is that to achieve this objective it will be necessary to first stabilize and eventually reduce greenhouse gas (GHG) emissions. Based on the scientific evidence, the Commission's position is that global GHG emissions will need to be cut by 50 per cent by 2050. Allowing for increases in developing countries, the Commission considers that this will require cuts in emissions in industrialised countries of 60 to 80 per cent by 2050. The European Council has affirmed the goal that developed countries should reduce emissions by 60 to 80 per cent by 2050.

A long term reduction in greenhouse gas emissions by 60 to 80 per cent will have far reaching economic and social effects. If this goal is to be compatible with continuing economic development, it will require a decoupling of economic growth and fossil fuel consumption. The move to a low carbon economy has been described as a 'new industrial revolution'. There are huge enterprise opportunities in this revolution. These include opportunities in renewable energy including wind and wave energy as well as energy crops[21].

Agreement was reached in Bali in December 2007 to commence international negotiations on a new climate change agreement to replace the existing Kyoto accord that set targets for the 2008 to 2012 period. The EU has made a commitment that the EU will reduce emissions by 20 per cent by 2020 compared to 1990 levels as a first step toward longer term reductions.

The Commission has announced initial proposals for the implementation of this target. A reformed emissions trading scheme (ETS) will be a key part of achieving the planned reductions. This covers large-scale emitters including electricity uses and cement manufacturers. It is intended that the ETS will cover more than 40 per cent of emissions. A cap will be set for emission reductions. The permits will be

21. There are significant concerns regarding the sustainability of biofuels in the light of global food shortages. The growth of energy crops for heating purposes is more efficient in the use of land and more sustainable.

distributed to industrial users; these permits can then be traded among users. In the reformed scheme, the Commission rather than Member States will undertake this allocation. Some of the permits will be auctioned. It is planned to achieve reductions in emissions of 21 per cent compared to 2005 levels through the ETS.

For emissions not covered by the ETS targets there is an overall target of reducing emissions by 10 per cent compared to 2005. Targets have been proposed for each Member State. When finalised, they will be legally binding commitments. The Commission has proposed that Ireland adopt the maximum target for the non-ETS sectors of a reduction in emissions of 20 per cent. Only Luxembourg and Denmark have the same target. Ireland's high GDP per head is the basis for this target. The qualifications regarding the use of GDP for Ireland were not taken into account. Nor were the relatively large size of Ireland's agricultural sector and the substantial share of emissions from this sector in Ireland. The target of reducing emissions by 20 per cent in Ireland in sectors beyond those covered by the ETS would be a challenging one, bearing in mind that the reductions in emissions achieved from renewable electricity and improved efficiency in large industry will not count towards this target.

The Commission has estimated that the direct economic cost of its proposal for the EU (27) as a whole at 0.6 per cent of GDP or €90 billion in 2020. This is not the net impact on GDP; it is the direct costs of investment and costs due to changes in operating and managing systems and so on. It is an indication of the additional resources that need to be directed toward reducing emissions and increasing the output of renewable energy. This cost estimate is on the basis of achieving all of the reductions in emissions within the EU. If account is taken of the possibility of achieving credit for reductions in non-EU countries, the costs are estimated to fall to 0.45 per cent of GDP. The Commission has also estimated the macroeconomic impact of its proposal; i.e., the net impact on GDP. This is estimated to be a reduction of between 0.35 and 0.5 per cent of EU GDP in 2020. In terms of growth rates, this means that for each year between 2013 and 2020, GDP growth would be reduced by from 0.04 to 0.06 per cent.

These cost estimates do not take account of the value of enhanced energy security. The estimates are based on an average oil price of around €55 per barrel in 2005 rising to €61 per barrel in 2020. If current high oil prices are sustained, this reduces the cost of the proposal as the opportunity cost of renewables is reduced relative to fossil fuels. In fact, the Commission has estimated that the economic impact of its proposal is substantially less than the impact of current high oil prices (European Commission 2008a and 2008b).

Ireland's target for greenhouse gas emissions by 2020 is still to be finalised. The target will pose considerable challenges. The move to a low carbon economy will also create many new economic opportunities and it is highly desirable that Ireland participates in this new industrial revolution.

There is also the commitment in the Programme for Government to reduce greenhouse gas emission by 3 per cent annually. This is even more ambitious than the target proposed by the EU Commission. A 3 per cent annual reduction over a five-year government term would imply reduced emissions of 16 per cent by 2012. This would require a huge acceleration of actions to reduce emissions.

1.8.4 Global Energy Market

There are risks to medium-term growth from the global oil market and other energy and commodity markets. The demand for energy is growing rapidly. It is estimated by the International Energy Agency (IEA) in its 2007 *World Energy Outlook* that, assuming a continuation of current policies and an expanding global economy (the IEA reference scenario), the demand for energy in 2030 will be 50 per cent higher than today; China and India together will account for 45 per cent of the increase in demand. This rise in energy demand poses huge environmental challenges particularly as a growing share of this demand will be in the form of coal. There is uncertainty regarding the future ability of the supply of oil to continue to meet the strong growth in demand. The supply of natural gas is also limited but the supply problems are less imminent than for oil.

There is increasing concern in relation to the phenomenon of peak oil. Peak oil refers to the situation in which global oil production reaches its maximum point and then declines. This is distinct from running out of oil – the point of peak production is expected to be reached long before oil runs out. Oil production has peaked and is now in decline in several countries and many experts believe that global oil production will also peak in the foreseeable future. There is considerable uncertainty about when this will occur. Many experts believe that it will occur within a decade while some believe it will be after 2030. Some experts initially predict a plateau rather than a peak in production.

The peak oil perspective has been developed by scientists and geologists who established an international association, the Association for the Study of Peak Oil and Gas. Peak oil has increasingly become a mainstream concern. In an address to the 2007 ASPO international conference, former US energy secretary James Schlesinger stated that 'we are all peakists now'.

The IEA advises the governments of the main oil consuming countries on energy policy. It does not believe that oil reserves pose any imminent constraint to production. Global oil production at present is around 85 million barrels of oil per day. The IEA's reference scenario projects that demand will rise to 116.3 million barrels of oil by 2030 per day, given current policies and assuming moderate growth in oil prices. It believes that oil reserves would be sufficient for production to reach this level if sufficient investment takes place although it says that there is considerable uncertainty as to whether this will occur.

Notwithstanding its view of the large potential increase in production up to 2030, the IEA has warned of risk of supply not keeping up with demand (at moderate prices) in the medium term. In an interview with the *Financial Times* its Chief Economist, Fatih Birol has summarised the situation in these terms:

> In the next seven to eight years we need to bring about 37.5 million barrels per day of oil into the markets for two reasons. One, the increase in demand, about one third of it, and the other two thirds to compensate for the decline in existing fields. We have looked at all the projects in the OPEC countries and the non-OPEC countries, all the producing countries in the world, at the 230 oil projects, on a field by field basis, how much oil will they bring to the markets for the next five to seven years. These are projects which are financially sanctioned projects. If they all see the light of day in a timely manner, they will come up about 25 million barrels

> per day. So 37.5 million on the one hand, what is needed, and what we expect is 25 million barrels per day, and that is in the case of no slippages, no delays in the projects, and everything goes on time, which is very rare. So there is gap of 12.5 million barrels per day (interview published on FT.com, 7 November 2007).

Fatih Birol goes on to explain that there are two ways in which this gap could be reduced. First, demand could be reduced through increased energy efficiency, biofuels and other means. Second, supply could be increased through much more investment in the oil producing countries. If the gap is not reduced he says that 'the wheels may fall off, we may end up with prices very high, which has implications of course for the economy, and other parts of the system'.

The future of oil supply is a risk to the economy's growth in the medium term. This is a significant issue that will be examined in greater depth in the Council's planned project on energy and climate change.

1.9 Conclusions

1.9.1 Employment, Income, Living Standards and Wealth

Up to 2007 the economy experienced continued strong employment growth, with annual employment growth of 3.3 per cent between 2000 and 2007. In 2008 there will be little net employment growth due to the fall in construction employment and possibly a substantial increase in unemployment.

There are numerous dimensions to income so this chapter considers a range of income measures. Here we focus on a few key measures. Median equivalised household disposable income – a comprehensive measure of household income that takes account of differences in household composition – has grown by an annual average of 2 per cent in real terms between 2000 and 2006. Over this period the incomes of the lower earning households exceeded the growth of the median so that the share of the population in households with below average income has fallen. This was mainly due to a fall in the share of older people with below average income.

The growth of real earnings peaked in 2001. In that year, real earnings after tax for a single person on average industrial earnings increased by over 7 per cent. Subsequent years were characterised by continuing real earnings growth at a more moderate rate. The past two years have seen slower real earnings growth, due to high inflation. Nominal earnings growth in this period, however, has continued to be high compared to other European countries. Tax reductions have continued to increase the real value of take-home pay and there were substantial increases in the value of mortgage interest relief in the 2007 and 2008 budgets to help compensate for the rise in mortgage costs.

Workers in the different sectors of the economy have had different experiences of earnings growth. The share of employees on low pay (below €10 per hour) declined between 2003 and 2006 but is still substantial at 18 per cent. There is some evidence, of an increase in income share by those at the top of the income distribution. Further research on Ireland's income tax data would be desirable to

clarify the extent to which the trends observed from the Revenue Commissioners' data represent a real shift in the income distribution.

The higher inflation experienced in recent years is of concern. Over the past year energy and commodity prices have added to inflationary pressures. This disproportionately affects people on low incomes. Forecasters are projecting that Irish inflation will moderate in 2008 and 2009 due to the strength of the euro, lower economic growth and moderation of mortgage costs.

There are factors beyond earned income that affect real living standards. In terms of cash benefits, Irish households with children typically compare favourably to other EU countries due to the relatively high level of child benefits. Other advanced EU countries enjoy significantly higher levels of public services and infrastructure provision. For example, much of Ireland's recent housing development has not facilitated satisfactory access to places of employment and public services. The cost of childcare in Ireland is relatively high which has a significant effect on some households. There is no overall measure that allows a comparison of a broadly defined social wage across countries.

Household debt has grown strongly but so have household assets. In 2005 household assets were worth more than five times household liabilities. A study produced by the World Institute of Development Economics Research (Davies *et al.*, 2006) using data for 2000 placed Ireland as the tenth richest country in the world in terms of net wealth. This study does not take into account asset accumulation since then but may give a reasonable indication of the underlying position[22].

1.9.2 Costs and Competitiveness

The Irish economy has experienced a loss of cost competitiveness in recent years, substantially exacerbated by the strength of the euro in recent months It is clear from the material produced by the National Competitiveness Council that many general business costs are now relatively high in Ireland. Ireland's wage costs (including social security costs) are comparable to some of the other advanced European countries; Irish labour costs are relatively lower in manufacturing. Some loss of cost competitiveness is not in itself a problem for the economy. Relatively strong wage growth in Ireland has increased living standards and underpinned growth in domestic demand and employment in the services sector. However future growth will need to have a stronger component of net exports so that further losses of cost competitiveness are likely to have more effects on the economy than the experience to date.

For several years the euro/sterling exchange rate was relatively stable. There has been a substantial appreciation of the euro in recent months: the euro/sterling rate went from 0.68 in August 2007 to 0.77 in March 2008 and reached a rate of 0.8 during April. This adds very significantly to competitiveness pressure on those exporting to the UK and competing with UK producers on the domestic market. This exchange rate is a particular burden for the indigenous manufacturing sector which sells the vast majority of its output on the Irish and UK markets.

22. The fact that this study does not take account of all of increase in Irish house prices since 2000 could be considered an advantage as the level of house prices in Ireland exaggerates the real level of Irish wealth. The level of house prices in Ireland is often higher than the corresponding levels in cities with comparable population and levels of development.

1.9.3 Migration

Migration is having a significant effect on Ireland's economic and social development. In its study on migration, the Council judged that there has probably been some moderation of wage growth in certain areas. Despite the large scale of the inflow, overall earnings growth has continued, but at a slower pace than earlier years. As the Council has previously observed, there is uncertainty regarding many of the economic and social effects of migration and its future scale (NESC, 2006). The Council considers that it is important to improve the availability of data on migration.

1.9.4 The Public Finances

The public finances have been in surplus in recent years up to 2007, with both a large current account surplus and an overall surplus after taking account of capital expenditure. The public finances benefitted considerably from the property boom with increases in the share of taxation from stamp duty and capital gains taxes. The slowdown in economic growth poses significant challenges for the public finances.

Ireland's public expenditure relative to GNP remains at a low level by EU standards. The various dimensions that contribute to this are explored in the chapter. The Council's conclusions on the public finances are presented in Chapter 7.

1.9.5 Vulnerabilities

In addition to pressures of cost competitiveness, there are a number of emerging vulnerabilities facing the Irish economy:

- Turbulence in financial markets and US slowdown;
- The adjustment in the housing market;
- Climate change policy; and
- Global oil market.

The turbulence in financial markets and the associated slowdown in the US economy will affect Ireland's economy. The performance of the Irish economy in previous periods of an adverse external environment has varied considerably. The role of a consistent policy approach in dealing with economic turbulence is explored in the next chapter.

The fall in housing output is having a large effect on economic growth in 2008. Some of those affected by the housing slowdown will migrate but some will need support in finding alternative opportunities in Ireland. Further reductions in house prices would be desirable as this would improve affordability.

Addressing climate change will have far reaching economic and social effects in the long run. The move to a low carbon economy will create many new economic opportunities and it is highly desirable that Ireland participates in what has been characterised as a 'new industrial revolution'.

Ireland's high reliance on fossil fuels poses another vulnerability. The International Energy Agency has warned that a continuation of current trends in oil supply and demand will lead to a 'supply crunch' within seven or eight years that could lead to substantially higher prices.

In identifying these vulnerabilities it is not intended to convey pessimism regarding Ireland's economic prospects. The economy has underlying strengths. The single most important factor in economic performance is the skills and experience of the current and future workforce. One tangible indicator of the economy's abilities in the international arena is the exceptionally strong growth of services exports in recent years.

Ireland's population will expand in the years and decades ahead and it is vital to sustain investment to meet the needs of a growing population. There is a need to make more progress towards a sustainable and affordable pattern of housing development. In addition to a high level of investment in infrastructure and social housing this requires an integrated, long term approach to transport, land use and active land management. The vulnerabilities that are present should not distract attention from the policies and actions that matter most for well-being in the longer term.

2

Building on Shared Analysis and Understanding

2.1 Introduction

The economic trends documented and analysed in this report suggest that Ireland is experiencing profound structural and regional change in an international economic environment that contains significant uncertainties and risks. In approaching the analysis of these changes and the search for the best policy approaches, it is valuable to begin by noting the scope and content of the shared understanding of the Irish economy and of the main parameters of economic strategy which has been forged on the Council over the last two decades. This is done in Section 2, which finishes with a summary of the Council's vision of a successful society. Section 3 outlines some reasons why it is now necessary to update and enrich this account of the economy. Chapters 3 to 6 then propose some key elements of a revised shared understanding.

2.2 The Council's Understanding of the Irish Economy

Through periodic discussion in the Council, interpretation of evolving government policy and joint work within the framework of social partnership programmes, the Council has developed a significant shared understanding of the Irish economy. This understanding has a number of dimensions. These are:

- Developmental;
- Macroeconomic;
- European;
- Partnership;
- Social;
- Migration; and
- Environmental.

The Council's perspective on each of these dimensions is summarised here. This provides the context within which the economic changes and challenges identified in Chapters 3 to 6 should be considered and a framework within which new policy agreements can be located. In developing its perspective, the Council has sought to find a shared analysis of both potential and vulnerabilities.

2.2.1. The Developmental Dimension

In its reports since the early 1980s, the Council has formulated its advice to government on the basis of a number of empirical observations and analytical principles concerning the economic development of a small, peripheral, European country with an agricultural background. These included:

- The importance of competitiveness in a small open economy;
- The importance of specialisation in high-value, high-growth sectors in maximising the gains from trade and integration;
- The damaging long-run effect of net emigration and the importance of increasing population and employment in Ireland;
- The need to reverse the historical interaction between a weak national system of innovation and population decline;
- The inter-dependence between the traded and non-traded sectors, and the importance of an efficient non-traded sector; and
- The importance of regional networking in strengthening competitive advantage.

A similar perspective has been neatly encapsulated by Krugman, in his suggestion that the Irish economy can be thought of as having some of the characteristics of a regional economy (Krugman, 1997). This analytical approach can offer an understanding of both Ireland's poor long-run economic performance through much of the 20th century and its experience of strong economic growth in the past two decades (NESC, 2002).

This understanding implies agreement on the appropriateness of active policy measures to encourage economic development. Ireland's vigorous pursuit of economic development over several decades has involved the creation of a 'flexible developmental state'. This has promoted development by creating connections with the most modern networks of production and innovation. It does this by attracting high-tech firms to Ireland and fostering related indigenous networks of innovation, and encouraging them to internationalise. The idea of the flexible developmental state retains a focus on the challenge of developing a small peripheral economy, which constituted the major task of independent Ireland and remains relevant, while letting go of the overly-statist outlook that sometimes goes with that focus, but which is no longer effective in an age of global information networks. It has also assisted NESC in linking its discussion of development policy with its analysis of social policy and building its argument for a developmental welfare state (see Section 2.2.5 below).

This shared understanding leaves room for analysis and discussion of the content of industrial policy, and the nature and powers of the agencies that execute it, as economic conditions change.

2.2.2 The Macroeconomic Dimension

A second dimension of the Council's understanding of the economy concerns the key macroeconomic levers of fiscal and monetary policy. On fiscal policy, there are two important principles. The Council sees fiscal discipline and sustainability as a precondition for economic and social progress. This agreement on the need for current spending to be funded from current revenue leaves space for different views on the optimal share of taxation and public spending in the economy. Natural differences on that issue have not prevented shared analysis of economic conditions over the past two decades.

The Council is also in agreement on the limited role of demand management in an economy as open as Ireland. This has a number of policy implications. The first is that pro-cyclical fiscal policy should be avoided. Another is that, while fiscal policy can help to stabilise the economy somewhat, demand management cannot be relied upon to protect the level of output or employment. This requires a range of other policies at both national and EU levels. Most of these are supply-side policies aimed at enhancing the quantity, quality and allocation of resources and capabilities in Ireland. This consensus on fiscal policy leaves room for ongoing analysis and debate on the degree to which public capital investment should be funded out of current savings or borrowing, subject to compliance with the revised EU Stability and Growth Pact. It can also accommodate debate on how different taxes should be designed and levied in raising revenue.

2.2.3 The European Dimension

The Council's shared understanding of the Irish economy includes agreement on Ireland's role in the EU and the EU's role in the world. It recognises the critical role of European integration in facilitating the development of a small, peripheral country such as Ireland. Early studies highlighted the role, and appropriateness, of both the CAP and the Structural Funds. The Council has long seen the internal market as important in facilitating market access for firms located in Ireland and improving consumer choice. It accepts the validity of mutual recognition and new-approach harmonisation in achieving a continental market, making it fair to firms and workers in each member state and safe for consumers and national economies. This reflects Europe's social approach to the construction and management of a market economy. NESC recognises that the small size of Ireland, and its peripheral location, can make it difficult to devise the best strategic and regulatory regime in networked sectors, such as telecommunications, energy and parts of transport.

The openness of the Irish economy and society and their small size in world terms – with the consequent importance of trade, international investment and labour mobility – mean that the existence of effective international political and regulatory institutions such as the EU, and Ireland's full participation in them, is absolutely essential to economic development and social cohesion (NESC, 2002: 13).

A most important element of NESC's understanding of the economy is agreement on currency and monetary policy. Since at least the late 1980s, NESC has supported Irish policymakers in their quest for a low-inflation and stability-oriented monetary regime through membership of the EMS and participation in transition to the euro. While the Council agreed that, on balance, analytical arguments suggest that this

is the most appropriate currency regime for Ireland (compared to a crawling peg or a free float), its own work highlighted the fact that the technical mechanism of currency and monetary management can only succeed where there is sufficient consensus on inflation, incomes and public finance (NESC, 1996, 1999, 2002). This is taken up in the discussion of social partnership below.

The Council's future deliberation on the EU is likely to focus on other areas of policy, such as the environment, common principles on migration and the EU's role in building a system of international governance that supports economic development, social justice and environmental sustainability. Consequently, the international dimension of the Council's shared understanding needs to extend beyond Europe, to include policies such as overseas development aid and the issues addressed by the International Labour Organisation, the World Trade Organisation and, to a degree, the UN. While these issues are implicit in NESC's perspective on Ireland's economic and social development in an international context, it is too early to claim that the Council has a shared understanding of globalisation.

2.2.4 The Partnership Dimension

Interdependence

The Council's shared analysis and understanding of the Irish economy includes a significant policy and partnership dimension. At a basic level, the existence of the Council since 1973 reflects the belief of government that dialogue with, and among, the social partners can assist policy for economic and social development. But experience since the late 1970s has greatly enhanced our understanding of these relationships. In its 1996 Strategy report, the Council reviewed Ireland's economic development in the three decades after 1960. It pointed out that, although the Irish economy achieved significant economic growth, adjustment, modernisation and inward investment in those decades, these successes were qualified in important ways.

> Inevitable adversities were allowed to become divisive and produced delayed and insufficient responses. Overall, there was an insufficient appreciation of the interdependence in the economy – between the public and the private sectors, between the indigenous economy and the international economy, and between the economic and the political (NESC, 1996a: 4).

It is this interdependence that underpins the Council's emphasis, since 1990, on a consistent policy approach, its formulation of an analytical framework for seeking consistency and its understanding of the role of social partnership.

The Council's Consistent Policy Framework

In 1990, NESC argued that there are three requirements for a consistent policy framework in a small, open, European democracy:

(i) Macroeconomic: the economy must have a macroeconomic policy approach that underpins low inflation and steady growth of aggregate output – discussed above;

(ii) Distributional: there must be an evolution of incomes which ensures continued improvement in competitiveness, handles distributional conflict in a way that does not disrupt the functioning of the economy, and is fair; and

(iii) Structural: there must be a set of complementary policies which facilitate and promote structural change in order to maintain competitiveness, eliminate barriers to participation and achieve social cohesion in an ever-changing environment.

Distributional Policy: Coordinated Wage Bargaining and Negotiated Incomes

The Council's view is that the distributional requirement is best achieved by a negotiated determination of incomes and that, to be really effective, such a negotiated approach must encompass not only the evolution of pay, but also taxation, the public finances, exchange rate and monetary policy, and the main areas of public provision and social welfare (NESC, 1990, 1996). This argument reflects the advantages of coordinated wage bargaining in a small open economy adhering to an external monetary anchor. Coordinated bargaining can provide business, government and employees with a degree of certainty that improves their ability to plan. When conducted with skill and flexibility, and on the basis of a shared analysis of the economy, it can reduce the risk of wages over- or under-shooting and thereby smooth aspects of the economic cycle. It reduces the time and attention devoted to distributional bargaining and minimises industrial conflict. This reflects the Council's view on the analytical issues, its understanding of the approaches adopted in other small European countries, and its reflection on the experience of Irish wage bargaining, both before and during the partnership period. This takes some of the emphasis off the centralised/decentralised bargaining structure and places it instead on the degree to which the social partners pursue a wider national interest and their own long-term self-interest. The Council concluded: 'the Irish experience suggests that such a co-operative mood of play is, in turn, shaped by the existence of a wide-ranging national programme which aligns economic actors to a particular policy approach and provides trade union members with guarantees on non-wage issues, such as taxation and social provision' (NESC, 1996a: 102).

The Council's analysis of wage bargaining leads it to the following conclusions on public service pay (NESC, 2005b). First, the competitive sector of the economy should set pay levels and public service pay should follow that set in the competitive sector. Second, ongoing change in a modern public service must be the 'default' position. Third, the normal rate of pay advancement in the public service should be the general pay increases negotiated at national level. Fourth, it is appropriate that there are periodic reviews of pay in the public and private sectors which can be achieved through a benchmarking process.

Structural or Supply-Side Policies

The third requirement for a consistent policy approach is structural or supply-side policy. In the context of globalisation, the Council has argued that:

(i) Most of the policies which affect Ireland's prosperity and social cohesion are *supply-side* policies – i.e. those that improve quality, quantity and allocation of resources and capabilities;

(ii) Given rapid economic change, national policies must produce flexibility; and

(iii) Successful national supply-side policies – directed towards innovation, competitiveness and inclusion - depend on the high level social cohesion and co-operation that the state can both call upon and develop (NESC, 1996).

This has a number of implications of on-going relevance. First, it suggests that once a consensus on macroeconomic policy is in place – and is reflected in government policy, wage bargaining and management – the main focus of policy analysis and development should be the supply-side measures that influence competitive advantage, social cohesion and societal well-being. These supply-side measures include the adequacy, timeliness and effectiveness of capital investment in the different physical infrastructures that affect the competitiveness of businesses and the levels and consistency of capital and current spending on educational and training that affect the capabilities and adaptability of individuals. Second, it suggests that partnership can play an important role in achieving successful supply-side policies. Indeed, the Council is of the view that structural reforms and supply-side policies are best achieved with the active consent and participation of those who work in public agencies and with the participation of affected citizens and groups. Third, the difficulty experienced in changing some services and making new supply-side policies effective suggests that policy and partnership must focus, in part, on creating institutional arrangements which encourage the discovery and implementation of effective services and other supply-side measures. Indeed, the Council has argued that exploration of the best arrangements for provision of supply-side policies – in utilities and networked sectors, planning and infrastructure, and public services – is a central task for government and the social partners. Equally, 'willingness to adopt the best arrangements is a central test of social partnership' (NESC, 2002: 67).

2.2.5 The Social Dimension

The Council's perspective on the economy contains a strong social dimension. This includes a shared understanding of the relationship between economic performance and social protection and the changing relationship between economic constraints and social possibilities.

Economic Performance and Social Protection

The Council has sought to clarify the relationship between social protection and economic performance. While this is a complex relationship involving several sorts of social processes, the international evidence seems to be that good economic performance and improved social protection are not intrinsically opposed but neither do they inevitably occur together. Rather, they *are made to support each other* where there is sufficient shared understanding and commitment on the part of those who shape and implement economic and social policies.

This depends critically on recognizing that social policy is not simply an exercise in redistributing a surplus, there to be creamed off *after* successful economic performance, but that the composition and manner of social spending are as significant as its level. Poorly-designed social protection can damage employment and reduce individuals' participation in the labour market. Well-designed social

protection, on the other hand, enables people to embrace change and take more risks than they would otherwise do. Besides its critical role in supporting those in need, social policy, therefore, must assume its appropriate share of responsibility for the economic policies that enable the widest possible number in the population to earn their livelihoods in a decent and humane way.

In its 2005 report, *The Developmental Welfare State,* the Council argued that the factors that underpin economic and business success in Ireland will, increasingly, depend directly on human qualities. The success of the Irish economy has been the source of very significant social progress. Continuation of that success requires a deepening of this social progress. Several of the major improvements in social protection now required to address Ireland's social deficits will prove to be economic assets and contribute directly to sustaining and improving our economic performance. Examples include ending child poverty, stemming educational disadvantage, tackling social exclusion, supporting people in their caring responsibilities, more flexible pension arrangements, and higher standards in publicly provided health care and education.

Beyond Economic Constraints on Social Possibilities

In recent years, the Council has developed a unified view of the economy and society. In past decades, and even in the past decade and a half, there was a real sense that Ireland's economic reality set limits to its social possibilities. Now, the medium and long term strength of the economy depends not only on the recent investment in infrastructure and scientific research, but also on a deepening of capabilities across a wide spectrum, even greater participation, an infrastructure of care that improves both the quality of life and the ability to participate, internal as well as external connectivity, less social exclusion, more social mobility, successful handling of diversity, including immigration, and high environmental standards. In short, there is a real sense in which aspects of our social reality now set limits to Ireland's economic possibilities.

This modified picture of Ireland's economic and social situation, possibilities and threats, demands that national goals be stated in new ways (NESC, 2005b). It requires integrated thinking about the economy and society. Social and economic goals must be jointly addressed. Social progress depends on economic prosperity and social policy has a critical role in facilitating a high-participation, dynamic economy. These complementary relationships between social policy and economic prosperity are reflected in the Council's vision of a successful society in Ireland (see Section 2.2.8 below).

2.2.6 The Migration Dimension

Understanding Migration

In recent years the Council has undertaken intensive analysis and deliberation on migration. Its current understanding of, and perspective on, migration includes awareness of the range of possible economic and social effects of migration and the experience of other countries, *findings* on the pattern, scale and effects of migration to Ireland to date, and acknowledgement of *uncertainty* about many aspects of migration.

The Council recognises that pressure for migration – legal and illegal – is an unavoidable feature of the emerging world order to which all societies and states must respond. It considers that the enlargement of the EU was a moral, political and economic imperative.

Migration can enhance economic and social progress and prosperity, *but this is not inevitable*. Migration is most likely to enhance Ireland's economic and social development when it supports an upgrading of the economy, skills and work, is characterised by mobility and integration rather than by segmented labour markets, and is combined with the enhancement of social participation and protection by means of the Developmental Welfare State and a narrowing of the income distribution.

Integration of migrants is one of the main factors determining the overall success or failure of migration. While many countries have used migrant workers to meet labour shortages, few European countries have achieved the successful long-term integration of migrants into economic, social, cultural and political life.

Broad Policy Approaches to Migration and Integration

Ireland's policy approach to migration should focus simultaneously on three broad goals: economic and social development, the rule of law, and the integration of migrants into economic, social, cultural and civic life. These goals are interdependent and all departments should take some responsibility for each of them. 'Migration policy' should be defined broadly. Making a success of migration depends on labour market policies, social policies, measures to ensure the integration of migrants and quality public administration. In many respects, migration increases the urgency of existing policy challenges more than it creates entirely new ones.

The Council supports the policy articulated since EU enlargement in 2004 – that low-skilled workers should be sourced from within the EU (now 27 Member States). It believes that only a limited level of low-skilled migration from outside the EU should be permitted and that it should take place through high-quality programmes. These should prevent low-skilled migrants being trapped in low-paying, cost-sensitive and vulnerable sectors.

Core labour standards and employment rights are integral to the Council's unified view of economic and social development. Framed correctly, legally-binding labour standards are not a burden on economic success or business performance, but supportive of them. While the creation of employment across the skill spectrum is a genuine part of Ireland's economic and social progress, jobs that are reliant on low standards are not. National social partnership can be a critical support in finding a constructive approach to the labour issues thrown up by migration and globalisation.

Ireland's relatively successful early experience of migration does not guarantee that migrants will integrate sufficiently into Irish society or the Irish economy. While government must play a leading role, successful integration hinges on a vibrant civil society. The main approach to integration should be through the adaptation of mainstream policies and services, rather than the creation of separate services for migrant groups.

Ireland's transition from a history of emigration to being a country of strong immigration marks an important threshold in its long-term economic and social development. Our conviction that a century and a half of net emigration weakened the country's progress suggests that immigration can play a role in building a successful society in Ireland. But international experience shows that this is not inevitable. To make a success of immigration requires effective government policies, a negotiated international order such as the EU, innovative firms and civic associations, an open culture and, most of all, a shared understanding that migration can contribute to a prosperous and inclusive Ireland.

2.2.7 The Environmental Dimension

In recent years, the Council has factored the environment more fully into its understanding of the Irish economy and Irish society. It takes a broad view of the environment, including not only the physical quality of air, water and land, but also of the man-made environment and the quality of access to nature. It has proposed the following elements of a shared understanding of the environment:

- A high quality environment is an essential feature of a successful society, being integral to economic activity, social relations and the quality of family and individual life;
- Ireland's current income level is well into the range in which income growth should be associated with improved environmental quality;
- Overall welfare can be increased by government policy that alters the allocation of resources in a way that reflects the value we put on the environment; NESC recognises that this creates a complex distribution of costs and benefits for resource owners, firms and households;
- While environmental policy can sometimes involve a trade-off between social benefits and private costs, there are many situations where firms can benefit from environmental policy and where national and sectoral competitiveness can be enhanced. Consequently, it is mistaken to think of environmental policy as a zero-sum game of business versus the environment;
- It is important to move the Irish environmental debate beyond the polarity that sometimes arises: 'conservation versus the economy'; and
- High environmental standards require the engagement of government, firms, associations and citizens. In some aspects of the environment, Ireland's structures of governance, decision-making and conflict resolution are not working as well as they could.

The Council's has sought to clarify how the key environmental challenges relate to Ireland's development strategy. Industrial development through the attraction of high-technology firms and increasing the capacity and capability of indigenous manufacturing was the core of Irish economic policy for several decades. Although it took some time, there is little doubt that Irish environmental policy and performance are most advanced in this area. Analysis suggests that 'while the environmental demands on business have been steadily growing, there is no evidence that these are impairing competitiveness' (Clinch *et al.*, 2002: 142). This is

important and encouraging in a number of respects. It means that two of the core ways in which Ireland now earns its living – advanced manufacturing and services – are not areas of poor environmental governance and need not be essentially environmentally damaging.

The Council's perspective on physical infrastructure also sees the potential for capital investments to bring environmental and social benefits as well as enhance business competitiveness. Additional physical infrastructure is essential to protecting the environment from the pressures that a larger and more affluent population impose on it, to driving and supporting regional development, including a prosperous rural economy and society, and to ensuring that Ireland's urban areas are attractive locations in which to live and work.

Many of the areas in which Irish environmental policy is less effective, and in which environmental goals are weakly mainstreamed, are 'upstream' or 'downstream' from these core business activities. Upstream are activities – such as energy generation and raw food production – which support competitive business activity. Several of Ireland's environmental challenges lie in these areas. Downstream lie activities that are essential to much competitive business, such as freight transport, and activities in which we use our incomes, such as consumption, municipal services, leisure transport, housing construction and urban development. Several more of our environmental problems lie in these areas.

2.2.8 The Council's Vision of a Successful Society

Drawing on the shared analysis summarized above, the Council has, in its Strategy reports since 1999, outlined a vision of a successful society in Ireland. It believes that the foundations of a successful society are:

- a dynamic economy, and
- a participatory society,
- incorporating a commitment to social justice,
- based on consistent economic development that is socially and environmentally sustainable,
- which responds especially to the constantly evolving requirements of international competitiveness, understood as the necessary condition of continuing economic and social success.

This vision has several dimensions, the most important of which are:

- economic inclusion based on full employment,
- social inclusion, reflecting full participation in those activities which constitute the norm in society,
- successful and continuing adaptation to change,
- commitment to the utilisation and development of the potential of the Information Society and the promotion of research and development,
- commitment to lifelong learning,

- environmentally sustainable and balanced development between regions and between urban and rural areas,
- commitment to the further development of the European Union and international solidarity, and
- an entrepreneurial culture.

The Council believes that this understanding of a successful society remains relevant in analysing the changed economic situation and devising policy responses.

2.3 Towards a new View of the Irish Economy

In *NESC Strategy 2006,* the Council identified a number of evolving aspects of the Irish economy and argued that these imply significant qualification of some long-standing perspectives.

For several decades, Irish policy makers and many economic and social actors shared a particular view of the economic challenge Ireland faced. It was a view that focused on national economic development as the key to national social and cultural development. The task of national economic development was, correctly, cast as the task of achieving export-oriented businesses. Within this model of national development, a series of ultimate and proximate economic and social goals sat fairly neatly on top of one another. The proximate goal that embodied this was employment. Anything that promoted employment – especially employment in the traded sector – was also likely to contribute to export growth, business strength, domestic prosperity and wider social progress. The goal of regional development could be met by allocating a proportion of new job creation to lagging regions. At several points, policy action under this model had to be adjusted: when creation of public sector employment became disproportionate, when the IDA adjusted its goal of employment creation to take account of value-added, and when it became accepted that policy could not, and probably should not, prevent inward investment locating in or near Ireland's largest cities.

We are now moving to a situation where the ultimate and proximate goals listed above do not coincide so neatly. For example, the goal of national prosperity and well-being, based on a dynamic economy, is no longer neatly reflected in the proximate goal of employment creation, in and of itself. This has implications in a range of economic and social policy areas. If employment creation, *per se*, does not adequately reflect our ultimate goals, participation is probably valued more highly than before – though we now see the need to think about participation and caring together. The rationale for active policies to strengthen indigenous enterprise and attract inward investment is changing, as the focus widens from job creation and boosting recorded national exports to building and finding firms that enhance Ireland's position and capabilities in key high-value sectors.

In short, the Council argued in 2005, we need to find a new shared understanding of the Irish economy. That account needs, first, to escape from the idea, sometimes heard, that Irish prosperity is virtually all created in the exporting, mostly foreign-owned, enterprises, with the rest of economic activity merely a recycling of that

value. Second, that understanding must include the growing role of services. It should encompass the increasing role of internationally-traded services, but not be confined to those services. Third, recognition of the increasing role of domestically-sold services and domestic demand must not involve slipping back towards the closed-economy view that competitiveness does not matter. Indeed, the new understanding must build on our current understanding of the critical role of the export base in a regional economy, but develop a sophisticated view of the sources and dynamics of regional competitive advantage. That understanding needs to include a clear view of the role of knowledge and skills in sustaining economic prosperity in a world with new global competitors, and an understanding of the role of public policy in strengthening innovation. Finally, we need an understanding of how migration, in all its forms – returning Irish, attraction of EU citizens and arrival of non-EEA nationals – influences economic welfare. This report contributes to the formulation of a revised understanding of the Irish economy.

The ideas summarised in this chapter suggest that in the current situation it remains important to extend shared analysis and understanding, to maintain a consistent policy approach, to share burdens of adjustment, and continue to lay the foundations of future prosperity and social cohesion. This is the context in which difficult specific issues – identified in later chapters and in current public debate – can most effectively be addressed.

3

The Future of Manufacturing

3.1 Introduction

This chapter reviews developments in manufacturing internationally and in Ireland and considers the prospects for the sector. Section 3.2 considers the role of manufacturing in advanced countries generally while Section 3.3 reviews the performance and assesses the prospects of Ireland's manufacturing sector. Policy issues that affect manufacturing are discussed in Section 3.4.

A High Level Group on the future of manufacturing was established under *Towards 2016*. The findings of this group are included in the discussion of policy issues in Section 3.4.

3.2 The Manufacturing Sector in Advanced Economies

3.2.1 The Globalisation Context

The manufacturing sector operates in a highly globalised environment. The existence of the global economy is not in itself new. A global economy was first created in the nineteenth century characterised by substantial trade and international investment flows. On the eve of the First World War, the UK had larger overseas investments than its domestic capital stock.

The first global economy was destroyed by political upheaval and war. A new global economy emerged in the decades following the Second World War. The intensity of the current wave of globalisation is unprecedented. While there were substantial real international investment flows in the nineteenth century, there was nothing comparable to the huge short-term financial flows of today's global economy. Information and communications (ICT) technology play a major role in shaping this phase of globalisation; Perez (2007) has characterised the ICT age as the fifth distinctive techno-economic paradigm since the industrial revolution. The use of ICT on a global basis has made it possible to create global 'value chains' in which the different phases in the creation of value-added are spread around the world to what firms consider to be the best locations.

Perez distinguishes the current foreign direct investment (FDI) and its associated global value chains from an earlier phase of FDI in the age of mass of production. This earlier FDI involved the transfer of technologically mature processes and rarely required local innovation capacity. By contrast the current global networks are characterized by continuous improvement. Perez describes today's value chains as follows:

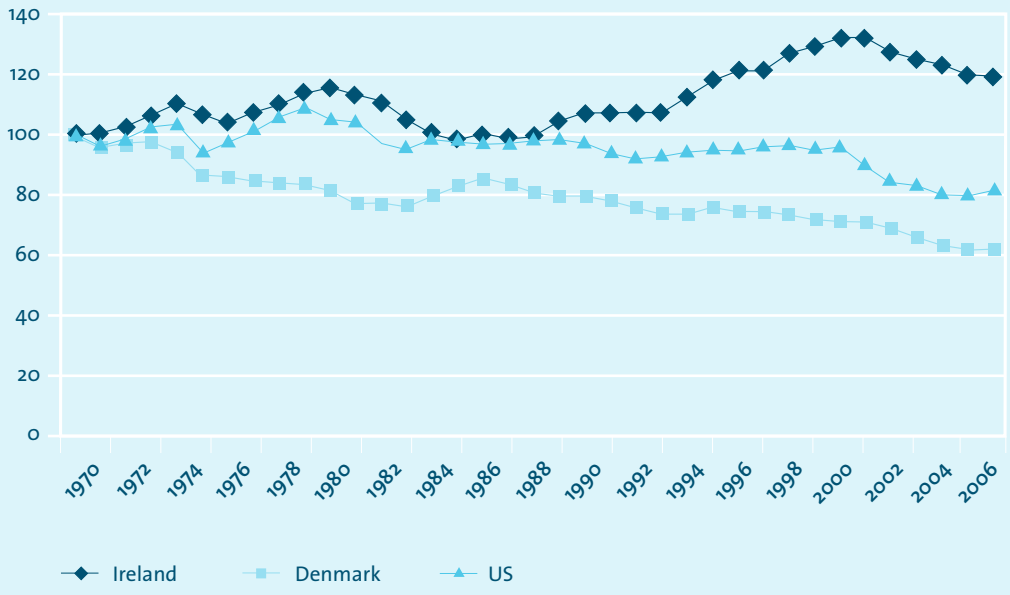
> The whole value chain is broken up into multiple processes and sub-processes and each of these is located where it is most advantageous in terms of cost and/or in term of innovation capacity or whatever the key variables are in each specific case. It could even be that there is no 'model' plant in the originating country, while technological capabilities can be very dispersed across the global network (Perez, 2007: 22-23).

With the emergence of global value chains, international trade becomes increasingly the trading of tasks rather than of more or less complete products. Rather than one country specialising in exporting, for example, clothing, a range of countries are involved in the different tasks such as design, marketing and production that are involved in creating an item of clothing.

3.2.2 Employment, Value-Added and Productivity

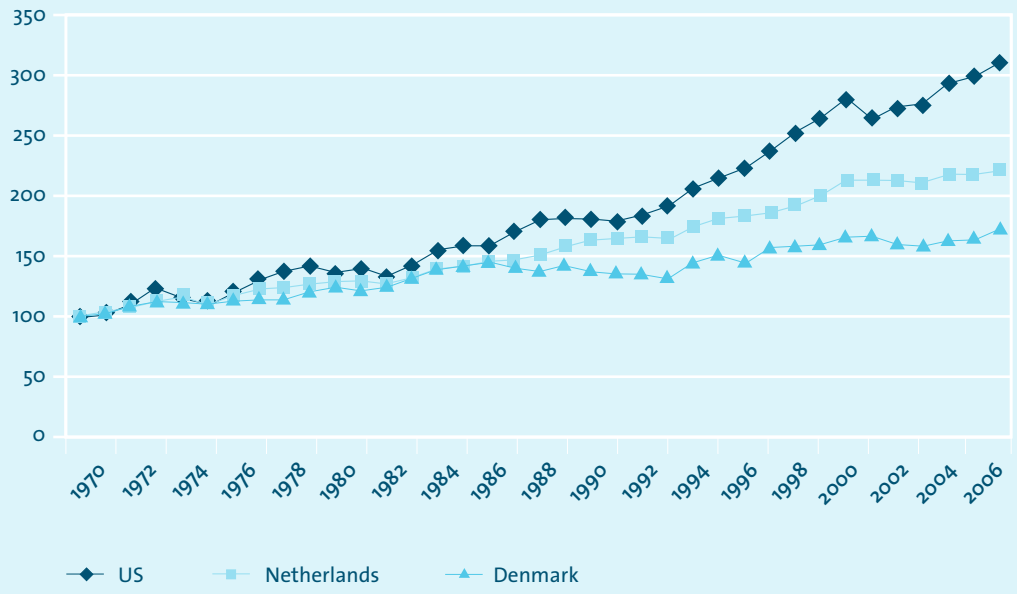
Within these global networks, the question arises as to what is the role of manufacturing in advanced countries. Employment in manufacturing in most advanced countries has been declining in both absolute and relative terms for several decades. Ireland has experienced rising employment in manufacturing, particularly during the 1990s, when it has been falling elsewhere (Figure 3.1 takes Denmark and the US as comparator countries). During the current decade, however, manufacturing employment has also fallen in Ireland with an annual rate of decline of 1.7 per cent while the corresponding rate for the EU (15) was 1.4 per cent. The share of manufacturing employment in Ireland is now around 13 per cent, somewhat below the EU average of 16 per cent.

Figure 3.1 Index of Employment in Manufacturing 1970-2006: Ireland, Denmark and the US



While employment in manufacturing is declining, this is not the whole picture. Real value-added has continued to grow in advanced countries. In the Netherlands, for example, the real (constant price) level of manufacturing value-added in 2006 was over twice the 1970 level (Figure 3.2). In the case of Ireland, total value-added in manufacturing increased over eleven-fold over the same period (for this reason, Ireland is not included in the Figure). This represents most impressive growth, although this growth of value-added in Irish manufacturing is boosted by the use of strategic assets of technology and branding created elsewhere. In the most recent years, there has been slower growth in value-added in manufacturing in some European countries, including Italy and Germany.

Figure 3.2 Real Value-Added in Manufacturing, 1970-2006: the US, Netherlands and Denmark



The share of manufacturing in value-added has fallen generally in advanced countries. A significant influence on the declining share of manufacturing value-added is the fall in the price of manufacturing goods relative to services. If value-added in manufacturing is measured in real or constant price terms then the decline in its share is much less pronounced than in current price terms and is stable in some countries. For example, in the US, value-added in manufacturing measured in terms of 2000 prices was 13.3 per cent in 1980 while it was 13.8 per cent in 2006.

The manufacturing sector is characterised by strong productivity growth. In most OECD countries rates of manufacturing productivity growth have averaged 2 to 4 per cent annually, which is substantially higher than economy-wide productivity growth.

There has been some decline in the share of manufacturing demand in final demand but demand for manufactured products remains high. In the advanced countries of Australia, Norway and the US, the manufacturing share of final demand was in the region of 22 to 26 per cent in 1995, substantially higher than its respective shares of value-added and employment (OECD, 2006b).

3.2.3 The Role of Innovation

The key decline that is occurring in manufacturing in advanced countries, as highlighted by the NCPP (2007), is in routine, rule-based work. There are two key factors driving this decline in the more routine manufacturing tasks in advanced countries. First, automation and the application of technology reduce employment in these tasks. Second, the creation of global value chains means that the more routine tasks can be relocated in lower wage economies. It was estimated by the OECD (2006b) that around one quarter of the fall in employment in the US and the EU can be explained by increased openness. The decline in manufacturing employment is not confined to OECD countries and is occurring in major non-OECD countries of China and Russia too. This is because these countries are also experiencing strong growth in manufacturing productivity (Pilat *et al.*, 2006).

With declining opportunities in the more routine manufacturing tasks, the future of manufacturing in advanced countries depends critically on innovation. There continue to be opportunities to expand employment based on innovative tasks to meet the very substantial demand for manufactured products. Within global value chains, these opportunities will be located in the countries, region and cities that are best suited to these tasks.

Lester (2007a) uses the example of the Apple iPod, a highly successful consumer product, to illustrate how these dynamics affect the role of manufacturing-related employment and value-added in advanced countries. The supply chain for the iPod stretches across the globe and most of the manufacturing takes place outside the US. Notwithstanding this, it is remarkable that over one-half of the retail value ($299) of a typical iPod sold in the US accrues to American employees and firms. Apple itself, despite undertaking almost none of the manufacturing in-house, receives $80 of the value. This illustrates how much opportunity there is for value-added in the creation of manufactured products in advanced countries, even if the direct manufacturing activity takes place in other countries.

In addition, Apple succeeded in combining the iPod with a profitable service in the form of an iTunes downloading service. This is part of a trend whereby manufacturers in recent years regard the ongoing provision of a service as a central part of their business strategies. This increased focus on the service dimension of manufacturers is referred to as 'servicisation'. This is particularly pronounced in those situations where the lifecycle of products is lengthening[1], there is increased competition, or market saturation limits the potential growth from new product sales. Servicisation offers manufacturers a number of advantages. First, there is the opportunity to capitalise on the superior knowledge that they typically have of their own products. Second, there is scope to transfer the reputation of the product to related services. Third, control over design can allow for the creation of innovative services (University of Cambridge, Institute of Manufacturing, 2004).

Some manufacturing activity remains in advanced countries for logistical reasons. This can arise because of a need for greater proximity to the market than can be achieved by serving an advanced country market from Asia or to achieve proximity to raw materials, for example, agriculture produce. Transport costs are one factor and explain why, for example, cement is not manufactured in China for western markets. There are also more subtle factors. Krugman has argued that distance still matters but 'increasingly it does so because of impediments it places on speed and ease of communication and shipment, rather than because of its impact on crude transport costs' (Krugman, 1997: 46). For these more subtle reasons, even for many products with high value-to-weight for which crude transport costs are low, Krugman argues that many companies have still found it cost effective to have a plant in each of the major continental markets rather than using a single plant located in Asia to serve the global market. This also applies to some tradable services. These communication factors are of course subject to change over time as ICT improves and people become more comfortable with very long distance communication.

3.2.4 The Role of Low-Tech Manufacturing

The OECD defines high-tech manufacturing as those sectors in which R&D expenditure exceeds 5 per cent of turnover, while sectors with R&D expenditure of 3 to 5 per cent are considered medium-tech. Other sectors are referred to as low-tech and medium low-tech (LMT). The key role of innovation in the future of manufacturing is not the same as a shift to high-tech manufacturing.

A European research project has examined the innovation and development potential of LMT industries. Some key findings that emerged from this study are as follows (Hirsch-Kreinsen *et al.*, 2005). First, the largest share of employment in manufacturing is in LMT industries. Second, notwithstanding some decline in the LMT share of employment over the period 1980 to 1999, 'the low-tech sectors continue to evince remarkable stability and a high share of employment' (8). Third, the ability of LMT industries to continue in high-income economies is attributed to their strategic flexibility and ability to innovate. Fourth, innovation in the low-tech firms and industries in the study was 'to a great extent the result

1. A longer product life implies a longer opportunity for providing services over the lifecycle of the product.

of the transformation and reconfiguration of well-known internal and external knowledge and of components and technologies developed elsewhere' (9). None of the firms in this study based their innovations on recent scientific findings. Fifth, notwithstanding the challenges of globalisation, the authors argued that the prospects for low-tech industries in advanced countries are reasonably promising for a number of reasons.

- First, the specific competences which many low-tech companies possess cannot be copied by potential competitors because they are deeply embedded in the social system of a company and its local environment.
- Second, the geographical and social proximity to sales, markets and specific customer groups and the abilities of LMT companies to use these advantages in a flexible manner are another reason for the favourable development prospects of such companies.

The results of this project are consistent with key themes that emerged from an NCPP conference on the future of manufacturing:

> The changing nature of manufacturing means that, for higher-wage, higher-skilled economies, there are no 'sunset industries' only 'sunset activities'. Innovation is the key to the future development of manufacturing in advanced economies. Whether they are operating in traditional sectors or more advanced high-tech markets, firms that continually develop new and innovative products, find new markets and improve production and delivery, will not only survive but prosper and grow. Firms that fail to innovate, even in those high-tech sectors will not survive (NCPP, 2007: 9).

The performance of Irish manufacturing is explored below. It is worth noting here that in the case of Ireland, restructuring of manufacturing has included a shift to high-tech manufacturing.

3.2.5 Conclusion

Employment is falling in advanced and some key non-OECD countries but output and productivity are growing in advanced countries. The development of global value chains has played a central role in the manufacturing sector. Some manufacturing activity is shifting to developing countries but manufacturing remains significant in advanced countries. Success in manufacturing in advanced countries depends critically on innovation.

3.3 Manufacturing in Ireland

3.3.1 Structure of Irish Manufacturing

For several decades analysts of Ireland's manufacturing sector have distinguished 'modern' and 'traditional' segments. The modern segment is characterised by high value-added per person engaged, high export orientation, the strong presence of high-tech sectors and a high rate of foreign ownership[2]. The traditional segment is characterised by lower value-added per person engaged, a lower export orientation and strong reliance on the UK market when it does export, the strong presence of low-tech and medium low-tech sectors and much of it is Irish owned. Nevertheless, there is considerable and growing heterogeneity within both these modern and traditional segments of manufacturing industry in Ireland. Over time the distinction is losing some of its salience as both segments have to deal with similar pressures. However, there continue to be important differences in characteristics and performance between them.

As Table 3.1 shows, almost 40 per cent of employment in Irish manufacturing – around 86,000 people – is in the modern sector. The largest sectors are chemicals (11 per cent) medical and optical instruments (10.7 per cent) and office machinery and computers (7.7 per cent). By far the largest sector in traditional manufacturing is food; employment in food, drink and tobacco in 2006 was almost one fifth of all manufacturing employment. The other traditional sectors with substantial employment are the various metals and other engineering sectors, publishing and printing (5 per cent), non-metallic minerals (4.8 per cent), rubber and plastics (4.4 per cent).

While over 60 per cent of manufacturing employment is in the traditional sector, exports are dominated by the modern sector and it accounts for over 80 per cent of gross manufacturing exports. The gross export figures overstate the real contribution of the modern sector to net export earnings as they do not take into account the very substantial imports and profit outflows associated with multinational manufacturing activities in Ireland. There is no doubt however about the much higher export orientation of the modern sector; it exports over 95 per cent of its output compared to just over one-half (52 per cent) for the traditional sector.

2. The CSO distinguishes the following sectors as 'modern' in the national accounts and other publications: reproduction of recorded media (mostly software), chemicals, computers and instrument engineering and electrical machinery and equipment while the remaining sectors then constitute the 'traditional' sectors (Table 3.1 in the text). This modern sector overlaps considerably with what the OECD classifies as high-tech industries but is somewhat broader than and includes some activity classified as medium-tech by the OECD, such as the non-pharmaceutical components of the chemicals sector. When drawing international comparisons we will use the OECD high-tech definition.

Table 3.1 Structure of Manufacturing Employment, 2006

	2006 (000s)	2006 (%)
Modern manufacturing		
Reproduction of recorded media	4.4	2.0
Chemicals, Chemical Products and Man-made Fibers	24.6	11.0
Office Machinery and Computers	17.2	7.7
Electrical Machinery and Apparatus	7.8	3.5
Radio, Television and Communication Equipment and Apparatus	7.8	3.5
Medical, Precision and Optical Instruments, Watches and Clocks	24.0	10.7
Total Modern Manufacturing	**85.8**	**38.3**
Traditional Manufacturing		
Food, Drink and Tobacco	44.1[1]	19.7
Textile	2.6	1.2
Clothing	1.5	0.6
Leather and Leather Products	0.2	0.1
Wood and Wood Products	7.0	3.1
Pulp, Paper and Paper Products	4.1	1.8
Publishing, Printing and Reproduction of Recorded Media	11.2	5.0
Rubber and Plastic Products	9.8	4.4
Other Non-Metallic Mineral Products	10.8	4.8
Basic Metals	2.5	1.1
Fabricated Metal Products, Except Machinery and Equipment	13.9	6.2
Machinery and Equipment	11.0	4.9
Transport Equipment	8.7	3.9
Other Manufacturing; Recycling; Refined Petroleum Products	10.3	4.6
Total Traditional Manufacturing	**137.7**	**61.5**
Total Manufacturing	**223.8**	**100.0**

1. 39,200 of this is food alone.

By far the largest export contributor in traditional manufacturing is the food sector, which contributed exports of €11.4 billion in 2005 or 65 per cent of the exports of traditional manufacturing[3]. However, these export figures and the overall export orientation of the traditional sector are boosted by a high level of (multinational) exports of cola concentrate included in 'other foods'. Bord Bia publishes figures for food and drink exports that do not include cola concentrate and these show exports of 8.6 billion in 2007.

Other significant exports within traditional manufacturing are machinery and equipment (€1.38 billion) and transport (€824 million). These do not, however, point to particular strengths of indigenous industry in that most of these exports also come from foreign-owned companies. Other sectors with substantial exports are rubber and plastics (€540 million), fabricated metal products (€408 million) and wood and wood products (€300 million) in 2005

3.3.2 Modern Manufacturing: Performance and Prospects

Performance

The modern manufacturing sector has had a strong long-run performance over several decades with buoyancy in output, employment, productivity and exports. This was especially the case during the Celtic Tiger years of the 1990s. Between 1995 and 2000, the annual rate of growth for the output of the modern sector was over 20 per cent and the corresponding rate for employment was 8.8 per cent (see Appendix Tables A3.1 and A3.2).

Output growth has slowed in the current decade. It first fell from over 20 per cent in 2000 to a static level of output in 2004 but has since recovered with a cumulative expansion of output of 21 per cent between 2004 and 2007. Productivity growth has continued to be strong in the current decade so the slowdown in output growth has meant a fall in employment. Employment in the modern sector fell by an annual average rate of 3.5 per cent between 2000 and 2006, grew in 2006 and the data available for 2007 show stable employment. The medical instruments subsector is the sole exception and has consistently increased employment in this decade to date.

High-tech manufacturing plays a more major role in Ireland's total manufacturing sector than in other EU countries. Its share of total national employment, at 2.7 per cent in 2005, was significantly higher than in any other EU 15 country (Finland was second with 2.1 per cent) (*Statistics in Focus*, 32/2007). In the subsector, 'precision instruments' (which includes medical appliances), Ireland is the most specialised country in the EU with the subsector accounting for fully 10 per cent of total manufacturing employment (*Statistics in Focus,* 51/2007).

While Ireland has an unusually large high-tech manufacturing sector, the proportion of people in employment in high-tech sectors in Ireland (manufacturing and knowledge-intensive services) employed *as professionals or technicians,* however, at 32 per cent in 2006, was the lowest of all regions studied by Eurostat;

3. Based on Census of Industrial Production (CIP) figures.

in Denmark, by contrast, it was 58.9 per cent (*Statistics in Focus* 102/2007). This reflects the fact that high-tech manufacturing operations in Ireland have a high reliance on products and technologies developed elsewhere.

Prospects for Modern Manufacturing

Rapid technological and market developments mean that there will be some ongoing job losses in modern manufacturing. As Ireland has become a higher cost location, it is no longer attractive for some types of manufacturing activity. However, this does not imply that modern manufacturing will not have a future in Ireland. By being highly innovative, many of the companies in Ireland's modern manufacturing sector are achieving strong productivity growth and remain competitive notwithstanding higher costs. What is crucial for Ireland's prosperity is the ability to upgrade existing activity in Ireland and to attract new, high value activity. Ireland continues to be an attractive location for much modern manufacturing activity.

The strategy of IDA Ireland is focussed on four key pillars: life sciences (biotechnology, pharmaceuticals and medical devices); information and communications technology (ICT); financial services; and other traded services and goods (consumer brands, consultancy services and so on). A crucial part of the IDA's strategy is the integration of manufacturing activity and other economic functions including R&D, customer and technical support and headquarters functions. Examples of where this has been achieved include the following:

- GlaxoSmithKline has been engaged in manufacturing in Ireland for over thirty years. The company's original concentration on production has widened to include research, development, sales and marketing, clinical trials and corporate financial services.
- ABB established a plant in Dundalk to manufacture quality control systems for the European paper and pulp market. Since then its role has expanded so that the Dundalk site has assumed responsibility for R&D, global sales and marketing, customer training and support, technical support, logistics management and finance for this industry.
- Apple's Cork facility was originally established to manufacture the Mac. Its mandate has expanded over time and the Cork site now provides a range of business functions. These include: financial shared services, supply chain management, customer support, telesales, treasury, software testing and localisation (IDA Ireland, 2007).

In the medical technologies area, over half of all companies based in Ireland have dedicated R&D centres. For example, Wyeth established a bio-therapeutic drug discovery and development research centre at UCD that will use new technologies to discover the next generation of therapeutical biopharmaceuticals for the treatment of a wide variety of diseases.

In the ICT area, Intel is engaged in research collaborations with Irish universities including TCD, UCD and NUI Maynooth. In addition Intel's Irish operation is the global headquarters for the company's Innovation Centres (IDA Ireland, 2007).

3.3.3 Traditional Manufacturing: Performance

Output, Employment and Exports

During the 1990s, most of the traditional manufacturing sector also experienced fairly strong growth in output and employment (see Appendix Tables 3.1 and 3.2).

O'Malley (2004) has examined the competitive performance of Irish manufacturing during the 1990s. He has shown that most sectors of Irish manufacturing experienced strong growth in output and employment compared to other advanced European countries. The exceptions were textiles, clothing, leather and footwear while all other modern and traditional sectors achieved output and employment growth above the European average. The relative performance was weaker on exports. While the modern sector's exports grew faster than exports of other European countries, in the case of most of the traditional sectors export growth was slower than other EU countries. There was relatively strong export growth in the two traditional sectors of food & drink and transport equipment.

In the years since 2000 there has been a weaker performance by traditional manufacturing. The only sectors in which output did not fall were wood products and food. Food output showed fairly strong growth but this driven by 'other foods', as noted previously. The widespread declines in output are perhaps surprising as most of these sectors have a substantial reliance on the domestic market which has been growing strongly. Some sectors would have been affected by the slower output growth in the modern sectors. As with the modern sector, there was some recovery in output growth in traditional manufacturing in 2006 and 2007. Total output for the traditional sector (including 'other foods') increased by 1.5 per cent in 2006 and 3.7 per cent in 2007. A stronger export performance was also evident in 2006 in the traditional manufacturing sectors.

Productivity

According to estimates presented in the 2006 OECD survey of the Irish economy, productivity levels across all sectors of Irish manufacturing were close to and in some cases above the EU (15) average in 2000. Eurostat data on productivity as measured by gross value-added per person engaged for 2004 are presented in Table 3.2 below. It can be seen that productivity across all sectors of Irish manufacturing exceeded the EU (25) average in 2004. It is also of interest to compare productivity levels to those obtaining in Denmark and the Netherlands. These perhaps are indicative of feasible productivity levels in manufacturing in small, high-income countries. Recorded productivity in the modern sectors in Ireland consistently exceeds that of Denmark and the Netherlands. In some of the traditional sectors productivity in Ireland is above that of Denmark while in others it is below without an obvious pattern emerging. In the case of the Netherlands productivity levels in most of the traditional sectors is higher than in the corresponding Irish sectors.

Productivity levels by sector for Irish- and foreign-owned manufacturing are compared in Table 3.3. These comparisons can give an exaggerated view of the differences between Irish- and foreign-owned sectors in view of the high rents enjoyed by the foreign-owned sectors on assets that were created abroad. This, however, is less significant for the traditional sectors. It can be seen from this table that productivity levels in all of the traditional sectors in Irish-owned manufacturing

are lower than in foreign-owned manufacturing. (The very large gap for the food industry is a distortion due to the influence of 'other foods'.)

Table 3.2 Gross Value-Added per Person Engaged in Ireland relative to Denmark, the Netherlands and the EU (25), 2004

	Denmark = 100	Netherland = 100	EU 25 = 100
Modern Manufacturing			
Chemicals	469.1	378.6	575.4
Electrical and Optical	218.0	194.7	247.0
Paper, Printing, Publishing, Recorded Media	444.2	367.6	420.3
Traditional Manufacturing			
Food, Drink and Tobacco	255.9	195.0	357.7
Textiles and Clothing	70.3	87.0	187.3
Leather	na	68.9	125.8
Wood and Wood Products	122.7	131.5	213.0
Rubber and Plastic Products	89.7	94.7	124.7
Non-Metallic Minerals	116.1	102.9	147.3
Metal products	92.3	79.7	113.8
Machinery and Equipment	101.6	91.6	117.4
Transport Equipment	108.6	81.6	97.8
Total Manufacturing	**264.2**	**224.2**	**333.5**

Source Eurostat, http://epp.eurostat.ec.europa.eu, Industry, Trade and Services section.

The data suggest that, while Irish manufacturing productivity levels are comparable to the EU average in traditional sectors, there could well be considerable scope for further increases in productivity by drawing on best practice. The productivity data presented here are simple comparisons based on value-added in money terms. They do not adjust for differences in the purchasing power of money so should be treated cautiously. More detailed analysis is required to establish more firmly the productivity differences and the reasons for such differences.

Size Structure

Traditional and Irish-owned industry are characterised generally by the limited scale of enterprises. As regards the traditional sector, the food industry however is a significant exception in that it contains some enterprises of considerable scale, both Irish- and foreign-owned. In 2005, almost 70 per cent of employment in the food industry was in industrial units with 100 or more people engaged compared to 60 per cent for all of manufacturing.

Table 3.3 Gross Value-Added per Person Engaged in Irish- and Foreign-Owned Manufacturing, 2005

	Irish-owned	Foreign-owned	Irish as % of Foreign
Modern Manufacturing			
Paper, Printing and Recorded Media	68.2	582.0	11.7
Chemicals	48.1	584.5	8.2
Electrical and Optical	49.5	144.8	34.2
Total Modern Manufacturing	**59.2**	**303.1**	**19.5**
Traditional Manufacturing			
Food	63.5	434.9	14.6
Textiles and Clothing	32.5	81.1	40.0
Wood and Wood Products	51.2	106.2	48.2
Rubber and Plastic Products	51.1	64.9	78.7
Non-Metallic Minerals	80.4	109.6	73.3
Metal Products	47.5	63.3	75.1
Machinery and Equipment	47.7	88.7	53.8
Transport Equipment	61.1	67.5	90.6
Other Manufacturing	49.3	200.3	24.6
Total Traditional Manufacturing	**57.7**	**190.8**	**30.2**
Total Manufacturing	**58.0**	**271.9**	**21.3**

Source CSO (2007), *Census of Industrial Production*, 2005.

The Department of Enterprise, Trade and Employment (2003), in a review of industrial performance and policy, noted that, 'though there was a modest increase in the number and employment share of large and medium-sized manufacturing establishments during the 1990s, Irish-owned enterprise remains predominantly small in scale. As productivity, export propensity and investment tend to increase in line with firm size, there remains a need for enhanced scale among domestically-owned enterprises (Department of Enterprise, Trade and Employment, 2003: 10). Gallagher, Doyle and O'Leary have observed that 'the chief issue concerning the quantity and quality of Irish entrepreneurship is, not that there has been a dearth of entrepreneurs but rather why so few of them have survived to build large profitable enterprises' (Gallagher, Doyle and O'Leary, 2002: 74). The Enterprise Strategy Group also identified small scale as a factor limiting the potential of indigenous companies in international markets.

The situation has not changed much in the current decade. In 2000, around 44 per cent of employment in Irish-owned manufacturing was in enterprises employing over 100 people and 11 per cent in enterprises employing over 500 people. By 2005, there had not been much change in these shares; 42 per cent of employment was in enterprises employing more than 100 people and 11 per cent was in enterprises employing over 500 people. The absolute numbers employed in the largest size Irish-owned enterprises (500 +) fell from over 15,000 to around 11,700. In 2005, there were 16 of these Irish-owned manufacturing enterprises employing over 500 people. Among foreign-owned enterprises, the vast majority (88 per cent) of employment in 2005 was in enterprises with more than 100 people employed and over half (52 per cent) was in enterprises with more than 500 employed.

Outward Direct Investment

Outward direct investment (ODI) is becoming an increasingly significant phenomenon in the Irish economy. ODI refers to investment by enterprises based in Ireland in foreign enterprises and in acquisition of foreign assets. It takes many forms, including the establishment of greenfield enterprise, acquisitions, mergers and joint ventures. Acquisition of property by both enterprises and individuals is also included.

There has been strong growth in ODI from Ireland in recent years. The level of ODI increased from €5 billion (4.8 per cent of GNP) in 2000 to €11.7 billion (6.7 per cent of GNP) in 2006. The cumulative stock of ODI abroad owned by Irish-based entities in 2007 was €87.2 billion (50 per cent of GNP). In 2004, for the first time, the outward flow of direct investment exceeded inward flows.

Outward direct investment is separate from portfolio investment such as the purchase of financial instruments by the National Pensions Reserve Fund (NPRF). The level of outward portfolio investment greatly exceeds the level of ODI. The CSO distinguishes direct investment from portfolio investment according to the criterion that direct investment involves equity ownership by the Irish-based investor of at least 10 per cent in the foreign enterprise or asset. Typically however the level of ownership for Irish direct investment is 100 per cent. Once the direct investment relationship is established then all subsequent transactions between the related entities are counted as direct investment.

There is substantial outward direct investment from Ireland by major companies such as CRH and the banks as well as by many smaller companies in both manufacturing and services. In addition, there is substantial direct outward investment by foreign-owned enterprises head-quartered in Ireland, often based in the IFSC. Of the €11.7 billion of ODI in 2006, €7 billion was by IFSC companies.

Some information on the pattern of ODI is available from data published by Forfás that tracked the ODI of 212 Irish firms (see Table 3.4). ODI is taking place across a broad range of manufacturing and services sectors. Business and financial services is the largest source of Irish ODI (21 per cent of investments over 2002 to 2006). The second highest sector is food and beverages (6 per cent). Taken together, the various manufacturing sectors accounted for 55 per cent of Irish ODI over this period.

Table 3.4 Outward Direct Investment by Sector, 2002 to 2006

Sector	Investment Projects	Percentage of Total
Business and Financial Services	44	20.8
Chemicals, Plastics and Rubbers	12	5.7
Consumer Products	2	0.9
Electronics	2	0.9
Food, Drink, Tobacco	14	6.6
Heavy Industry	38	17.9
ICT	27	12.7
Life Sciences	9	4.2
Light Industry	13	6.1
Distribution	2	0.9
Property, Tourism and Leisure	31	14.6
Transport Equipment	18	8.5
Total	**212**	**100.0**

Source O'Toole (2007).

The CSO has recently undertaken a representative survey on international outsourcing by larger enterprises – those employing over 100 people – in Ireland. International outsourcing refers to the movement of activities in an enterprise in Ireland to an enterprise outside Ireland. The survey covered all the market sectors of the economy with the exception of agriculture and finance. Given that the survey was of enterprises employing over 100 people, it related substantially to multinational enterprises. Preliminary findings show that a high share of larger companies – 38 per cent – engaged in international outsourcing of some activity over the period 2001 to 2006. The most common destination of outsourcing was other countries within the EU (15). This suggests that outsourcing is associated with trading relationships. The survey also found evidence of substantial two way flows of international sourcing with companies reporting both job losses and job gains associated with international sourcing. The job losses were mostly in manufacturing while over half the job gains were in services.

A significant issue is the implications for the Irish economy of international outsourcing. Forfás commissioned research from a Copenhagen consultancy (Copenhagen Economics, 2007) on the economic effects of ODI on the Irish economy. They estimated its effects using both econometric research as well as a series of case studies. The key findings from this research were as follows.

The econometric evidence indicated that ODI was associated with higher employment than in comparable firms that did not undertake ODI. The econometric evidence did not prove a causal relationship but taken together with the case study evidence, the consultants considered that ODI was leading to higher net employment in the Irish bases of the firms concerned. This occurred despite employment losses in some cases arising from the transfer of production to other countries. The consultants identified three channels through which ODI increases indigenous employment. First, ODI sometimes leads to increased exports from Ireland. Second, in all of five case studies examined, there was an increase in headquarters activity leading to the creation of high quality jobs. Third, ODI can trigger the establishment of new jobs in R&D and product development.

There was also econometric evidence that ODI resulted in higher productivity in Ireland of the investing companies; ODI companies were up to 50 per cent more productive than other companies. The data did not identify any spillover effect on the productivity of other firms.

In addition there was a relationship at sectoral level between the intensity of ODI and changes in the skill structure of a sector. The textiles sector has a high ODI intensity (from offshoring a high number of jobs) and also has experienced the largest increase in the share of high skilled employees in Ireland, though this does not necessarily imply an increase in their absolute number.

The consultants also identified costs associated with ODI. There is an increased risk of technology being poached by competitors and this was experienced by one of the case study companies which led to lost revenue and legal costs. There are substantial start-up costs that can be an obstacle for smaller companies. The main cost to the economy was some loss of lower skilled employment. On balance, the consultants found that the net effects for the companies and the Irish economy were positive.

3.3.4 Prospects for Traditional Manufacturing

There is considerable diversity across traditional manufacturing both in terms of enterprises and sectors. Enterprises in traditional manufacturing range from large Irish- and foreign-owned multinationals to thousands of small enterprises employing less than fifty people. The following discussion first examines the food industry, by far the largest sector within traditional manufacturing, and then makes a set of observations concerning the remaining (diverse) sectors.

The Food Industry

The food industry represents around 20 per cent of total manufacturing employment and generated around 10 per cent of gross exports in 2006. In view of its substantial purchases from the domestic economy and low profit outflows, each euro of its exports has a bigger impact on the economy than of other manufacturing exports. Forfás data show that expenditure in the Irish economy (wages, raw materials and services) by the food industry was 63 per cent of sales in 2005 compared to 32 per cent for all manufacturing and 29 per cent for internationally-traded services. In the case of Irish-owned food companies, expenditure in the Irish economy was 78 per cent of sales compared to 67 per cent for all Irish-owned manufacturing.

In recent years there has been strong output growth by the food industry with total real output for food and drinks growing by over 4 per cent annually between 2000 and 2006. However, as mentioned, when the effects of cola concentrates are separated out, the other sectors are seen to have grown at slower rates. Exports of food and drink (excluding cola concentrate) have grown by an annual average of 3.3 per cent in nominal terms between 2000 and 2007. This has been affected by CAP reform but, in effect, represents slow export growth. There was stronger growth in the most recent years, with food exports increasing by 10 per cent in 2006 and 5 per cent in 2007 (in nominal terms). The level of food exports in 2007 was €8.6 billion.

The four main sectors of Irish food exports are dairy products (27 per cent of export value in 2007), prepared consumer foods (21 per cent), beef (18 per cent) and beverages (17 per cent)[4]. The dairy sector has experienced particularly strong growth in the past two years, with exports up 6 per cent in 2006 and 13 per cent in 2007 (in value terms). The diary sector has benefitted from stronger dairy markets. An interesting feature is the strong growth in exports to Asia, with around 50 per cent of the growth in Irish dairy exports in 2007 coming from Asia. Prepared food exports include chocolate, frozen ready meals and pizza. The industry is under pressure from rising costs but managed to increase exports by 10 per cent in 2006 and 6 per cent in 2007. The value of beef exports increased by 14 per cent in 2006 but fell 2 per cent in 2007, due to weaker prices. Beverage exports showed a large increase of 26 per cent in 2006 and there was a further increase of 5 per cent in 2007. The large increase in 2006 was due to the success of cider exports (i.e. Bulmers/ Magners) while the increase in 2007 was due to growth in liqueurs, whiskey and beer exports. It can be seen that the growth of Irish food exports in the last couple of years is based on the performance of a range of products.

4. Other food exports are seafood (4 per cent in 2007), poultry (3 per cent), pig meat (2.5 per cent) and sheep meat (2 per cent).

As with other sectors of manufacturing, there is a need for increased investment in marketing and R&D. The stronger commodity markets might be seen as obviating the need for increased investment in marketing. However, in relation to the dairy sector, Pitts (2005) has pointed out that Ireland's competitors have considerably larger scale, which is important for competitiveness in commodities and higher investment in marketing and R&D.

Restructuring is needed in parts of the food industry to secure long term viability. Competition policy should take into account the need for adequate scale to secure viability. In the case of the beef industry the Competition Authority has challenged legally the plans by Enterprise Ireland to support rationalisation of the industry. The case of the Competition Authority was unsuccessful in the High Court but the judgement has been appealed in the Supreme Court. The Supreme Court in turn referred the issue to the European Court of Justice (ECJ) as the case involves interpretation of European competition law. The Council's view is that competitive advantage is an important consideration in the food industry and that restructuring of Ireland's processing capacity, small in the EU internal market context, seems necessary to secure the long term viability of the industry.

Under *Towards 2016*, a Food Industry Committee, consisting of senior representatives of the industry, was established to identify issues impeding the development of the food and drinks sector and to develop appropriate strategies. In addition an Agri-Food Research Group was established to identify high level research priorities.

A positive characteristic of the food industry is that it includes some of Ireland's largest Irish-based multinationals, including Kerry, Glanbia, IAWS and Greencore. These companies have been very successful internationally and continue to have substantial presence in the Irish economy. Of the top ten indigenous exporters in Ireland, seven are food companies[5].

Stronger international demand for commodities has led to increased commodity prices and the strong demand is expected to persist in the medium term. Irish dairy companies will benefit from strong commodity demand. There has been some fall in dairy prices from the peak reached in late 2007. Higher commodity prices benefit farmers but also mean increased raw material input prices for food processors. These increased costs are distributed among processors, retailers and consumers. The experience to date seems to be that processors are passing on higher costs to consumers. A significant exception to this is meat where increased costs of corn have not been passed through to meat prices. As an agricultural and food exporter Ireland can be expected to be a net beneficiary of the rise in agricultural prices.

Output in the dairy sector in the EU is at present managed by the dairy quota system. It is the intention to eliminate the quota by 2015; in the interim period there will be a 2 per cent milk quota increase in 2008 and this is likely to be followed by modest further increases in quota in advance of its elimination. It is probable that Irish dairy production could expand when the quota is abolished. If the Irish dairy sector is to avail of the potential opportunities from quota removal and the growth of global dairy markets, there are a number of strategic issues that need to be

5. The other top three indigenous exporters were Glen Dimplex, Elan and Waterford Wedgewood.

addressed. Investment is needed to update existing processing plants and to create the additional capacity to process future increases in milk output. Ireland's seasonal milk production naturally lends itself to commodity production so that a radical shift to higher value-added consumer products is unlikely. However, there is need to consider the best product mix, having regard to future market opportunities and Ireland's competitive advantage.

World Trade Organisation (WTO) and the Food Industry

The WTO negotiations will affect the prospects of the food industry. These negotiations are not yet finalised but the direction is clearly towards greater liberalisation. There were substantial reforms made to the Common Agricultural Policy (CAP) in advance of the WTO negotiations. The latest proposals on the WTO are set out in a paper by the Chairman of the Agriculture negotiations in the WTO, Crawford Falconer. The Falconer proposals envisage very substantial reductions in agricultural tariffs in sectors of most concern to Ireland, the beef and dairy sectors. There are also substantial proposed reductions in tariffs for other products produced in Ireland including lamb, pigment and poultry. Export subsidies would be halved by 2010 and eliminated by 2013. The current proposals are being analysed by the Food and Agricultural Policy Research Institute (FAPRI)-Ireland Partnership within Teagasc but this analysis is not yet available[6].

If implemented, the Falconer proposals would have significant effects for the Irish agricultural and food sector. The most significant effects would be for the beef sector. Without a WTO agreement the beef sector is under considerable pressure. There is a very large gap between EU and world prices. The large reductions in tariffs (of around 70 per cent) would significantly affect the economics of beef production in Ireland[7]. Ireland's beef exports go mainly to the EU market at present. Both prices and volume of production would fall. The production of sheep meat would also fall.

The Falconer proposals would also have negative effects on the dairy sector. The reduction in tariffs would reduce prices and the value of production and exports.

In the event of a successful WTO agreement, the overall effect would be to increase the exposure of agriculture and associated processing sectors to global market pressures and volatility. A possible WTO agreement would significantly affect Irish food exports. The Council reiterates the view expressed in its 2006 Strategy that it is important that the 'European Model of Agriculture' is not undermined and that the EU has a key role in ensuring that the process of globalisation is accompanied by sufficient international governance to achieve both stability and respect for social and environmental goals.

6. The material presented here is informed by discussions with economists in Teagasc who are not responsible for the views expressed here.

7. There is the possibility that beef would be designated as a 'sensitive' product in the negotiations. This would mean a lower tariff cut but the *quid pro quo* would be that increased access to the EU market through what is known as the 'tariff rate quota'.

Other Sectors

There is considerable diversity across the enterprises in all the other traditional manufacturing sectors, and there will invariably be job losses in some of them. However, the trends in output and employment presented above do not indicate that these sectors are subject to long term decline. The findings of the European research study on low-tech manufacturing discussed above found evidence that manufacturing in what are labelled low-tech sectors display remarkable stability and a continuing high share of employment in manufacturing in advanced countries. Proximity to markets provides a continuing source of advantage for some traditional manufacturing activity.

There is potential for ODI to contribute to successful development across many traditional manufacturing sectors. While this will lead to job losses in some cases, as discussed above there is evidence that it can lead to net employment gains for the enterprises concerned and the Irish economy. For those indigenous companies that have strong brands, ODI can be used to enhance the economic return on these brands.

Innovation is a critical requirement for survival and success in traditional manufacturing. Innovation can involve new products, entry to new markets and improvements in organisation and process. For some traditional manufacturing, R&D is an important source of innovation. For example, in building materials, R&D provides the basis for new products that are in demand to meet the needs of enhanced energy efficiency. In much of traditional manufacturing innovation is based more on reconfiguration of available information and process improvements than on recent scientific knowledge.

Examples of Successful Strategies in the Traditional Manufacturing Sector

Glen Dimplex is a company that began as a small Irish manufacturing company in 1973 and expanded into a major global supplier of domestic appliances. The company now employs around 10,000 people worldwide and turnover is approaching €2 billion. Through the development of its original brands and a strategy of acquisition internationally, the company now has a portfolio of well-known brands. There are manufacturing operations in Ireland, the UK, Continental Europe, the US, Canada and New Zealand and its products are marketed on five continents. In the late 1990s, sourcing offices in China were opened to develop an Asian supplier base for the company's worldwide operations. The corporate headquarters for this global business is located in Dunleer, Co. Louth.

Design and innovation are core aspects of corporate strategy. There are 500 design and development engineers employed across its global operations. In 2007 the company announced the establishment of a new research centre in Dunleer to develop energy efficient products. In announcing the establishment of this centre the company referred to climate change and stated that it was seeking to enhance its market position through the development of innovative, energy efficient products. This centre is to employ 20 researchers and engineers.

The scale of the global operations of Glen Dimplex makes it very distinctive in the Irish manufacturing sector. Dubarry Shoes is an example of a small company that has been successful in finding profitable tasks in a traditional sector. The company

was established by community leaders in the 1930s to create employment and served the protected home market in its early decades. The company no longer undertakes manufacturing in Ireland but its head office continues to be in Ballinasloe where product development and marketing functions are based. The company has had considerable success in marketing its products in the Irish market. In relation to international markets the company took the view that it lacked the financial resources to establish itself in the general footwear market. The company developed technical expertise in producing marine footwear, initially as a subcontractor to a Danish company. Its marine shoes incorporate patented technology in the form of a non-slip rubber outsole. In international market it concentrates on niche areas of marine and outdoor footwear.

The growth in beverage exports from Ireland was referred to above. A key factor underpinning this growth has been substantial investment in developing international brands. Baileys has been remarkably successful in global markets. It is sold in 130 countries and sales exceed 7 million cases annually. Baileys is ranked as number 25 among spirit brands worldwide. Jameson is also a strong international brand. Sales have doubled in the past decade and now exceed 2 million cases. The most recent major branding initiative for an Irish beverage brand was the launch of Magners in the UK. This achieved remarkable success; a new market for premium cider was created in the UK but the brand now faces strong competition.

The textiles, clothing and leather sectors have experienced long-term decline in their output and employment levels and the likelihood is that this will continue. However, here too there is scope for ODI to underpin higher value-added employment in Ireland. As noted above the textiles industry in Ireland has experienced a high level of ODI and an increase in the proportion of skilled employees. Diamond Designs in Monaghan is an example of an Irish clothing firm that has successfully used offshoring in its business strategy. This company designs and markets uniforms for nurses and beauticians from its Monaghan base using French fabric and outsourced manufacturing. Another example of a successful small enterprise in the clothing sector is Horseware Products in Dundalk. This company designs and produces high quality horse rugs and equestrian clothing for global markets. Manufacturing takes place in Ireland and North Carolina. The company has been affected by rising costs and Asian competition. It has responded with capital investment, acquisition of technology and training to increase efficiency across its business. Magee is another company in a traditional sector that has offshored its manufacturing operations. This has facilitated the company in continuing to be competitive in the high-quality clothing market.

These examples illustrate that notwithstanding considerable pressure on the traditional manufacturing sector in Ireland, there are opportunities for profitable tasks in these sectors to be based in the Irish economy, while using the opportunities presented by globalisation.

3.4 Policy Issues

3.4.1 The Challenges for Manufacturing

The Enterprise Strategy Group (ESG) argued that the Irish enterprise sector had significant expertise in operations and manufacturing but more limited capabilities in the areas of: (i) applied R&D and new product development; and (ii) sales and marketing. Their overarching strategy was to develop strengths across the value chain. There has been progress in these areas but this characterisation of Irish enterprise is still relevant. Notwithstanding strengths in manufacturing and operations there is considerable potential, particularly in the traditional sectors, to increase productivity through process and organisational innovation.

The recently-published Enterprise Ireland strategy for 2008 to 2010 identified the achievement of larger enterprises as the single biggest challenge facing Irish companies. The issue of the size of enterprise is related to the challenges identified by the ESG. For indigenous enterprises in both manufacturing and services, greater scale facilitates the building of strengths in new product development and marketing[8]. Enterprise Ireland has a dedicated unit that works with companies that demonstrate commitment to increase sales to significant thresholds. Its strategy has set a target of increasing the number of its client companies with an annual sales threshold of €20 million to 225 (an increase of 20 per cent by 2020).

For inward investment in manufacturing, the challenge is to attract high level manufacturing operations and crucially R&D and other related service functions. Extending the corporate mandate of existing manufacturing operations in Ireland to other functions including R&D, sales and marketing is a crucial part of achieving value-added activity in Ireland that is consistent with a higher wage economy.

3.4.2 High Level Group on Manufacturing

A high level group on manufacturing was established under *Towards 2016* consisting of representatives of employers in manufacturing and trade unions with the enterprise agencies represented in an advisory capacity. The group published its report in April 2008. The report argues that manufacturing continues to have a fundamental role in the Irish economy given its contribution to employment (direct and indirect), output, exports, innovation and technological advance. The report draws a distinction between production and manufacturing. Production is one (albeit an important one) dimension of manufacturing. Manufacturing encompasses R&D, design, production, logistics, distribution, marketing and after-sales service.

The group identified the loss of cost competitiveness as the biggest immediate challenge facing the manufacturing sector. In particular the group expressed its concern at costs in the areas of energy, waste, local authority charges and local professional services. The group called for immediate government action to address costs. To address the cost of professional services the group recommended that

8. The size of enterprise is also of relevance to functions such as finance; these benefits are probably now more important than technical economies of scale in production.

new structures be put in place to co-ordinate responses to the recommendations made by the Competition Authority.

The group also made recommendations to promote innovation and productivity. It emphasised the importance of non-technological as well as technological innovation and recommended enhanced support for business process improvement and workplace reorganisation. It noted that there are many initiatives in place to promote innovation and productivity. It called for a review of the effectiveness of existing initiatives as well as enhanced promotion of the supports available from the enterprise agencies. The group recommended that increased resources be provided for relevant courses for people in employment. The group also recommended the establishment of a national manufacturing competence centre or centres that would engage actively with large companies and SMEs. This would take place under the competence centre initiative established by the agencies in 2007[9].

To drive implementation of its proposals the group recommended the establishment of a manufacturing forum to include representation from the social partners.

3.4.3 Corporation Tax

While FDI-enterprises represent a small share of total employment in the economy, Ireland relies substantially on FDI-enterprises for productivity and export growth. It is critical that Ireland remain an attractive location for high value FDI. Ireland's low corporation tax rate has been and continues to be an important incentive in attracting FDI to Ireland. It is not the only factor. Other factors include a stable macroeconomic environment fostered by social partnership; Ireland's EU membership and the fact that Ireland is an English speaking country; Ireland's social links with the US; the effectiveness of the IDA and a general pro-enterprise approach to public policy; an education system suited to produce the skills needs of high-tech and international service businesses; and the ability to attract skilled employees from around the world. The new Member States are seeking to emulate Ireland's success in attracting FDI through a low corporation tax rate.

Ireland's use of corporation tax as an instrument for economic development could be affected if there were to be the development of a common, consolidated corporate tax base (CCCTB). The feasibility of this is being explored by a working group of Member States representatives established by the European Council.

3.4.4 Innovation policy

Developments in Irish Policy

Innovation is crucial to economic development. Empirical and theoretical research on economic development has shifted the emphasis from the investment constraint to the knowledge and skills constraint (NESC, 1989).

9. Competence centres are collaborative initiatives established and led by industry. They are resourced by researchers associated with research institutions. They undertake market-focussed R&D based on industry needs and defined by a group of companies.

Under the National Development Plan, 2000-2006, there were major initiatives in the area of research policy with the establishment of Science Foundation Ireland (SFI) and expansion of the Higher Education Authority's Programme for Research in Third Level Institutions. These initiatives provided significantly enhanced funding for basic research. In 2006 the Government published a new *Strategy for Science, Technology and Innovation (STI) 2006-2013*. This provides further increases in support for basic research. Research is distinct from innovation. In addition, the STI strategy emphasizes the promotion of enhanced business R&D and innovation and the development of economic benefits from the basic research undertaken in higher education and research institutions. It also introduced new institutional arrangements to achieve better alignment with Ireland's research efforts and its economic, social and environmental objectives. The new arrangements are led by a cabinet committee (chaired by the Taoiseach or his nominee) and an interdepartmental committee on science, technology and innovation.

The new strategy envisages that two thirds of the additional R&D will be driven by the business sector. In addition there is an ambitious innovation target that the proportion of sales from innovative products and processes introduced in the last two years will double by 2013.

Earlier work by NESC on Ireland's long run economic development identified as one of the basic features of the Irish economy 'the absence of a well developed infrastructure of research institutes, universities and firms engaging in development and application of new technologies' (NESC, 1989: 490). The success of the Irish economy since 1987 and particularly since 1994 indicates that more economic development was possible than anyone had imagined despite the absence of such infrastructure. Ireland's success in attracting FDI in the past two decades offset, to a significant extent, the need for a well developed research infrastructure. However, as Irish incomes and costs have increased, there are limits to how far Ireland's economy can progress without this infrastructure. The plans set out in Ireland's STI strategy go some way towards altering this basic feature of the Irish economy.

Ireland's STI strategy is part of Ireland's contribution to the European Union's Lisbon strategy. The Lisbon strategy is a strategy of economic, social and environmental reform that was agreed by the European Council in 2000 and re-launched in 2005 with increased emphasis on the job creation and economic growth dimensions. The Lisbon economic strategy calls for wide ranging reforms including improving work incentives, reforming active labour market policy, education and training reforms, promoting new business formation and business development. One of the prominent targets in the Lisbon strategy is to increase the EU's expenditure on R&D to 3 per cent of GDP by 2010. This is based on the fact that EU R&D expenditure lags that of the US and Japan and the perception that this is a factor in the EU's sub-optimal performance in terms of innovation and economic growth. Two thirds of the 3 per cent of R&D is to be business R&D.

The Relationship between Research and Economic Development

There is not a simple relationship between research, technology and innovation in the economy. The 'linear model' whereby innovation is simply applied science was first explicitly named and rejected in an influential paper by Kline and Rosenberg (1986). This model views innovation as consisting of a number of clearly defined stages; research comes first, then development and then production and marketing. Subsequent empirical evidence on innovation has shown that it comes from multiple sources:

> In particular, incremental innovations (in manufacturing) came from production engineers, from technicians and the shop floor. They are strongly related to different forms of work organization. Furthermore, many improvements to products and to services came from interaction with the market and with related firms, such as sub-contractors, suppliers of materials and services. Formal R&D was usually decisive in its contribution to radical innovations but it was no longer possible to ignore the many other contributions to, and influences upon the process of technical change at the level of firms and industries (Freeman, 1995: 10-11).

The lack of a simple relationship between science and innovation does not imply that they are independent of each other. Nelson is among those authors who emphasises the importance of entrepreneurship and learning by doing and using technology. However, he also emphasises the significance of scientific understanding to the advance of technology:

> At the same time, efforts to advance technology are not completely blind but are guided by the understandings of those in the field regarding how the technology works, the sources of its strengths and limitations, and promising avenues toward improvement. In the contemporary world, much of this understanding is provided by science, particularly the applied sciences and engineering disciplines whose basic objective is to facilitate technological advance. For me at least, a striking characteristic of fields in which technological advance has been rapid is that they all seem to be closely related to a powerful applied science or engineering discipline (Nelson, 2005: 178-179).

In Porter's analysis of the sources of competitive advantage of nations, he points out that virtually every advanced nation and all of those in his study had polices designed to encourage research. In his analysis of the US economy, Porter (1990) cites the research that universities undertake as one of its outstanding strengths that accounts for much of American success in new business.

In view of the substantial increase in funding in university research in Ireland it is important to understand the different channels through which this research could bring economic or social benefits. In this chapter the focus is on the potential benefits to the manufacturing sector. There are a number of possible channels of influence.

- First, the enhanced investment in research may encourage multinationals already here to remain in order to engage with this research work and may also encourage new multinationals to invest in higher levels activities in Ireland. This channel operates mainly through the Centres for Science, Engineering and

Technology (CSETs)[10]. The attractions of participating in this research activity can help to offset the rising cost of doing business in Ireland. Where these research centres generate commercially valuable knowledge, there are issues in regard to the appropriate sharing of the profits or rents created.

- Second, the knowledge gained may be used by indigenous companies to boost their capabilities and value-added. This requires that indigenous companies have the ability to interact with research and use the knowledge developed. Higher education institutions have developed technology transfer offices to facilitate diffusion of knowledge to both multinational and indigenous companies.
- Third, where research knowledge has direct commercial value, the use of patents is a way through which universities can obtain a return on public research.
- Fourth, research in universities may lead to the formation of new businesses by academics or graduates. Higher education institutes (HEIs) now have initiatives and facilities to support the formation of campus companies. Porter (1990) particularly emphasises the significance of students seeing ideas with commercial potential and forming new companies or bringing ideas to existing companies.
- Fifth, apart from establishing companies, students who have participated in advanced research can bring new skills and knowledge into existing enterprises. However, it is worth noting that the US experience – where there is a long history of advanced research and post-graduate education – is that it is a minority of PhD graduates who enter business employment (Thurgood *et al.*, 2006)[11].
- Sixth, there is potential for participation in advanced research to support good teaching and inspire undergraduates. However, there is also concern, discussed below, that the increased emphasis on research creates tensions with undergraduate teaching.

It is unclear generally what impact developments in areas such as biotechnology and nanotechnology will ultimately have in economic and social terms. The benefits that Ireland will derive from its new investment in research are unpredictable. In this unpredictable environment there are likely to be some benefits to having people who are engaged in research in emerging technologies. However, achieving economic or social returns from the major investment taking place in basic research is not guaranteed. Some are skeptical that there will be a return. Those who welcome the new investment acknowledge the challenge of deriving benefits from the research.

10. Ireland's CSETs are listed on www.idaireland.com

11. In 1995/99 of those PhD graduates with plans to remain in the US, 63 per cent had job commitments. The largest area of employment was the academic sector where around half of PhD graduates with work commitments found employment in 1995/99. Around 27 per cent of PhD job appointments in 1995/99 were in business or self-employment. This percentage was higher for PhD graduates in science and engineering (44 per cent).

A paper by Jordan and O'Leary (2007) examined the impact of interaction between enterprises, HEIs and other organisations on innovation. The paper was based on a survey of CEOs in 184 high-tech enterprises in 2004. A surprising finding from the survey was that there was a negative association between the frequency of interaction with HEIs and product and process innovation, as reported by companies in the survey. This negative association does not prove a causal relationship. More research is needed in this area.

A recent report by the Advisory Council for Science Technology and Innovation (2007) found that collaboration between higher education institutions and enterprise operates at a low level in Ireland and that the structures for encouragement and support of the process have failed to achieve the level of contribution appropriate to higher education expenditure on research and development. This was consistent with the findings of the ESG. The Advisory Council identified the two key constraints on collaboration between HEIs and enterprise as the low absorptive capacity of enterprises for research and a gap in the availability of applied research that enterprise can readily access.

To address these shortcomings the Advisory Council proposed that the development of an applied research capability be prioritized under the current Strategy for STI to give SMEs access to technological knowledge that they can apply in their businesses. It recommended a major new initiative to achieve the development of in-depth competence in applied research and the development of new applied research groups to support innovation. It noted that competence centres are one model for the applied research capability, together with the expansion of the enterprise-led research networks approach. It emphasised that the new applied research groups be enterprise-led and should ideally be located on or close to HEI campuses. Enterprise Ireland in 2007 had an initial call for expressions of interest for the establishment of competence centres.

NESC Perspective

The NESC Council considers that the repositioning of Irish enterprise is essential. New sources of competitive advantage need to be developed as the Irish economy can no longer compete on the basis of relatively low costs. The Strategy for Science, Technology and Innovation is a significant part of the response to this challenge. This strategy needs to be monitored and adapted over time to ensure that the substantial investment in research is yielding benefits and that there is increased innovation and new product development in enterprises. It will take several years for the benefits of this investment to be realized.

Concerns have been raised that the implementation of the new research strategy is requiring the diversion of significant attention and some resources from undergraduate education in Irish universities (Forfás/HEA, 2003). Barrett (2006) has pointed out that the actual spending by universities on undergraduate education is far below the subsidy per student in arts, social science and business that is allocated to universities. The Council is of the view that it is possible to combine enhanced research activity with strong undergraduate education. A decline in the quality of undergraduate education would be contrary to the goals of the innovation strategy: it is the skills of the labour force that are and will continue to be the single most important basis for Ireland's prosperity and social progress.

Within the traditional manufacturing sector there is scope for technological innovation to enhance competitive advantage, even if the actual production takes place elsewhere. The potential for innovation exists across all business functions; in particular, organisational as well as product innovation can support competitiveness and profitability. The NCPP has highlighted the potential of changes in work practices to increase productivity. The Council welcomes the recent announcement of a revised and streamlined fund of €500 million over the period 2008 to 2013 to support R&D in enterprises and a dedicated fund of €80 million to support innovation in SMEs.

3.4.5 A Low Carbon Economy

Concern about climate change has led to ambitious targets to reduce greenhouse gas (GHG) emissions. The European Council has agreed that developed countries will need to cut emissions by 60 to 80 per cent by 2050. It has also been agreed that the EU will reduce emissions by at least 20 per cent on 1990 levels by 2020. The transition to a low carbon economy has been described as a 'new industrial revolution'. It is possible that active pursuit of low carbon technologies will unleash a cluster of innovations across economies in the manner famously described by Schumpeter (1939) with far reaching economic and social effects. Historical examples of key innovations include the introduction of railways, the invention of electricity and more recently the ICT revolution.

It is impossible to predict the implications for manufacturing in Ireland of cutting GHG emissions by 60 to 80 per cent but there will obviously be very significant effects. As the initial steps are taken towards reducing emissions, energy efficiency has a crucial role to play. A study cited in the Stern report of 74 companies drawn from 18 sectors in 11 countries showed gross savings from actions to tackle climate change of $11.6 billion. Manufacturing companies were included in the study. For example, BASF, the chemicals company has reduced GHG emissions by 38 per cent between 1990 and 2002 through a series of process changes and efficiency measures that reduced annual costs by $500 million at one site alone.

The move to a low carbon economy will result in many new enterprise opportunities. These opportunities will arise across the economy in primary production, electricity generation, manufacturing and services. It has been estimated that the number of jobs in the renewable energy industry globally in 2007 was 2.4 million, of which 1.1 million were in biofuels production (Renewable Action Network 21, 2008). The Stern report estimates that this will rise to over 25 million by 2050.

Research is proceeding in Ireland and elsewhere on the development of ocean energy. This could lead to exciting enterprise opportunities in Ireland with possible spinoffs for manufacturing. Biomass for use in heating creates opportunities for primary producers and producers of wood chips and pellets.

The need for energy efficiency will increase demand for innovative energy efficient products. As noted above, Glen Dimplex is creating a new research centre to develop such products in the domestic appliances area. Tougher building regulations will increase demand for energy efficient materials in building.

3.4.6 Education and Training

As in other sectors of the economy, the future of manufacturing sector depends on the skills and attributes of those engaged in and attracted to the sector. An important factor in Ireland's success in developing a large high-tech manufacturing sector has been the availability and quality of people with relevant skills. Ireland is the leading EU country in terms of the number of maths, science and technology (MST) graduates (24.2 MST graduates per 1000 population in the 20 to 29 age group compared to an OECD average of 12.3 per cent in 2003) but, as in other western countries, enrolment in these areas at third level is declining in both relative and absolute terms (NCC, 2007b: 40)[12].

In recent years demand for engineers in Ireland has exceeded domestic supply; demand has been met in part through immigration. Ireland's ability to sustain its success as a location for high-tech industry and to develop R&D and related activities depends on talented people continuing to pursue engineering and scientific careers. There is scope for more effective use of the talents of women to address skill shortages in these fields[13].

Ongoing innovation is essential for success in the light of rapid change in markets and technology. The enhancement of skills at all levels is essential to enable such innovation.

3.4.7 Networks

The Council and the ESG have previously advocated a network approach in the development of enterprise. Networks may refer to groups of firms that co-operate to achieve some objective or may involve other actors such as third level research institutes, financial institutions or development agencies. The term 'business network' describes arrangements where firms collaborate for specific purposes and where the results of the activity will have some identifiable impact on their business. Networks are a possible response to the challenge of increased global competition and can be a way of small firms overcoming some scale disadvantages.

Trust is required if companies are to co-operate substantively in a business network. Research by Jacobson and Mc Grath (2006) on the software manual printing industry in Dublin suggested that the lack of trust and a culture of secrecy prevented what would have been economically beneficial co-operation. To maintain very high quality, companies needed to invest in expensive high-tech machines. The cost of these machines was greater than any individual company could afford. None of the companies considered co-operating to share the ownership and costs of the

12. At honours degree level (level 8 in the education system) the share of acceptances in courses in the technology fields (engineering, computing, science and construction) fell from 31.7 per cent in 2000 to 22.8 per cent in 2006; in absolute terms there was a decline of around 550 acceptances. This decline occurred despite increases in acceptances for construction courses. Acceptances for engineering courses fell by over 28 per cent and for computing by close to 50 per cent between 2000 and 2006 while the absolute number of acceptances on science courses has been fairly stable over this period. There was also a fall in acceptances in technology courses in both absolute and relative terms at certificate and ordinary degree levels (levels 6 and 7) since 2000 with some recovery in 2006. The percentage of acceptances for all courses was affected by the introduction of a nursing degree; the percentages quoted here have been adjusted to take account of this.

13. Women now constitute 60 per cent of new entrants to university but are under-represented in engineering education and related careers. In 2006/2007 less than one quarter (23 per cent) of entrants to full time undergraduate courses in the category of 'engineering, manufacturing and technology' were women. There is not the same gender disparity in science education with women representing 47 per cent of undergraduate entrants to science in 2006/2007 and around one half of science graduates in the same year.

machines. Such co-operation would obviously not have addressed the subsequent collapse in the market for software manual printing but with co-operation 'it is certain that they (the printing firms) could have done better during the software boom' (Jacobson and McGrath, 2006: 143).

It should not be inferred from this experience that Irish companies or even Irish printing companies are not capable of co-operation. Jacobson and Mc Grath show that subsequent experience in the Dublin printing industry was different. Of the companies that survived the collapse of the software manual boom, most returned to their traditional market of printing for the public sector. However, these companies were significantly affected by new EU regulations that required that large printing contracts be subject to tendering on an EU basis. The Dublin printing companies lacked the scale of diversity of skills to compete for large contracts in this new environment. To overcome this they formed a joint venture (business network) called the Printing Consortium of Ireland (PCI) that was capable of bidding effectively for large contracts.

The question arises as to what had changed that now enabled co-operation to take place in this industry. According to Jacobson and Mc Grath, it was the experience of executives from four printing companies in serving together on the executive council of the Irish Printing Federation that changed the dynamic and provided the basis for initial trust. This was reinforced by a two year trail period that preceded the formal establishment of PCI.

This experience confirms the importance of trust but also illustrates that the initial absence of trust is not necessarily a fixed factor. Interaction among business people can build trust that can in turn lead to co-operation among businesses.

A report by InterTradeIreland (Hunt *et al.*, 2005) documented for the first time the extent of networks and clusters across the island of Ireland. This report shows that the experience of the Dublin printing companies is not an isolated example. The report found that networks and clusters[14] were more widespread than previously thought with 110 networks and clusters of different kinds identified on the island. Almost 10,000 firms were involved in a network or cluster; this includes training networks promoted by Skillnets. Over two thirds of these were in the category of business networks, i.e., firms that collaborate for specific purposes where the results of the activity will have some identifiable and measureable impact on their business.

Following on from the ESG report, Enterprise Ireland established a pilot programme to support business networks. To date a small number of networks have been supported through this programme.

There is considerable potential for the network approach to play a more significant role in enterprise development policy. The results of the pilot network programme should be evaluated and consideration given to more widespread support for networks in enterprise policy.

14. This study defined clusters as geographically concentrated groups of interconnected companies, educational institutions, local authorities, local development agencies that arise out of linkages or externalities across sectors. This should be distinguished from full clusters in the sense used by Porter of a group of industries that benefit domestically from all of the elements of the Porter diamond being in place (factor conditions, demand conditions, related and supported industries and firm structure, strategy and rivalry).

3.4.8 Exchange Rate

As discussed in Chapter 1, the current weakness of the euro is putting a lot of pressure on the manufacturing sector. Indigenous manufacturing sells the vast majority of its output on the domestic and UK markets so the current weakness of sterling is a major pressure. The multinational sector has considerable US exports but is better positioned to absorb this pressure.

3.5 Conclusions

The Council believes that manufacturing continues to have a key role to play in Ireland's future economic development. There has been very rapid growth in services exports as discussed in the next chapter but manufacturing remains a substantial source of export earnings and productivity growth. The attraction of high value-modern manufacturing activity to Ireland and the integration of service functions with manufacturing establishments are important elements of FDI strategy. There is considerable diversity in Ireland's traditional manufacturing sector. There are traditional sectors (textiles, clothing and leather) where output and employment are in long term decline but this does not apply to most of Ireland's traditional manufacturing.

Food is the largest manufacturing sector in Ireland. The proposed WTO reforms pose very considerable challenges for the agriculture and food industry, particularly for the beef sector. However, the food sector contains some of Ireland's largest and most successful companies and there is scope for development in much of the food industry.

The growth rate of manufacturing output peaked in 1998 and then declined until 2004. Since then there has been a recovery in manufacturing output growth, led by the modern sectors. Rising costs in the Irish economy pose challenges for the manufacturing sector. There is a particular need to address costs in the areas of energy, waste, professional services and local authority charges. The significant strengthening of the euro against sterling in recent months will particularly affect indigenous manufacturing which sells the bulk of its output on the Irish and UK market. Manufacturers need to increase productivity and increase the value of their activities in Ireland. Productivity levels across sectors are at least as high as the EU average but for some sectors fall below those achieved in Denmark or the Netherlands. Innovation in products, process and organisationally are crucial. This will depend both on R&D and more informal sources of innovation.

Global value chains play a prominent role in the manufacturing sector. Many Irish firms have succeeded in positioning themselves profitably in these value chains. These include large Irish-based multinationals as well as smaller companies that outsource some functions such as production abroad. Overseas Direct Investment can contribute to enhancing the value-added and employment of manufacturing enterprises in the Irish economy.

Appendix Table A3.1
Annual Percentage Change in Employment in Manufacturing by Sector, 1995-2000 and 2000-2006

	1995-2000	2000-2006	2006 (% change)	2006 level (000s)
Modern Manufacturing				
Reproduction of Recorded Media	12.1	-3.5	-15.0	4.4
Chemicals	5.4	-0.2	5.9	24.6
Office Machinery and Computers	11.9	-6.6	11.1	17.2
Electrical Machinery and Apparatus	6.4	-11.9	-1.9	7.8
Communications Equipment and Apparatus	13.6	-10.8	0.6	7.8
Medical and Optical Instruments	8.4	4.6	8.5	24.0
Total Modern Manufacturing	**8.8**	**-3.5**	**5.0**	**85.8**
Traditional Manufacturing				
Food, Drink and Tobacco	0.1	0.5	-3.1	44.1
Textiles	-7.0	-11.9	-16.0	2.6
Clothing	-16.4	-16.7	-22.7	1.5
Leather and Leather Products	-9.6	-16.5	-30.8	0.2
Wood and Wood Products	6.0	3.7	3.7	7.0
Pulp, Paper and Paper Products	2.8	-3.2	0.6	4.1
Publishing, Printing	4.5	-4.6	4.4	11.2
Rubber and Plastic Products	2.8	-1.4	0.3	9.8
Non-Metallic Minerals	3.9	0.0	0.0	10.8
Basic Metals	6.2	-3.4	7.7	2.5
Fabricated Metal Products	3.1	1.5	4.9	13.9
Other Machinery and Equipment	1.3	-5.9	1.6	11.0
Transport Equipment	1.1	-2.1	-3.1	8.7
Other Manufacturing	2.5	-0.4	3.3	10.3
Total Traditional Manufacturing	**0.5**	**-1.7**	**-0.4**	**137.7**
Total Manufacturing	**3.3**	**-2.4**	**1.8**	**223.8**

Source CSO Database Direct, www.cso.ie.

Appendix Table A3.2
Annual Percentage Change in Manufacturing Output by Sector, 1995-2000 and 2000-2006

	1995-2000	2000-2006	2006 (% change)
Modern Manufacturing			
Reproduction of Recorded Media	17.2	15.2	16.2
Chemicals	27.1	7.1	3.7
Office Machinery and Computers	17.1	3.3	7.1
Electrical Machinery and Apparatus	23.3	9.9	14.3
Communication Equipment and Apparatus	14.8	-1.2	15.3
Medical and Optical Instruments	22.8	11.3	-0.5
Total Modern Manufacturing	**22.8**	**7.1**	**6.7**
Traditional Manufacturing			
Food Products	3.1	3.9	-3.7
Meat and Meat Products	0.1	-1.4	2.2
Dairy Products	-0.7	0.3	5.7
Other Foods	6.6	6.8	-5.0
Beverages	5.5	na	na
Textiles	-3.6	-10.0	-3.6
Clothing	-9.4	-15.5	-36.4
Leather and Leather Products	-4.6	-25.7	-13.4
Wood and Wood Products	10.6	6.9	11.2
Pulp, Paper and Paper Products	1.3	-2.2	1.6
Publishing and Printing	3.9	-1.9	-1.0
Rubber and Plastic Products	-0.3	-1.5	2.0
Other Non-Metallic Mineral Products	6.3	-0.1	3.6
Basic Metals	-1.2	-0.8	4.4
Fabricated Metal Products	5.6	-0.8	-0.1
Other Machinery and Equipment	0.9	-1.5	10.7
Transport Equipment	14.8	-1.4	0.2
Other Manufacturing	4.4	-3.9	3.7
Total Traditional Manufacturing	**3.9**	**1.1**	**1.5**
Total Manufacturing	**15.9**	**5.1**	**5.2**

Source CSO Database Direct, www.cso.ie.

Appendix Table A3.3 Exports and their Destination, by Manufacturing Sector, 2005

	Exports (€millions)	Percentage of Output Exported	Destination of Exports: UK	Other EU	US	Other
Modern Manufacturing						
Publishing, Printing, Recorded media	11676.4	89.0	19.3	68.2	1.1	11.4
Chemicals	28207.4	97.5	5.9	62.6	13.2	18.2
Office Machinery and Computers	16967.8	97.1	29.8	56.4	4.4	9.4
Electrical Machinery	2636.9	90.1	10.8	42.2	10.9	36.1
Communications, Medical + Optical	8616.1	96.0	5.1	29.8	48.7	16.4
Total modern manufacturing	**68104.6**	**95.3**				
Traditional Manufacturing						
Food	11420.8	63.3	28.1	38.7	15.9	17.3
Other foods	7853.8	88.1	19.5	39.4	21.0	20.2
Textiles	187.4	62.4	24.9	56.5	9.3	9.3
Clothing	148.9	72.0	45.5	45.6	2.2	6.8
Wood and Wood Products	300.4	28.3	66.8	23.6	8.0	1.6
Pulp, Paper and Paper Products	88.2	16.5	84.3	13.4	0.9	1.4
Rubber and Plastic Products	539.8	39.8	38.0	52.7	4.6	4.7
Non-Metallic Minerals	315.4	15.6	40.9	32.0	21.3	5.8
Basic Metals	308.2	60.7	37.4	42.9	0.5	19.3
Fabricated Metal Products	407.9	26.4	48.4	40.3	8.1	3.1
Machinery and Equipment	1384.5	77.6	17.4	47.8	15.8	19.0
Transport Equipment	824.4	73.1	13.4	65.4	14.1	7.1
Other Manufacturing	1067.1	38.4	35.1	35.8	10.8	18.3
Total Traditional Manufacturing	**16993**	**52.0**				
Total Manufacturing	**85097.5**	**82.8**	**17.2**	**53.9**	**13.5**	**15.4**
Total Irish-owned Manufacturing	6195.2	33.8	46.1	35.7	8.2	10.0
Total Foreign-owned Manufacturing	78902.4	94.1	15.0	55.3	14.0	15.8

Source CSO (2007), *Census of Industrial Production, 2005.*

4

The Rise of Services

4.1 Introduction

With the economic boom of the 1990s, a shift in the composition of activity in the Irish economy from making things to providing services that had begun much earlier was accelerated. Until the early-1980s, the sectoral employment shares of services *and industry* (manufacturing and construction) both expanded, while that of agriculture declined. After 1981, the employment share of industry also began to decline and the services sector alone has been growing its share of total employment. By 2006, it accounted for 71 per cent of total employment in the Irish economy (Census 2006, *Principal Socio-Economic Results*). The strength of growth in services employment even overshadowed the huge growth in construction employment to 2006. For every one of the extra jobs created in construction between 1996 and 2006, nearly four jobs were created in one type or another of services activity. As it is inevitable and desirable that the level of construction employment return to a lower and more sustainable level, sustaining the rise in services employment becomes even more central to achieving Ireland's economic potential. The rise of services is, of course, a hallmark of contemporary economic development in every high income country today and one with profound implications for practically every area of economic and social-policy making.

This chapter focuses on the growth of services employment, the changing composition of services activity and the principal implications of these developments for economic and social policy. Section 2 rehearses the fundamental reasons behind the rise of services in high income countries and identifies the major types of services for which demand increases. Section 3 examines the changes in the scale and composition of services employment that have taken place since 1996 and that are forecast to occur by 2012. Section 4 explores the implications of the growing role of domestic demand in driving the economy. Section 5 studies the rise of services exports and the scope for an even greater and more diversified contribution from them in the future. Section 6 reviews the general challenge of raising productivity in services and assesses the evidence on productivity levels in the main types of service activity in the Irish economy. Section 7 discusses the specific challenges of supporting innovation in services, Section 8 focuses in on the quality of broadband access as an enabling condition, while Section 9 concludes.

4.2 Fundamentals Driving the Rise of Services

As real incomes rise, the proportion of them spent on goods declines and the proportion spent on services of one kind or another increases. This *higher income elasticity for services than goods* is the fundamental factor driving the growing share of services employment in advanced economies. Despite the constant innovation and improvement characterising product markets[1], consumers – after certain thresholds of affluence have been reached – tend to demand new services in order to improve their well-being or satisfaction more than they demand further additions and improvements to their stocks of perishable and durable goods[2]. In fact, there appears to be no discernible limit to the growth in demand for services as incomes rise or the ingenuity with which new types of services can be created.

Two other factors serve to reinforce or accelerate this basic fact. *Technological change* is particularly suited to the manufacture of goods and has driven major improvements in productivity which, other things being equal, has reduced the price of goods relative to services and enabled affluent consumers to enjoy additional and improved goods even while spending the same proportion of their incomes on them. International trade plays a larger part in the manufacture of goods than in the provision of services. Goods can be stored and most of them do not deteriorate on being moved across borders. This inherent tradability of goods allows countries to concentrate on producing those which utilise domestic factors that are scarce in other countries and, hence, for which other countries are prepared to pay more. This specialisation, in turn, offers major opportunities to benefit from economies of scale and, within both 'cloth producing' and 'wine producing' countries[3], the price of goods relative to services, other things being equal, then falls.

In small open economies, however, this inherently greater tradability of goods than services obtains at the same time that a new tradability *in services* is capable of reshaping their export sectors. Several factors have combined to enlarge significantly the types of service activities that are now traded internationally. Advances in ICT have enabled the digitisation and almost instantaneous, low-cost transmission of information down fibre optic cables, or across the airwaves, in ways that allow a wide range of service *functions* (data entry, claim processing, customer services, marketing, design, research, etc.), service *providers* (airlines, banks, hotels, hospitals, universities, etc.) and service *professionals* (architects, accountants, engineers, medical technicians, mathematicians, paralegals, etc) to engage in international trade. Supporting roles have been played by deregulation and a

1. Some of which takes the form of 'servicisation', i.e., a strategy by goods producers to provide services around their products in order to earn more from their customers. Thus, within manufacturing employment, progressively more workers are engaged in services-related occupations (e.g., scientific professionals, accountants, lawyers, managers, clerks, etc.); on average, 40 per cent of manufacturing employment in OECD countries involves – in effect – providing a service with only the remaining 60 per cent actually involved as 'production' workers (Pilat et al., 2006).

2. The exceptionally strong rise in demand for housing that accompanied Ireland's economic boom (the income elasticity of demand for housing is greater than unity) can, in fact, be interpreted as confirming - rather than disproving - the higher income elasticity of demand for services over goods. Demand for a house is, in fact, a demand for the 'service' that the house provides. This is discussed later in the text.

3. In the literature on international trade theory, 'cloth producing' and 'wine producing' frequently refers to the pattern of trade that developed between colonial powers and colonies in earlier centuries when the former concentrated on exporting goods that required capital and machinery to produce (the colonial powers had savings and could invest) while the latter concentrated on those which build on their natural resources (including climate).

movement towards trade liberalisation in services markets, though not without difficulty as recent debates within the EU on the Services Directive and between the EU and USA on air travel made evident.

Two types of services can be usefully distinguished, therefore, which are now playing unprecedented roles in driving the Irish economy – domestically produced and consumed services that have grown in importance as incomes rise, and internationally traded services that have been occasioning increased flows of inward and outward investment.

4.2.1 Domestically produced and consumed services

As noted, services are inherently less tradable than goods. By definition, they are used or 'consumed' at the time they are provided (e.g., a health diagnosis, being waited on in a restaurant). This means they cannot be warehoused and resold. In many instances, the user or customer and the service provider have to be physically present to each other (e.g., being waited on in a restaurant, being driven on public transport). This does not deny that, in other instances, new ICT technologies are obviating this need for physical co-location (e.g., some medical diagnoses and treatments are now carried out through patient-doctor interactions mediated electronically). However, generally, a large proportion of the services for which demand increases as real incomes rise generates domestic employment from meeting domestic demand. Urbanisation is a further factor strengthening the salience of domestic services activity. The geographical concentration of consumers/users consequent on urbanisation creates opportunities for new services to be provided as population centres attain the critical mass that ensures a viable market for niche and specialist providers. While this happens in large cities in low-income countries also, the diversity of new services created is particularly apparent in the urban centres of rich countries.

An important distinction can be made between domestically provided and consumed services which are market and those which are non-market. The former are those for which consumers pay out of their disposable real incomes, covering the full costs of commercial providers and providing the element of profit that incentivises them. The latter are those which the members of society have provided for them out of the taxes they pay, by public authorities themselves or 'third parties' whom public authorities enlist, funded entirely from tax revenue or with some element of co-payment required each time the service is used. To some extent, the balance struck between market and non-market services is quite specific to each society – to its history, institutions and culture. Higher levels of usage of many public services (e.g., in transport, education, health, policing, administration and regulation) may automatically follow from rising incomes and urbanisation, but that public services should account for a growing proportion of economic activity will reflect further specific conditions - for example, the ability of public service providers to match the quality of private sector alternatives, and the weight a society gives to the fact that public services are available to people independently of the levels of their purchasing power.

A key example is health. The value people place on good health, their growing awareness of what it takes to protect and restore it, and growing longevity seem to guarantee that a growing proportion of income will be spent on health services

in one way or another as real incomes rise. Whether this higher proportionate spending on health spurs commercial health provision or non-market providers the more will depend on a society's political choices and public traditions, but societies as different as the US and Sweden testify to the growing prominence of health services activity and of employment in health and social care.

4.2.2 Internationally-traded services

In several respects, the same logic that has driven the dismantling of manufacturing processes into tasks that are subsequently reallocated across the world to regions where each can be performed most cost effectively is being applied to services operations too. The features that make a service task eminently tradable include that it has a high IT intensity, an output that is IT transmittable, is codifiable, and requires little face-to-face interaction (Van Welsum and Vickory, 2006). By contrast, service tasks which require the creative application of a range of skills, problem-solving, judgement and face-to-face interaction tend not to be traded. In those instances, the workers in question must themselves travel if an overseas customer is to be served. Krugman (1996) points out that the level of education associated with service provision within a country no longer protects its domestic providers from service imports if the requirements for tradability otherwise exist. Baldwin (2006) emphasises the new unpredictability this produces within large service organisations when some relatively low-skill tasks (e.g., security and cleaning) continue to require domestic workers who turn up each day but higher level tasks (e.g., data and accounts processing) can be conducted through ICT channels by workers based overseas. In short, hairdressers and public transport drivers have a more secure future in the services sectors of high-income countries than many workers carrying out intricate but routine operations in processing and transmitting information.

To date, the Irish economy has been a strong net beneficiary from the growing tradability of services. Offshoring by service companies, largely in the USA, has created more jobs in the Irish economy than have been moved out of Ireland. Again, however, the strategies that enhance the benefits and minimise the risks attaching to attracting inward investment in manufacturing apply in similar fashion to inward and outward investment in internationally traded services. The services which are more complex, tailored and require intensive interaction between users and producers (thus, the least programmable or rule-based) are the most likely to remain competitive in a high cost location like Ireland and be the least likely to migrate. The relatively well-studied Irish software industry provides a case in point. A significant proportion of indigenous software firms are niche providers to specialist markets where a high price for a tailored product and a small number of clients can support a viable business. They operate at the fluid frontiers between software, communications and financial services and their 'products' are seldom 'off the peg' but constitute creative packages for defined situations (Haynes, Vecchi and Wickham, 2005). By contrast, foreign software operations in Ireland tend to provide fairly standardised services across wide markets of relatively homogenous users. Accordingly, they tend to be on a larger scale and are, potentially, more footloose. The distinct challenges in further developing indigenous and multinational software operations in Ireland are discussed below (Section 4.6.4).

4.3 Actual and Forecast Shifts in Services Employment

The enormous employment expansion associated with the economic boom has occurred overwhelmingly in services activities (Table 4.1). Construction accounted for 15 per cent of the growth in employment over the period, 1996-2002, and for 23 per cent over the next five years, 2002-2006. Otherwise, all growth occurred in services activities with particularly large contributions coming from 'real estate, renting and business activities', 'wholesale and retail trade' and 'health and social work'. By 2006, more people were working in distribution alone (the wholesale and retail trade) than in manufacturing, and more than twice as many worked in health and social work alone than in agriculture. Expressed in average annual growth rates in employment over the period 2001-2006 (Figure 4.1), employment in construction topped the ranking with an 8 per cent growth rate but health and social work followed closely, while employment in other non-market activities (public administration and defence; education) grew by 5 per cent a year.

The dominance of services jobs in net employment growth is firmly expected to continue, whether the economy continues to grow strongly or if a pronounced slowdown should occur. Table 4.2 explores the employment consequences of, alternatively, the Irish economy continuing to grow strongly to 2012 and of a pronounced deceleration of growth that begins in 2007 (the high-growth and low-growth scenarios respectively of the ESRI's 2005 Medium Term Review[4]). The ESRI's Medium Term Review (MTR) uses a macroeconomic model to simulate the impact both on final demand and the composition of activity in the Irish economy of, respectively, a postponed correction and an immediate correction to the large macroeconomic imbalances in the US economy. A postponed adjustment to the US imbalances (current deficit and trade imbalance) means that strong growth continues in Ireland's export markets until 2012 – this is the 'high growth scenario'. An immediate correction means a major slowdown begins in the US economy in 2007 that results, directly and indirectly, in slower growth in Ireland's export markets – this is the 'low growth scenario'[5].

4. This study was completed before the publication of the ESRI's 2008 Medium Term Review covering 2008-2015.

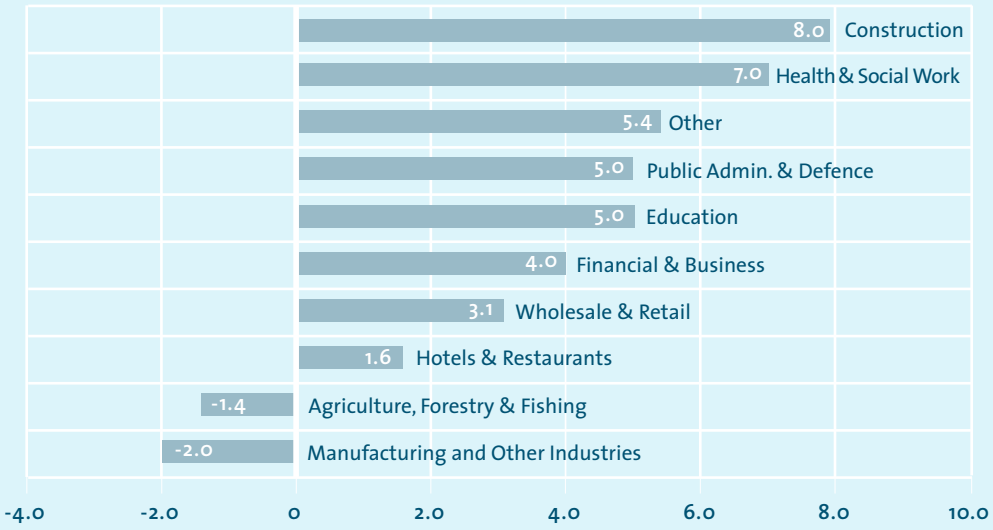
5. The actual trajectories modeled (ESRI, 2005) for Ireland's GNP were of an annual average growth of 4.9 per cent between 2005-2010, and of 3.3 per cent between 2010-2015 under the high-growth scenario, and of 3.5 per cent and 3.1 per cent respectively under the low-growth scenario. In effect, a correction to the macroeconomic imbalances in the US economy got underway in 2007. Growth in Ireland's GNP averaged 5.2 per cent over the period 2005-2007 but is expected to decelerate sharply in 2008 in response to the US slowdown; the average annual growth in Ireland' GNP for the 2005-2010 period now expected (Budget 2008) is 4.25 per cent.

Table 4.1 Persons Aged 15 and over at work, by broad industrial group: Census Data

Industrial Group	1996	2002	2006	1996-2002 Change	1996-2002 %of Growth	2002-2006 Change	2002-2006 %of Growth
Agriculture, forestry and fishing	133,969	97,281	89,277	-36,688	-11.0	-8,004	-2.8
Mining, quarrying and turf production	5,720	6,658	7,751	938	0.3	1,093	0.4
Manufacturing industries	244,372	244,203	243,182	-169	-0.1	-1,021	-0.4
Electricity, gas and water supply	11,709	11,363	11,290	-346	-0.1	-73	0.0
Construction	100,008	149,271	215,184	49,263	14.7	65,913	22.9
Wholesale and retail trade	172,081	219,165	257,309	47,084	14.1	38,144	13.2
Hotels and restaurants	65,325	81,418	100,731	16,093	4.8	19,313	6.7
Transport, storage and communications	66,191	96,855	105,705	30,664	9.2	8,850	3.1
Banking and financial services	49,093	70,838	85,413	21,745	6.5	14,575	5.1
Real estate, renting and business activities	83,815	151,107	180,973	67,292	20.1	29,866	10.4
Public administration and defence	77,385	94,746	101,264	17,361	5.2	6,518	2.3
Education	93,904	109,301	127,476	15,397	4.6	18,175	6.3
Health and social work	112,238	143,520	191,219	31,282	9.4	47,699	16.5
Other community, social and personal services activities	65,128	64,333	80,358	-795	-0.2	16,025	5.6
Industry not stated	26,298	101,528	132,910	75,230	22.5	31,382	10.9
Total at work	**1,307,236**	**1,641,587**	**1,930,042**	**334,351**	**100**	**288,455**	**100**

Source respective Census Socio-Economic Results.

Figure 4.1 Average Annual Employment Growth by Sector, 2001-2006



Source QNHS

Table 4.2 shows the starting position of sectoral employment in 2005, when 65 per cent of employment was in services, 16 per cent in manufacturing, 13 per cent in construction and 6 per cent in agriculture[6]. Depending on whether conditions in the global economy (proxied by what happens in the USA) are difficult or favourable for the traded sectors of the Irish economy, total employment is forecast to grow by a cumulative 190,000 or 330,000 jobs over the seven-year period, 2005-2012, that is, by 10 per cent or 18 per cent (Lunn *et al.*, 2007). Under both scenarios, the fundamental tertiarisation of the Irish economy continues apace and almost 70 per cent of all employment is forecast to be in services occupations by 2012[7]. Under both scenarios, the key subsectors contributing to an increase in services employment are also the same, viz., business services, health and social work, and distribution. Under the high-growth scenario, they account for 65 per cent of all the additional jobs created; under the low-growth scenario, they account for 80 per cent.

6. On a Principal Economic Status [PES] basis. The FÁS/ESRI Sectoral Model classifies employment status on a PES rather than ILO basis, which gives lower employment totals than if the latter is used, e.g., 4 per cent lower in 2005.

7. On a PES basis. The greater disparity of working hours in services creates a particularly wide difference between employment measured on an ILO 'at work' basis (where one hour's work in the previous week suffices) and employment based on Principal Economic Status (PES) in the sector.

Table 4.2 Sectoral Employment Forecasts to 2012: High-Growth and Low- Growth Scenarios

	2005	High Growth 2012	Change	%	Low Growth 2012	Change	%	Low Growth Impact
Agriculture	109,958	91,592	-18366	-16.7	91,592	-18366	-16.7	0
High-Tech Manufacturing	140,188	147,201	7013	5.0	132,683	-7505	-5.4	-14518
Other Manufacturing	151,527	143,849	-7678	-5.1	146,561	-4966	-3.3	2712
Construction	240,361	278,065	37704	15.7	251,497	11136	4.6	-26568
Distribution	241,353	295,436	54083	22.4	280,324	38971	16.1	-15112
Wholesale	*50,834*	*49,059*	*-1775*	*-3.5*	*46,533*	*-4301*	*-8.5*	*-2526*
Motor Vehicles, etc.	*38,540*	*48,500*	*9960*	*25.8*	*46,022*	*7482*	*19.4*	*-2478*
Retailing	*151,979*	*197,877*	*45898*	*30.2*	*187,769*	*35790*	*23.5*	*-10108*
Transport & Communications	116,088	123,006	6918	6.0	120,466	4378	3.8	-2540
Transport	*82,860*	*90,926*	*8066*	*9.7*	*89,034*	*6174*	*7.5*	*-1892*
Communications	*33,228*	*32,080*	*-1148*	*-3.5*	*31,412*	*-1816*	*-5.5*	*-668*
Business Services	248,664	343,735	95071	38.2	322,196	73532	29.6	-21539
Finance & Insurance	*83,821*	*108,979*	*25158*	*30.0*	*102,150*	*18329*	*21.9*	*-6829*
Other Business Services	*164,843*	*234,756*	*69913*	*42.4*	*220,046*	*55203*	*33.5*	*-14710*
Hotels & Restaurants	95,123	104,186	9063	9.5	97,658	2535	2.7	-6528
Other Market Services	105,204	138,779	33575	31.9	130,083	24879	23.6	-8696
Public Administration & Defence	103,940	122,719	18779	18.1	116,890	12950	12.5	-5829
Education	122,667	151,195	28528	23.3	135,453	12786	10.4	-15742
Health & Social Work	182,305	247,045	64740	35.5	221,324	39019	21.4	-25721
Total	**1,857,378**	**2,186,808**	**329430**	**17.7**	**2,046,727**	**189,349**	**10.2**	**140081**

Source Lunn *et al.* (2007)

Perhaps the most striking feature of the results is the extent to which the employment slow-down that occurs in a low-growth scenario is borne by the non-traded sectors. The results depict the final equilibrium position after the knock-on effects on domestic demand of lower export activity have fully worked their way through[8]. In absolute terms, many more jobs are lost in the labour intensive, non-traded sectors of the economy than in the traded sectors. For example, an employment gain in high-tech manufacturing of 7,000 jobs becomes a loss of 7,500 jobs as the low-growth scenario replaces the high-growth one, a net difference of 14,500 jobs. However, an employment gain of 65,000 jobs in health and social work is pared back to 39,000, a net difference of 26,000 jobs. In similar fashion, additional jobs in education are 16,000 less and in distribution 15,000 less when the low-growth scenario rather than the high-growth one materialises.

The low-growth scenario also has significantly different impacts on the rates of employment growth in the different kinds of services. The subsectors where the cumulative employment growth under the high-growth scenario is most pared back are hotels and restaurants (a larger proportionate reduction than even in construction – employment growth is only 28 per cent of what would be expected under high-growth conditions) and education.

The human capital implications of the rise of services are partially captured by the forecast changes to the sectoral distribution of employment outlined in Table 4.2. As explained in the previous chapter, however, there is a shift even *within* manufacturing to more service-type activities (Pilat *et al.*, 2006). The cumulative effect of both these processes on the specific occupations people are classified as holding (as distinct from the sectors they are employed in) gives even greater prominence to the significance of 'soft' or people-handling skills, along with 'hard' skills and the qualifications that attest to them, as increasingly important requirements for working in the Irish economy. The occupational employment forecasts of FÁS and the ESRI describe those occupations as 'professional' which are associated with holding a degree-level occupation, and as 'associate professional' those with a sub-degree third level qualification. Table 4.3 shows that, over the seven-year period, 1998-2005, professionals and associate professionals accounted for 29 per cent of all additional employment in the Irish economy. Over the next seven-year period, 2005-2012, however, they are forecast to account for 40 per cent of the growth in total employment under the high-growth scenario, and for 46 per cent should the low-growth scenario materialise (employment prospects are most impaired for the lower qualified when economic growth slows). As Lunn *et al.* (2007: 27) note, only one occupational group not associated with holding a third-level qualification is forecast to grow very substantially under the high-growth scenario (by more than 30 per cent), namely, caring occupations. The large growth in childcare workers in this latter group, though, is directly related to looking after the children of the faster growing groups of professionals and associate professionals.

8. For this reason, low-tech manufacturing actually fares better in employment terms under the low-growth scenario. This is because the envisaged conditions lead to a rise in unemployment, which exerts downward pressure on wages in these industries and, therefore, improves their competitiveness (Lunn et al., 2007: 21).

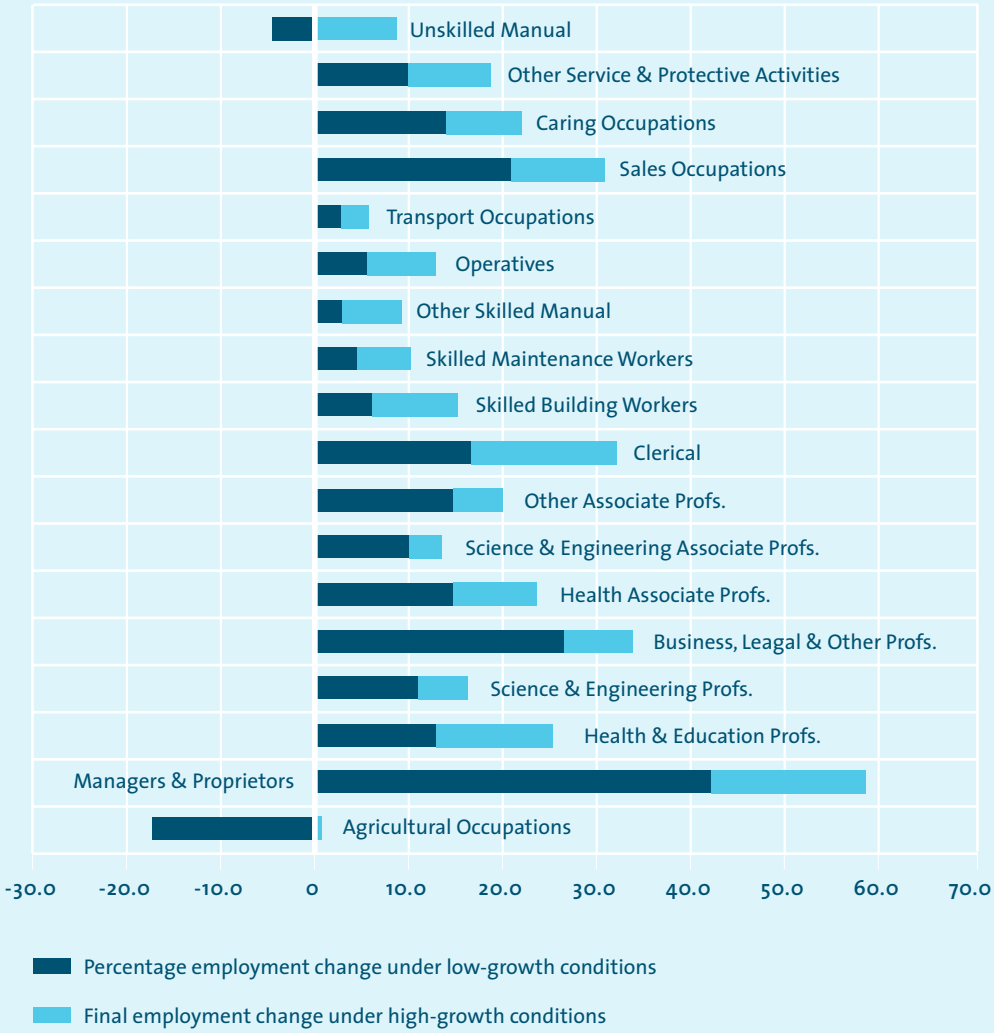
Table 4.3 Occupational Forecasts to 2012: High-Growth and Low-Growth Scenarios

	1998	2005	Change 1998-2005		High Growth 2012	Change 2005-2012		Low Growth 2012	Change 2005-2012		Low Growth impact
	000s	000s	000s	%	000s	000s	%	000s	000s	%	000s
Agricultural Occupations	113.4	99.2	-14.2	-12.5	82.4	-16.8	-16.9	81.9	-17.4	-17.5	0.6
Managers & Proprietors	180.9	228.2	47.3	26.1	286.2	58.0	25.4	270.0	41.8	18.3	16.2
Health & Education Professionals	76.6	100.1	23.5	30.7	125.1	25.0	25.0	112.6	12.5	12.5	12.5
Science & Engineering Professionals	32.4	55.0	22.6	69.8	70.9	15.9	28.9	65.8	10.8	19.7	5.1
Business, Legal & Other Professionals	50.4	79.6	29.2	57.9	113.0	33.4	42.0	105.8	26.2	33.0	7.2
Health Associate Profs.	43.7	66.1	22.4	51.3	89.5	23.4	35.4	80.5	14.4	21.8	9.0
Science & Engineering Associate Profs.	28.0	41.3	13.3	47.5	54.4	13.1	31.7	50.8	9.5	23.0	3.6
Other Associate Profs.	42.8	57.6	14.8	34.6	77.3	19.7	34.2	72.0	14.4	25.1	5.3
Clerical	180.5	235.8	55.3	30.6	267.6	31.8	13.5	252.2	16.4	7.0	15.4
Skilled Building Workers	41.7	84.6	42.9	102.9	99.5	14.9	17.6	90.6	6.0	7.1	8.9
Skilled Maintenance Workers	61.8	74.1	12.3	19.9	83.9	9.8	13.2	78.4	4.3	5.8	5.5
Other Skilled Manual	61.8	80.4	18.6	30.1	89.3	8.9	11.1	83.1	2.7	3.3	6.2
Operatives	137.3	125.4	-11.9	-8.7	138.0	12.6	10.0	130.8	5.4	4.3	7.2
Transport Occupations	60.8	82.8	22.0	36.2	88.3	5.5	6.6	85.5	2.7	3.3	2.8
Sales Occupations	113.3	154.8	41.5	36.6	185.2	30.4	19.6	175.5	20.7	13.3	9.8
Caring Occupations	26.3	60.9	34.6	131.6	82.6	21.7	35.6	74.4	13.5	22.2	8.2
Other Service & Protective Activities	88.2	114.2	26.0	29.5	132.5	18.3	16.0	124.2	10.0	8.7	8.3
Unskilled Manual	85.4	117.3	31.9	37.4	121.1	3.8	3.2	112.6	-4.7	-4.0	8.5
Total	**1425.3**	**1857.4**	**432.1**	**30.3**	**2186.8**	**329.4**	**17.7**	**2046.7**	**189.3**	**10.2**	**140.1**

Source Occupational Employment Forecasts 2012. Lunn *et al.* (2007). FÁS/ESRI Manpower Forecasting Studies

Figure 4.2 shows the absolute increments in employment forecast to occur for the 8 main occupational groupings in the Irish workforce over the 2005 -2012 period, and the difference between the high-growth scenario and low-growth scenario (explained above). In addition to the cumulative dominance of professional and associate professional occupations in overall employment growth, the Figure also serves to highlight the polarisation across skills levels of strong tertiarisation. Under the high-growth scenario, substantial growth is also forecast in occupations that require relatively modest and easily acquired skill sets, i.e., clerical workers and sales workers. All occupational groupings grow by significantly less when economic growth is subdued rather than strong but the least qualified occupational groups fare least well – in the case of unskilled manual workers, a modest increase becomes an absolute decline. The implications of this polarisation in skill requirements associated with the expansion of services and of the greater vulnerability of lesser skilled occupations to an economic slow-down will be addressed in Chapter 6.

Figure 4.2 Absolute Increases Forecast in Employment, 2005-2012: High-Growth and Low-Growth Scenarios



4.4 The Role of Domestic Demand

It is clear from the foregoing that the large majority of jobs being created in the Irish economy are in services and supplying Irish residents. Even allowing for a significant downstream or multiplier effect from the jobs based on exporting, this means a growing proportion of Ireland's economic activity is being based on what we do for each other. Is this a cause of concern?

As explained, the proportion of economic activity that arises from services which are domestically produced and consumed should be expected to increase as real incomes rise. The Council endorses the view that, driven principally by unsustainably high levels of residential construction, the balance between domestic demand and net exports tilted too much in favour of the former in the first half of this decade, and that a re-invigoration of net exports is now required. At the same time, however, the crucial role of domestic demand in protecting and maintaining full-employment and in leveraging further increases in well-being needs to be frontally acknowledged.

Ireland enormously improved its employment performance, not through enhancing the cost-competitiveness of its export sectors alone, but by linking success in doing so with a rising level of domestic demand and reduced taxation on lower waged employments. Since the mid-1990s, the incomes earned in Ireland's export sectors have been sufficiently large to boost domestic demand (including for housing) which, in turn, has generated demand for workers – largely in the services sector – right across the skills spectrum. This demand for services workers was facilitated by such developments as the reduction in the tax-wedge on average and low (two thirds of average) earnings; the latter, for example, fell from 26.5 per cent to 15.0 per cent for a single person between 1996 and 2007[9].

This complementarity between export competitiveness and domestic demand in raising employment and reducing unemployment is not automatic. Germany, for example, went through a period when impressive export growth did not translate into rising domestic demand and unemployment remained high (*OECD Survey of Germany,* May 2006). This was because it relied for a period almost wholly on wage moderation to increase the competitiveness of its exports, no tax reductions offset the depressing effect on domestic demand and payroll taxes continued to bear heavily on lower waged employments[10]. The result was that a thriving export sector did little to boost domestic demand for several years; increasingly profitable companies even began to invest in increased capacity overseas to meet the demand for their products, though unemployment was above 10 per cent. It led the OECD to reflect at the time that export competitiveness, when it can be achieved through productivity gains rather than by reducing wage costs, is better for domestic demand and boosting employment rates (op. cit.).

9 Single person with no child, OECD data base (http://stats.oecd.org). The tax-wedge expresses income tax plus employee and employer contributions less cash benefits as a percentage of earnings.

10 For a single person with no child on two thirds of average earnings, the tax-wedge (see footnote 11) was 47.4 per cent in 2007, hardly changed from 46.5 per cent in 1996.

While domestic demand is essential to guaranteeing high levels of employment, domestically provided and consumed services need also to be appreciated for their indispensable role in enhancing well-being. It is unduly dismissive of the depth of change that has taken place in the economy to depict the domestic provision and consumption of services as inherently second best to exporting goods and services. This invokes an earlier Ireland when, it was true, that seeking to trade primarily with each other resulted in lower incomes for everyone and a limited supply of jobs. But the economy of 2008 is wholly different to that of 1958. A key example of where domestic service provision in response to higher domestic spending today can directly raise well-being is health-spending. Higher health spending is far from a 'burden' when it contributes to extending active and 'disability free' years for a steadily older population. It is wholly appropriate that a population should spend a growing proportion of its higher incomes on health as the opportunity to lead longer active lives presents itself and it is not, then, a 'problem' that health should account for a growing share of GNP and employment.

In other ways, too, circular flows in which people sell services to each other and which are largely domestic can be as generative of higher living standards and well-being as the circular flow in which manufactured goods are exported in exchange for imported goods. In the case of domestic service exchanges, however, increments in well-being must arise from genuine improvements in the quality of the service that each party is responsible for providing. It is true that teachers, doctors, drivers, journalists and a long list of other service providers are paid more today than in an earlier Ireland. But this is not simply a reflection of their higher 'opportunity cost' (the wage levels needed to bid them away from taking 'real' jobs in the trading sectors of the economy). Nor is it only because the people they serve have higher earnings and the value of supports provided them can accordingly be adjusted upwards. The higher earnings of domestic service providers in Ireland today can genuinely reflect services that, in what is provided (for example, the range of medical treatments now available through the public health system) and how it is provided (the standards, the guarantees, the follow-through, etc.), constitute, in effect, much 'more' of a service than previous generations received.

A final important perspective on the role of domestic demand in driving the economy over recent years is specific to residential construction. Once the Irish population at large began to receive substantially higher real incomes, they registered a strong preference to consume more of the 'service' that is housing. More of the population joined the ranks of home owners while existing owners improved their homes or purchased larger ones. It is estimated that, by the end of 2005, 35 per cent of the housing stock in place had been built in the previous ten years, and that the size of the average unit being built had increased by 20 per cent (Aylward and O'Toole, 2007). This is not evidence of a displaced or erroneous use of resources but of the channelling by Irish consumers of a major portion of their increased wealth to achieve a step-improvement in a critical dimension of the overall framework to well-being, viz., the quality of housing. It is, to a large degree, a once-off, historical response, bringing the stock of housing in Ireland closer to European levels. Its problematic aspect arises primarily from the speed and scale with which this improvement took place. A regrettable by-product was the emergence of a significant level of speculative demand for housing as further

people then sought to benefit from rising capital values (and rents) and low borrowing rates but this should not obscure from view that the majority were, in fact, investing in an asset because it produced a valued 'service' flow. As the economy returns to lower and more normal levels of house building, the significant contraction in beneficial by-products of the building boom (the boost to government revenues and employment with a welcome regional spread) requires a major and measured response. However, the larger and higher quality housing stock will not disappear and the flow of 'services' it generates will remain.

4.5 The Growth and Composition of Services Exports

The data on employment generated since 1996 and forecasts of employment creation to 2012 which have been reviewed are far from capturing the full contribution of services activity to the Irish economy. A significant part of services employment in Ireland is based on serving customers overseas rather than Irish residents and the rapid growth of these internationally traded services has been a major and revealing feature of the transformation in the Irish economy.

Comprehensive data on internationally traded services (gathered by the OECD and IMF) defines them as all service transactions between residents in a country and non-residents, and groups the transactions into eleven categories (*OECD Statistics on International Trade in Services, 1996-2005*. 2007 Edition). The developments in the net balance under each category over the ten-year period, 1996-2005, reflect the significant changes that have taken place in the Irish economy's links with the world economy (Table 4.4). The net services balance remained in deficit throughout the period, rising by almost two-thirds (in current terms). Large deficits in two categories of services accounted for almost all this. There were near six-fold increases in payments of royalties and license fees and for 'other business services'. Most of the former and some of the latter are, in fact, inputs to Ireland's high-tech, multinational manufacturing operations (in pharmaceuticals, computer hardware, medical devices and appliances). Factoring out payments of royalties and license fees, a significant surplus in international trade in services developed after 2002 that reached $6 billion US dollars in 2005. One category of services export, 'computer and information services', developed so strongly since 1999 that its net earnings in 2005 were sufficient to cover Ireland's longstanding deficit under 'royalties and license Fees'. In addition, 'financial services' and 'insurance services' have emerged as sources of significant net exports for the Irish economy. Interestingly, given the previous important role of tourism as a net export earner, the deficit that has opened up under 'travel' since 2001, as Irish people spend more of their higher incomes on trips aboard, was matched by the net earnings from 'insurance services' alone in 2005.

The scale of growth in services activities provided by Irish residents to non-residents is captured by the trends in the gross rather than net earnings under each category. Gross services exports are presented in Table 4.5; since 1996, the value (in current US dollars) of Ireland's total services exports increased almost tenfold[11]. By 2005, in

11. The scale and composition of gross services imports are not examined here but presented in Appendix Table A4.1 to this Chapter.

fact, they accounted for 34 per cent of all export earnings and were equivalent to 29 per cent of GDP as against, for example, 15 per cent in the Netherlands and 9 per cent in Finland. Services activity is particularly large in four areas – 'computer and information services', 'business services', 'insurance services' and 'financial services' – where the patterns of growth have not been smooth but exhibit large ratchet effects as exceptionally large operations, given the existing scale of the sectors, came on stream.

Table 4.4 Ireland's International Trade in Services, 1996- 2005: Net Balances[1]

Service Category	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Transportation	-762	-864	-1,041	-1,001	-1,219	-265	-186	-19	130	245
Travel	272	374	224	94	26	-313	-646	-879	-805	-1,329
Communication services	-168	-234	-372	148	-14	563	382	-152	-346	-302
Construction services	-123	-180	-254	-295	-18	-18	-16	-20	-10	-10
Insurance services	-173	-188	-212	-421	-332	307	545	2,420	2,213	1,407
Financial services	-327	-394	-462	406	633	759	1,121	1,760	2,523	2,507
Computer and Information services	-201	-220	-341	4,790	5,219	9,096	9,851	13,821	18,368	18,255
Royalties and License Fees	-3,313	-3,969	-6,026	-6,529	-7,412	-9,500	-10,728	-15,826	-18,485	-18,869
Other Business Services	-2,747	-3,072	-4,399	-8,155	-9,168	-13,107	-14,141	-14,125	-17,020	-15,184
Personal, Cultural & Recreational Services	-293	-363	-464	-521	151	267	246	313	308	264
Government Services, N.I.E.	158	108	71	98	97	140	159	194	446	469
Total Net Services Trade Balance	**-7,678**	**-9,003**	**-13,277**	**-11,387**	**-12,037**	**-12,067**	**-13,411**	**-12,514**	**-12,666**	**-12,548**
Total ex Royalties and License Fees	-4,365	-5,035	-7,251	-4,858	-4,625	-2,567	-2,683	3,311	5,818	6,321

Source OCED Statistics on International Trade in Services, Vol 1 (2007)

1. Millions of US dollars, current prices

Table 4.5 The Composition of Ireland's International Services Exports, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Export Category					**Current US$ m.**					
Transportation	1,130	1,152	1,178	1,381	1,358	1,508	1,609	1,928	2,353	2,650
Travel	2,469	2,595	2,592	2,568	2,659	2,813	3,064	3,847	4,391	4,742
Communication services	86	98	112	356	330	1,038	979	702	426	507
Construction services	224	257	272	203	-	18	21	27	-	-
Insurance services	-	-	-	997	1,126	2,660	3,637	8,680	9,711	8,464
Financial services	186	236	263	1,665	2,081	1,992	2,716	3,798	5,298	5,815
Computer and Information services	105	142	191	5,100	5,496	9,603	10,405	14,192	18,749	18,673
Royalties and License Fees	101	118	172	415	509	248	280	210	350	591
Other Business Services	1,213	1,417	1,722	1,786	3,015	4,270	5,171	7,852	10,478	15,031
Personal, Cultural & Recreational Services	48	55	69	65	162	289	319	400	412	358
Government Services, N.I.E.	189	141	131	161	149	198	227	275	503	519
Total Services Exports	***5,747***	***6,209***	***6,701***	***14,714***	***16,885***	***24,638***	***28,428***	***41,911***	***52,677***	***57,352***
					Relative to previous year					
Transportation		1.02	1.02	1.17	0.98	1.11	1.07	1.20	1.22	1.13
Travel		1.05	1.00	0.99	1.04	1.06	1.09	1.26	1.14	1.08
Communication services		1.14	1.15	3.17	0.93	3.15	0.94	0.72	0.61	1.19
Construction services		1.15	1.06	0.75	-	1.16	1.31	-		
Insurance services		1.13	2.36	1.37	2.39	1.12	0.87			
Financial services		1.27	1.11	6.33	1.25	0.96	1.36	1.40	1.40	1.10
Computer and Information services		1.35	1.35	26.69	1.08	1.75	1.08	1.36	1.32	1.00
Royalties and License Fees		1.17	1.46	2.41	1.23	0.49	1.13	0.75	1.67	1.69
Other Business Services		1.17	1.22	1.04	1.69	1.42	1.21	1.52	1.33	1.43
Personal, Cultural & Recreational Services		1.14	1.26	0.95	2.48	1.78	1.10	1.25	1.03	0.87
Government Services, N.I.E.		0.75	0.93	1.23	0.93	1.32	1.15	1.21	1.83	1.03
Total Services Exports		***1.08***	***1.08***	***2.20***	***1.15***	***1.46***	***1.15***	***1.47***	***1.26***	***1.09***

Source OECD Statistics on International Trade in Services, Vol. 1 (2007)

The overall result is a transformation of the Irish economy's presence in international trade which is hard to exaggerate. In 2005, Ireland ranked as the OECD's 9th largest exporter of services out of the 30 most advanced countries for which the data were available ahead, for example, of countries like Canada and Sweden, and had a 2.3 per cent share of the world's total exports of services. It was, by a large margin, the OECD's and, thus, the world's largest exporter under two headings – 'computer and information services' and 'insurance services' – under which Ireland accounted for, respectively, one quarter and one fifth of total OECD services exports. It was, further, the 6th largest exporter of 'financial services' (where, however, it accounted for only four per cent of total OECD services exports of this kind[12]). These are remarkable rankings and testify in particular to the rapid and successful adaptation by IDA Ireland and the IFSC of policies for attracting inward investment in internationally traded services. In the composition of its trade with the global economy, Ireland already presents itself as a significantly tertiarised economy.

Further understanding of how unusual or otherwise Ireland's trade in international services is, and of where further expansion of services exports may yet occur, can be gained by comparing the scale and composition of Ireland's services trade with that of comparable countries. Table 4.6 compares the structure of Ireland's services trade with that of the Netherlands and Finland. It is revealing, for example, that royalties and licenses are significant sources of export earnings in the other two economies – accounting for 11 per cent (Netherlands) and 7 per cent (Finland) of total services exports – but earn practically nothing in Ireland. Of the four types of services that together account for 84 per cent of Ireland's total services exports, only one – 'other business services' – assumes a larger presence in the other two countries' services exports; for example, it accounts for almost one-half of Finland's total services exports. On the basis of this evidence, Ireland's services exports are *not* particularly lacking in diversity by the standards of other small advanced countries; the dependence of Finland and the Netherlands on selling business services is even greater than Ireland's dependence on computer and information services.

When the composition of the services for which residents in each country pay non-residents (services imports) is examined (Table 4.6), Ireland's high level of recourse to the purchase of royalties and licenses (as expected) is what most distinguishes it; payments of royalties and license fees accounted for 28 per cent of Ireland's service imports in 2005, some three to four times greater than the corresponding share in Finland and the Netherlands.

12. The three largest exporters of financial services - the United Kingdom, the USA and Luxembourg - account for almost 70 per cent of the OECD total.

Table 4.6 Composition of International Trade in Services: Ireland, Netherlands and Finland, 2005.

	Ireland	Netherlands	Finland
GDP (current, US dollars, $m. Ireland=100)	1.00	3.16	0.98
Services Exports			
Total (US dollars, $m)	57,352	92,023	16,995
...of which %	%	%	%
Transportation	4.6	23.3	14.3
Travel	8.3	11.4	12.9
Communication Services	0.9	4.1	2.3
Construction Services	0.0	3.0	3.4
Insurance Services	14.8	0.5	0.4
Financial Services	10.1	1.2	0.5
Computer & Information Services	32.6	4.1	8.9
Royalties & License Fees	1.0	11.1	7.1
Other Business Services	26.2	38.3	47.3
Personal, Cultural & Recreational Services	0.6	1.0	0.1
Government Services, N.I.E.	0.9	2.1	0.7
Services not allocated	0.0	0.0	2.3
	100	100	100
Services Imports			
Total (US dollars, $m)	69,900	84,482	15,194
...of which %	%	%	%
Transportation	3.4	17.7	26.6
Travel	8.7	19.1	20.1
Communication Services	1.2	3.8	3.8
Construction Services	0.0	1.7	3.2
Insurance Services	10.1	1.0	1.0
Financial Services	4.7	1.9	0.6
Computer & Information Services	0.6	4.4	7.6
Royalties & License Fees	27.8	10.2	7.4
Other Business Services	43.2	38.2	27.1
Personal, Cultural & Recreational Services	0.1	1.1	0.2
Government Services, N.I.E.	0.1	1.1	0.9
Services not allocated	0.0	0.0	1.6
	100	100	100

Source OCED Statistics on International Trade in Services, Vol 1 (2007)

Services exports and the balance of payments

There are several significant benefits when the composition of exports begins to shift in favour of services.

In the first place, it can serve to stem deterioration in the terms of trade. In almost all countries the terms of trade have been moving steadily against the price of manufactured goods. Largely as a consequence, Ireland's terms of trade fell from 100 in the year 2000 to 96.8 in 2006 (Department of Finance, 2007: Table 63). This is partly because keen competition in product markets compells manufacturers to pass much of the benefit of high productivity growth on to overseas customers in the form of lower prices. By contrast, the purchasing power of services output, measured in terms of internationally traded goods, has been rising over time. This has led the Fitz Gerald *et al.* (2005) to observe:

> For Ireland, the continuing fall in the real value of goods exported means that the economy has to steadily increase its sales abroad to keep purchasing power constant. When services can be exported they are generally likely to hold their value to a much greater extent in the medium-term. This means that, while industrial exports continue to be much more important for the Irish economy than for many other developed economies, it would be surprising not to see a greater specialisation over time into production of services for export (Fitz Gerald *et al.*, 2005: 11).

In the second place, euro for euro, services exports provide a bigger injection into the domestic economy than do exports of goods. Though the import content of services exports has risen markedly since 1985, it remains the case that the import content of services exports is still significantly lower than for industrial exports - at 42 per cent rather than 53 per cent in 1998 (the most recent year for which the necessary input-output data is available). In fact, in the long perspective provided by Table 4.7 (going back to the mid-1960s), it can be seen that a strong rise in the import content of consumption reached its plateau in the mid-1980s and began to decline thereafter as more consumption began to consist of domestic services rather than of imported goods.

Table 4.7 The Import Content, Indirect and Direct, of Final Demand

	1964	1969	1975	1985	1998
Consumption	27.7	29.5	34.5	35.7	33.8
Agricultural exports	18.6	22.0	19.0	31.1	42.0
Industrial Exports	44.7	40.0	46.5	49.8	53.1
Services Exports	24.0	n.a.	n.a.	28.7	41.9
Final Demand	n.a.	n.a.	33.9	37.2	42.8

Source Fitz Gerald *et al.* (2005: Table 2.1)

Note The data on import content in the table does not take into account profit repatriations. In 1998, profit repatriations from manufacturing were equivalent to around 23 per cent of all exports(Fitzgerald et al, 2002: 9) ; hence, the combined leakage from a unit of industrial exports was 76 per cent and the domestic value added only 24 per cent. As with industrial exports, it is probable that a significant share of the value-added from services exports also leaves the economy as profit repatriations. Nonetheless, the domestic value-added from services exports remains significantly higher than for industrial exports.

4.6 Productivity in Services

As services grow in importance, what is specific to understanding and enhancing productivity in providing them becomes central to maintaining economic competitiveness and improving living standards.

4.6.1 The data challenges

In the first place, there are specific data challenges associated with measuring and monitoring productivity in services. These difficulties can be particularly acute when seeking to measure the output of public and other not-for-profit service providers. A brief, non-technical review of some of them will serve as a preliminary to reviewing some of the theory and evidence on productivity in services.

Productivity cannot be measured and monitored without having good data on the output or value-added of services activities. Measuring the output of services activities is difficult in ways that do not apply when measuring agricultural or manufacturing output (Griliches, 1992). The turnover or revenue generated by market services allows their nominal output at least to be clearly identified, but there can still be difficulties in establishing the volumes traded that generated these turnovers.

- Services are intangible. They cannot be warehoused and counted after being produced, and some of the most fundamental metrics (weight, dimensions) simply do not apply.
- Services can be highly tailored to individual clients. This makes standardisation and aggregation difficult. For example, the value of a correct medical diagnosis for one patient may be much greater than a similar diagnosis for another if the first patient's history and condition required much greater skill and experience to detect the illness.
- Services are hugely heterogeneous. The diversity of activities undertaken by the same service provider (by an organisation such as a school, hospital or financial consultancy, or by an individual worker such as a teacher, doctor or accountant) poses challenges to measuring, aggregating and valuing the service provider's 'output' that can be much more complex than in the case of a manufacturing plant.
- Fairly measuring changes in the quality of a service is pushing new metrics into prominence (e.g., waiting times, satisfaction ratings, the level of repeat appointments, etc.) but formidable challenges attend the acknowledgement of higher quality in many instances. For example, the need to monitor trends in the quality of teaching must reckon with the impact on young people of increased exposure to new media and to less stable family structures.
- Many important services are not delivered by the market but through the public system. There are particular challenges in measuring the output of public bodies; conventions have to be adopted that may not adequately capture real output or productivity (see Box 4.1 on the measurement of output in the UK's NHS). The output statements of government departments, and the service agreements public bodies enter into with third parties, are examples of attempts to specify just what is to be 'produced' for given amounts of public expenditure.
- A large proportion of many services are delivered by very small establishments. This poses specific challenges to data collection.
- Services are 'consumed' when provided. This means that a high degree of co-operation is needed from front-line staff in recording output. In more formal terms, a principal-agency problem has to be addressed so that it is in the interest of the agent ['front line provider'] to disclose the actual service provided to the principal [management]. Different approaches have to be taken in the private and public sector contexts and, in either, supervision that is too intrusive or too lax may affect the volume and quality of the service[13].

13. For example, professional services delivered person-to-person and which require a high degree of trust between user and provider to be effective may need extensive peer and international review as well as the perspectives of management and front-line staff to establish the length of time it typically takes to complete a service transaction effectively (a key determinant of productivity). Both too short and too long a time may indicate low productivity.

Box 4.1 Measuring Output in the National Health Service (UK)

An example of the difficulties that arise in measuring the output of the public sector is provided by the National Health Service (NHS) in the UK.

Depending principally on whether and how the value of services provided by doctors, nurses and other health professionals is adjusted to recognise improvements in their quality and their greater value to patients (in an increasingly productive economy, the opportunity cost of being sick rises implying that the value of effective health services should be adjusted upwards by the general rise in real earnings – and vice versa), Boyle (2006) illustrates how different studies variously conclude that productivity in the NHS deteriorated by between -1.3 and -0.6 per cent per annum between 1995 and 2004 or improved by between +0.9 and +1.6 per cent per annum.

The Office of National Statistics (ONS) in the UK has described measuring productivity in the NHS as 'approximations to a complex reality'. Examination of a period over which data allowed adjustment for the quality of output (2001-2005) led to the conclusion that adjusting output for quality slowed the decline in productivity growth otherwise recorded from an annual average fall of 2.5 per cent to 2 per cent a year (Lee, 2008).

The ONS has recourse to a procedure known as triangulation in support of its conventional approach to productivity measurement. Triangulation is the process of checking crude productivity estimates against other corroborative evidence – e.g., data on service users' perspectives – which helps place the productivity estimate in a wider context and improve its interpretation. But it too presents challenges; for example, what monetary value is to be put on improved patient ratings of the responsiveness and attentiveness of services?

A major systematic study of quality in the NHS by the Nuffield Trust concludes that it improved significantly over the decade 1997-2006 but oscillates between agnosticism and pessimism as to whether the gains were commensurate with the increase in investment, i.e., on productivity (Leatherman and Sutherland, 2008).

These specific difficulties in identifying the value-added in services transactions are by no means insurmountable. Progress is being made, though unevenly and on different fronts. For example, large consultancy firms have established procedures for billing clients that itemise and cost the diverse activities of their employees; by contrast, the National Hospitals Office is at a much earlier stage in agreeing how to measure the output of a hospital. Generally, it is recognised that considerable scope remains for improving how output or value-added is measured in many service activities[14] and, in particular, those provided by government (the OECD launched a project in 2005 under the working title *Management in Government: Comparative Country Data* and its technical papers explore the measurement of government output).

14. See, for example, the appendix on 'Output Measurement in Market Services' in Inklaar, Timmer and Van Ark (2008).

Even when it is clear how services output should be measured, statistical authorities need to give greater priority to producing and publishing regular data series on services outputs. National and international statistical collection agencies still devote more attention and resources to manufacturing and agricultural output series, reflecting the former predominance of these sectors in national economies. Eurostat itself notes that, 'indeed, statistical systems are often centered on industrial goods – their production and trade' and that, while 'services statistics have progressed in the last couple of decades', they 'remain in the shadow of the vast array of data that is generally available to trace the performance of the industrial economy' (Eurostat, 2007c).

4.6.2 The conceptual challenge

Two broad perspectives can be distinguished both of which suggest that growth in labour productivity at the national level should slow as services grow in significance. One is structural and the other is related to the specific context of rapid employment expansions.

The principal structural hypothesis is known as 'Baumol's cost disease'. This states that productivity improvements are less likely in services than in goods-producing industries because many service activities are inherently labour-intensive and, thus, constrained by their nature from extensive substitution of labour for capital (Baumol, 1967). For example, the automation of the St James's Gate Brewery in Dublin immensely increased the productivity of the much reduced workforce that continues to be employed there, but there is unlikely ever to be similar scope for capital investment to boost the productivity of care-workers. The Baumol hypothesis is considered by some to imply that, as services grow to account for a larger share of the economy and manufacturing for a smaller one, overall labour productivity growth is bound to slow. The analysis in Chapter One of a slowdown in productivity being partly caused by Ireland's construction boom is similarly structural (i.e., based on a shift in the sectoral composition of the economy's output) but the telling difference in the case of services is the inevitability and irreversibility of the rise in their share in the economy and, thus, of a trend decline in labour productivity.

The second perspective on why slower productivity growth will be associated with a rise in services is related to a prior situation of underused labour resources. One variation argues that increases in the employment rate lead to people with lower productivity being pulled into the economy, the majority of them as low skilled workers in market services (e.g., Blanchard, 2004). Another variation focuses on the impact of the labour market reforms that help to bring about employment expansions. Wage moderation 'overshoots' in the sense that not only are more people employed at existing capital-labour ratios but labour's cheaper relative price leads to an increase in the labour intensity of production (Koszerek *et al.*, 2007). In both variations, this second perspective sees the productivity slowdown as potentially reversible. Once full employment is reached, people at work enhance their skills through learning by doing or further education and training, and/or capital deepening can resume, with the result that labour productivity resumes growing at the higher level of employment and despite its services intensity.

Each of these perspectives or analyses undoubtedly highlights an aspect of what happens as the share of services grow and employment expansions take place. If they are considered to describe all that happens or what is dominant in events, some awkward empirical findings need to be faced. For example, productivity in market services has improved steadily in the US and is the main factor accounting for its superior productivity performance vis-a-vis Europe. The evidence, also, is far from confirming that there is a trade-off between high employment rates and high labour productivity, with several European countries in particular combining both (DTI, 2003). It is possible that the plausibility of the two scenarios, however, may have contributed to an 'economic image problem' (Farrell *et al.*, 2007: 56) for domestic services and to fears of a 'MacDonaldisation' of the labour market as allegedly lower paying and less secure jobs replace higher quality jobs in manufacturing.

4.6.3 The US-Europe productivity gap

The most significant challenge to any assumption of a trend decline in labour productivity as economies become more services intensive is provided by the performance of the US economy since the mid-1990s. An extensive literature charts and discusses the emergence, since the mid-1990s, of stronger productivity growth in the US than Europe. Until the mid-1990s, it was the other way around, which fitted with the perspective that the European economy, generally, was engaged in 'catch up' with the more advanced economic structure of the US and that many enterprises in Europe stood to benefit if they adopted for the Single Market some of the technological and organizational practices that their US counterparts had developed for their large internal market. The purpose of visiting some of the literature on the US-Europe productivity gap in this section is purely to highlight factors that have significant potential for improving productivity in services in Ireland.

Aggregate labour productivity growth in the US has grown as its economy has become more services oriented, with market services in particular exerting a pull rather than a drag effect. Growth in labour productivity per hour in 2000-2004 was at double the rate of before 1996 and, in private services, it was 2.5 times as great (Table 4.8). One detailed study of the productivity performance of individual service industries in the US found evidence that 15 out of 22 had recorded labour productivity growth that at least equalled the economy-wide average. This led the authors to entitle their study 'Baumol's Disease has been cured' (Triplett and Bosworth, 2006). The evidence for Europe, by contrast, appears more consistent with the disease hypothesis. The annual rate of growth in overall labour productivity per hour in Europe slowed by one-half (from 2.2 per cent to 1.1 per cent) over the two and half decades, 1981-2004 (Table 4.8). The productivity gap with the US widened and the deceleration has been most evident in market services.

Table 4.8 Labour productivity per hour (annual average volume growth rate in %) by three broad sectors: US and EU 15

	1981-1995	1996-2000	2000-2004
Manufacturing			
US	3.3	4.4	5.7
EU 15	3.5	2.6	2.3
Private Services			
US	1.2	2.2	3.0
EU 15	2.1	1.4	0.9
Rest of Economy			
US	0.3	0.0	0.6
EU 15	1.3	1.0	0.7
Total Industries			
US	1.3	2.1	2.6
EU 15	2.2	1.6	1.1

Source Koszerek *et al.* (2007)

It is important, however, not to treat Europe as a single entity. Table 4.9, drawn from a different study, compares the US, first with Europe's two most services intensive economies, the UK and the Netherlands, and then with several of its other economies. The differences within Europe emerge clearly. While not matching the 3.3 per cent rate of growth in value added per hour worked in market services achieved in the US over the period 1995-2004, the UK and Netherlands yet recorded a significant improvement on the previous period (1980-1994). In these two countries, market services in the economy expanded by more than in the US and, by 2004, the share of GDP they accounted for was larger. By contrast, in all other cases, significant expansions of market services similarly occurred but, in their case, Baumol's disease hypothesis appeared to be confirmed and distinct slowdowns were recorded in the growth of value added.

Table 4.9 Share in GDP and average annual labour productivity growth in the US and selected European countries, market services, 1980-2004

	Share of market services in GDP			Growth of value added per hour worked	
	1980	1995	2004	1980-1995	1995-2004
US	37	41	44	1.4	3.3
UK	33	41	49	1.9	2.5
Netherlands	34	42	46	0.3	2.4
Germany	32	38	40	2.3	0.8
France	36	38	41	1.9	1.3
Italy	36	40	42	0.6	0.3
Spain	31	38	41	1.0	0.4
Austria	37	40	43	2.1	0.7
Belgium	32	40	44	1.4	1.2
Denmark	34	38	40	3.0	0.9
Finland	30	34	36	2.5	1.7

Source Inklaar *et al.* (2008)

There is much that economists can still not explain in these figures. There is widespread agreement, however, that a key area in which to search for more of the answer is the manner in which information and communication technologies (ICT) are being invested in and used[15]. A second area is the rising educational attainment of the workforce in market services in every country, a process partly driven by the intrinsic requirements of some of the services involved (software, financial services, etc.) but also by the rise in educational attainment within OECD societies generally. A third input, accorded a lesser role but not to be discounted, is investment in traditional (non-ICT) assets[16]. While market services are particularly intensive users of ICT, investment in non-ICT assets continues to be at a higher level than ICT investment in all countries.

In the case of the US, three principal channels can be distinguished through which ICT alone has impacted positively on productivity growth; (i) investment in ICT products and systems in many sectors of the economy, (ii) strong productivity growth within ICT-producing industries themselves (they account for a larger part

15. This and the following paragraphs are drawn from Bart van Ark and Robert Inklaar (2005), 'Catching Up or Getting Stuck? Europe's Problems to Exploit ICT's Productivity Potential'. *EU KLEMS Working Paper Series*, n.7.

16. Expressed as the ratio of nominal gross fixed capital formation over nominal value added in market services.

of the manufacturing base in the US than in Europe), and (iii) the development of new and productive uses of ICT in the rest of the economy. In Europe, at the aggregate level, by contrast, it appears that any initial boosts to productivity that came from ICT investment, ICT production and the use of ICT were not sustained as well as in the US and for reasons that are still poorly understood.

Van Ark and Inklaar (2005) speculate on why this might be so. Generally, the pervasiveness of technologies, such as ICT, take a significant amount of time before their full productivity effects are exploited . The early normal returns on ICT, they suggest, are the result of the direct productivity effects of ICT production and ICT investment, which they term the "hard savings". Then, there can follow a period in which productivity growth slows because complementary investments in human capital and knowledge capital, as well as organizational innovation, do not immediately translate into an acceleration of productivity growth. Eventually, the combination of ICT investment and intangible investments and innovations, which they term the "soft savings", has a further effect in raising productivity.

Why might Continental European countries be slower in realizing the effects from soft savings than, for example, the UK and the U.S.? Again, van Ark and Inklaar speculate that the process of realizing the soft savings may involve significant trial-and error. It, therefore, requires an entrepreneurial environment and competitive labour and product markets that allow efficient firms to grow, while the least efficient ICT users must either catch up or exit the industry. The leading firms invest heavily in ICT and organizational change and reap the accompanying productivity gains. But the laggards, though they may also have invested heavily in ICT, are less successful in realizing the soft savings. Catching up with the leaders or exiting the industry due to competitive pressures inevitably takes time. In the meantime, industry performance will reflect both leading and lagging firm performance. The European economic environment appears to create less room for good firms to excel and for failing firms to exit the market so as to free up resources for the much-needed transition.

It is not for this report to discuss further the US-Europe productivity gap. It is highlighted in order to draw attention to the major role accorded private services activity and, more specifically, the use of ICT in explaining the superior productivity performance of the US. Whatever the specifics of Ireland's particular position – whether, for example, we are more similar to Europe or the US – the strong performance of the US is an invitation to accord major attention to the potential for productivity growth in private services and of ICT as a generic technology for achieving it.

Box 4.2 The Retail Industry

McGuckin, Spiegelman and van Ark (2005) show that, in the retail industry, ICT investment had an immediate impact on productivity growth through hard savings. For example, the introduction of barcode scanning allowed for more efficient check-out systems without the need for much additonal investment. However, the same barcode technology subsequently enabled a reorganization of the supply chain and the introduction of new shopping concepts. These soft savings not only require heavy investment in ICT, but also in newer complementary technologies (such as Radio Frequency ID and transportation technology) and organizational change (new shopping concepts, adjustment in the logistic chain so as to supply shops more frequently, etc.). Investment in just such complementary technologies, for example, appears to have been instrumental in enabling Ireland's domestic book retailer, Hughes and Hughes, win the contract for Terminal 5 in Heathrow airport. A computerised system linking sales to inventory orders and an automated security system helped a small, Irish company win a coveted overseas contract and become a sophisticated supplier of services internationally.

4.6.4 Productivity in Ireland's internationally-traded services

As the analysis above of Ireland's exports made clear, internationally traded services have developed quickly to become a major feature of the economy. Three types of service can be distinguished (though they overlap) that, currently, account for the bulk of these exports – ICT software and computer related services, financial services, and other business process operations provided on-line or through call centres. In each of these areas, Ireland has become - in a relatively short space to time – a favoured location from which multinationals serve their subsidiaries and customers across Europe and wider afield.

In addition to the general forces driving the rise of internationally traded services discussed earlier, specific policy measures played specific roles in fostering their growth in Ireland. The scale of software and computer-related services exports is partly due to the development agencies' successful work with PC manufacturers to 'reinvent' their Irish operations; by 2006, almost 54,000 people were working in agency-assisted firms in software and computer-related services. The successful establishment of Dublin's International Financial Services Centre in 1987 stimulated the development of international financial services (IFS) more broadly across the economy; by 2006, IFS accounted for 5 per cent of Ireland's GDP and employed 22,000 people (EGFSN, 2007c). The concept of the 'pan European call centre' to provide back-office or customer service functions from a single hub to all a multinational's subsidiaries or customers across the Continent was developed and actively promoted by IDA Ireland; over the course of the 1990s, Ireland moved from a standing start to be second only to the Netherlands in significance as a European location for call centres.

Generally, this adroit promotion of internationally traded services was based on the successful adaptation to services of strategies which first proved effective in attracting inward investment in manufacturing. Some factors have been equally

advantageous in attracting both, e.g., Ireland's low corporate tax, the availability of an educated workforce and its work ethic, the perceived business friendliness of government, Ireland's participation in the EU, the pragmatic approach to regulation, etc. Some factors have been particularly advantageous to inward investment in services, e.g., the quality of fibre optic lines to Ireland, the country's intermediate time zone between Asia and the US, English as a first language, etc.

Further specifics to attracting inward investment in services deserve highlighting as they point to directions in which policy can be further developed. Generally, services are more human capital intensive than manufacturing. Global firms wishing to export services are drawn to locations where they can access the appropriate mix of staff by foreign language capability, international experience, technical expertise and skill levels. These firms scrutinise the attractiveness of urban centres to mobile skilled workers as well as a host country's skills pipeline, determined as it is by demography, educational institutions and their responsiveness, and migration policy and its success. Particular attention is also paid to broadband infrastructure and air connections (and less to the road network and port capacity of critical concern to goods exporters). At the same time as inward investors in internationally traded services study the attractiveness of urban centres and show a propensity to cluster in them (discussed in Chapter 5), they are highly mobile across them; sunk capital costs per worker are lower than in manufacturing. As quickly as Ireland has been able to attract them, therefore, it could lose them.

The challenges in building on the success since the mid-1990s in developing internationally traded services can be illustrated by taking a closer look at software and computer related services and financial services respectively.

Software and computer related services

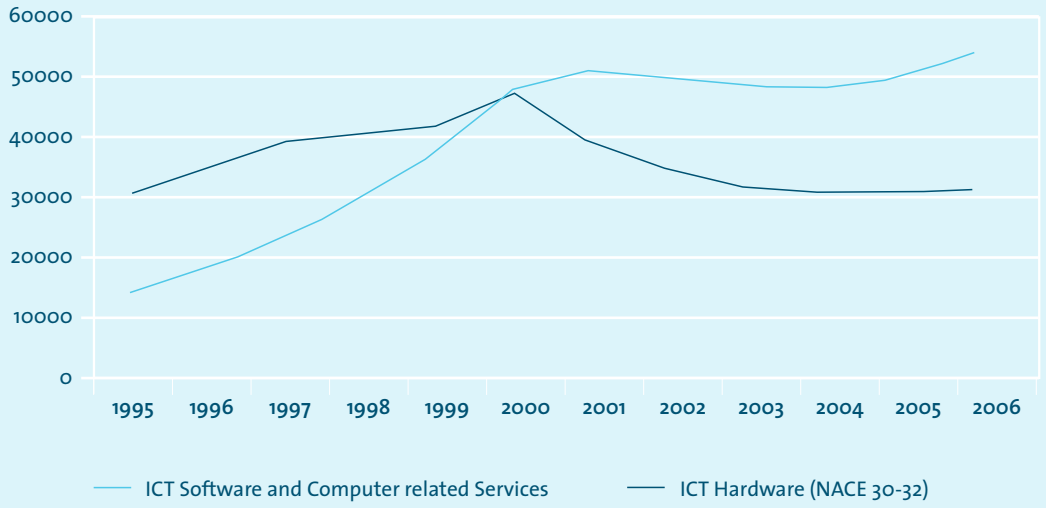
Software and computer related services, currently, make the largest contribution of the three sectors to employment as well as to exports. Figure 4.3 captures the quite dramatic divergence in employment trends since 2000 associated with the shift of comparative advantage in the manufacture of PCs and electronics components to the Far East[17] and the emergence of a comparative advantage for Ireland in exporting software and computer related services. Employment in the former declined sharply after 2000 but employment in the latter proved remarkably stable, even in the aftermath of the ICT industry shake-out in 2001. ICT services employment began to grow again after 2005 and, by 2006, was approximately two thirds higher than the numbers employed in manufacturing ICT hardware.

The Irish software industry consists of two distinct sub-sectors with different characteristics – one dominated by the large operations of multinational firms (MNCs) and the other by smaller, indigenous firms. The first accounts for some 56 per cent of the employment total but for 90 per cent of total exports (Martinez-Solana *et al.*, 2005). Its exceptional scale of exporting is due to the MNCs having advanced but standardised software which, with other services, they provide to their own subsidiaries and mass market customers. By contrast, indigenous software

17. China's share of world computer exports jumped from 6 per cent to 28.3 per cent between 2000 and 2005, and its share of world exports of electronic components from 4 per cent to 15.4 per cent (Barry & Van Egenraat, 2008, op. cit.).

companies work more for other domestic organisations and when exporting – 62 per cent of their revenue came from exports in 2000 (Garriatama, Pagano and Torrisi, 2004) – largely serve niche markets (rather than large or mass markets) or individual customers (providing tailored software and business solutions).

Figure 4.3 Agency Assisted Employment in ICT Hardware and ICT Software, 1995-2006



Source Forfás (2007)

By comparison with the rest of the Irish economy, productivity in each of these sub-sectors is high (even allowing for MNC transfer pricing) and they employ highly educated workforces. By comparison with the software industry worldwide, however, each sub-sector in Ireland faces distinct challenges if it is to continue to prosper. The primary challenge to the indigenous sub-sector is for a larger proportion of its micro-enterprises to grow to a scale where a wider customer base and more established product and service offerings underpin greater security and higher re-investment. The primary challenge to the MNC sub-sector is similar to that facing manufacturing operations in Ireland in general (Chapter 3); their software and computer related services exports from Ireland need to increase in sophistication and value-added if the companies in question are to remain in the economy and not relocate as cost levels rise in the Irish economy. In their instance, too, the sophistication of the services exported from Ireland is, currently, well ahead of the sophistication of the actual activities being carried out in the Irish economy. This point is illustrated in Tables 4.10 and 4.11

Table 4.10, which ranks 10 European countries by the importance of ICT (manufacturing and services) to their economies, shows Ireland as the third most reliant on ICT and with a sector bettered for productivity (value-added per person

employed) only by Finland. However, if the number of patent applications made to the European Patent Office (EPO) in the course of this activity is considered a reliable indicator of the innovativeness and originality of the Irish operations, Ireland's exceptionally small number (19 per million inhabitants as against an EU 27 average of 26 and Finland's 124) is, at least, a ground for caution in assuming that relatively high proportions of graduates mean exceptionally high value-added in the Irish operations. Table 4.11 makes a similar point with data from the US Patent and Trademark Office (USPTO) where the study in question focuses on software firms only and on just three countries, in each of which a significant indigenous sub-sector has emerged and can be compared with the operations of multinational software companies in the same country (India, Israel and Ireland). A *prima facie* case appears that software operations in Ireland are far behind those in Israel in their research intensity and, since 1990, behind those in India also; this applies as much to the activities of indigenous software companies as to multinationals. However, patent data must be carefully interpreted. In the first place, copyright law rather than a patent is often the primary means used instead to protect against imitation in software. In second place, the country from which a patent is filed may not be the country most responsible for generating the innovation, much less the one which develops it. In third place, significant increases in software research, much of it stimulated by Science Foundation Ireland (SFI) funding, have probably not impacted on the patent data analysed to date. SFI has a dedicated ICT division that has channelled funding to several Centres for Science, Engineering & Technology (CSETS, see Chapter 3) based in HEIs and involving leading ICT companies as 'industry partners'[18].

18. Since 2000, SFI alone has committed over €163 m for software research in higher education institutions (Irish Times Business Magazine, Innovation. March 2008).

Table 4.10 ICT Sector (manufacturing and services), EU 27 and Selected Countries, 2003

Country	Value added per person employed (€ '000)	Patent applications to EPO per million inhabitants	Value added in ICT sector as % of GDP
Finland	107.18	124	8.9
United Kingdom	87.82	28	8.8
Ireland	102.09	19	5.7
Sweden	66.70	62	5.0
EU 27	75.86	26	4.9
Belgium	101.42	25	4.8
France	78.42	35	4.3
Austria	82.93	31	4.1
Germany	91.15	55	4.0
Denmark	72.05	36	3.3
Netherlands	66.99	89	3.1

Source *Statistics in Focus*, 22/2008. Eurostat
Note Numbers attained by dividing the number of patents by the number of inventing firms (USPTO data only)

Table 4.11 Average Number of ICT Patents (USPTO), Domestic and Multinational Firms

	Domestic firms		MNC firms	
	Before 1990	After 1990	Before 1990	After 1990
Ireland	1.24	1.33	1.68	1.99
Israel	6.64	17.18	11.81	12.21
India	1.07	2.11	2.13	3.11

Source Giarratama, Pagano and Torrisi (2004)

International financial services

International financial services (IFS) were estimated, in 2006, to account for around 15 per cent of total employment in financial services in the economy (22,000 out of 148,000)[19]. IFS cover three areas of activity: banking and capital markets, investment management, and insurance. Within each, a range of services is currently provided from Ireland. Some are highly sophisticated (e.g., in aircraft leasing, Ireland is considered to have 'a deep pool of skilled arrangers, managers and advisors'), some are of major significance at the EU level (e.g., Ireland sells more cross-border life insurance in the EU than any other Member State and is responsible for managing almost 10 per cent of the net assets of the European investment fund industry) and some involve administering the accounts of retail customers of multinational financial institutions. IFS are concentrated in Dublin's International Financial Services Centre (10,700 employees in 2007) but significant spillovers have occurred across the regions, particularly in response to lower rental costs and the availability of 'skilled generalists that are trainable' (Expert Group on Future Skills Needs [EGFSN], 2007c: 92). Reputation is a particularly key asset in the development of IFS and critically dependant on transparency, the quality of regulation and the consistency of policy. The evidence to date is that Ireland has successfully established a reputation in each of the three areas of financial services provision.

Before the onset of the financial turbulence triggered by sub-prime crisis in the US, the EGFSN anticipated a cumulative growth of 44 per cent in employment in international financial services between 2006 and 2012. A subsequently slower expansion, with the potential for job losses and company closures or relocations in some instances, however, should not obscure from view that specific fundamentals underpin the long-term growth prospects of the financial services sector in locations that remain competitive. These include the growing proportions of populations in advanced countries relying on private pensions; the gradual establishment of an EU 27 market in financial instruments[20]; the continuing innovation and extension of on-line financial services to affluent users; the scope for improved productivity and, consequently, market widening from offshoring, both to Ireland and from Ireland.

As with software exports, Ireland's financial services exports, however, are also being challenged to increase their value-added. This is principally because the favourable cost conditions under which they first developed are changing rapidly - office space, for example, now costs more in Dublin than in Washington D.C. (Harris *et al*., 2008: Table 12). The overall challenge is described as increasing the proportions of 'middle-office and high value client servicing functions' located in Ireland from the global value chains in which Irish staff are participating (EGFSN, 2007: 69) or, in simpler terms, getting a greater share of front-office roles and dealing less exclusively in back-office support services which are largely administrative and can feature relatively little discretion (Department of the Taoiseach, 2006b: 28).

19. Unless indicated otherwise, data in this section are from the EGFSN report, Future Skills and Research Needs of the International Financial Services Industry (2007).

20. The EU's Markets in Financial Instruments Directive (MiFID) came into effect on 1st November 2007 and is expected to continue the development of an internal market in these instruments and consolidation among Europe's financial centres.

Attaining this higher level of sophistication to Irish financial exports will require a significant increase in the availability and stability of staff with the appropriate skills. The extent to which the sector's growth potential is already constrained by skill shortages has led the Expert Group on Future Skills Needs to advocate improving career guidance and foundation-level courses for secondary-level students, back-to-work parents, migrants working below their skill level and other 'alternative populations' to encourage them to take entry-level jobs in financial services. More such entrants would enable current graduates in the industry to up-skill for higher level functions while, simultaneously, the supply of people with advanced mathematical competencies needs to be boosted in whatever ways are possible (including the pro-active application of Ireland's new green card). To an even greater extent than in the software industry, therefore, the further development of financial services exports from Ireland hinges on increasing the competencies and skills of the workforce involved. Formal R&D also has a role but it appears secondary in financial services to the speed with which staff are empowered to understand and adapt to new market developments. This, in turn, makes it particularly challenging and compelling for universities and institutes of technology to work closely with the industry (including, for example, by placing students more frequently in workplaces) and introduce new modules and programmes within time frames that match its needs.

'Low-tech' services exports

The distinction made between 'high-tech' and 'medium- to low-tech' sectors in manufacturing has validity among services exporters also. Software, financial and business services constitute a type of high tech group, but their rapid emergence and dominant contributions to exports should not be allowed to eclipse the potential for significantly higher foreign exchange earnings in areas of service provision that are relatively less intensive in ICT and where more may hinge on organisational and institutional innovations.

Tourism has been the traditional 'national champion' among indigenous exporters of services. In its case, it earns foreign exchange by successfully marketing holidays, short-breaks, venues for international conferences and other Irish products to potential overseas visitors in what is a highly competitive international marketplace. This competition, including the need to maintain and grow the sector's share of the Irish population's rising expenditure on travel and leisure, is resulting in a continuous up-grading of the Irish tourism product. In this upgrading, innovation plays a crucial role, along with higher capital spending, the up-skilling of the workforce and the setting and more effective regulation of higher standards. The skilled use of the internet is enabling even the smallest service provider (e.g., a B&B) to engage in international marketing and enhance its brand. The health of tourism is particularly important to the economy of rural areas where additional strong industries are less likely and whose flourishing could even undermine the attraction of the local tourist product. Tourism is now been joined by other significant indigenous players in exporting 'low tech' services - principally in insurance, air travel and education.

Education has become an internationally traded service in several ways. Through e-learning students overseas may enrol with an Irish educational institution to avail of its courses without having to be present in the country for the full duration

of their studies. The institutions – not just third level but secondary schools also with recognised strengths and traditions – may set up a teaching establishment abroad supplying it with strategic direction, core staff and – thus – credibility from its Irish operations. More usually, however, Irish educational institutions export their services when students come from abroad to study in Ireland. In 2005, the proportion of tertiary enrolment in Ireland accounted for by foreign students was around the OECD average (6.7 per cent) while it was as high as 14 per cent in the UK and 17 per cent in Australia and New Zealand (OECD *Education At a Glance 2007*). The internationalisation of education is a particularly large source of foreign earnings in the UK, where it earns more than the cultural & media industries, textiles, clothing or publishing, and in Australia, where it was the country's fourth largest export earner in 2003/04.

International students arriving to Ireland's HEIs, however, impact in ways other than on export earnings and the fee income of the institutions – they enrich the learning experience for Irish students, increase the exposure of Irish cities and towns to other cultures, add to the supply of high skilled migrant workers and help create links on which tourism and other businesses can build. The International Education Board Ireland (IEBI) notes the solid growth since 2002 in the numbers of overseas students in Ireland's HEIs but voices significant concerns about the sustainability of the trend unless policy is more vigorously developed. At a time when increasing student numbers from China and India could significantly improve Ireland's ties with these key regions, growth in their numbers is slowing; there is a reliance on a small number of countries for the bulk of Ireland's international students and, within the universities, on the one faculty of medicine to attract them; a growing proportion of the students are short-term; and little priority appears to be attached to what the IEBI describes as Ireland's most significant market, Europe (IEBI, 2006). A higher priority should be attached to development and implementation of a strategy for educational services from Ireland.

4.6.5 Productivity in Ireland's domestic market services

While a growing number of services are now traded internationally, others are provided and consumed domestically (for example, retailing, hairdressing, childcare and eldercare, waste management, etc.). The traditional perspective has been that they contribute *indirectly* to the success of the internationally traded sectors. This is because their cost levels impact on the purchasing power of workers in exposed sectors of the economy to influence wage-setting in those sectors and, thus, their international cost competitiveness. Productivity improvements in non-traded services, therefore, contribute indirectly to the performance of the internationally traded sectors.

A second perspective on the significance of productivity improvements in purely domestic services was outlined earlier and is independent of considerations of international competitiveness, i.e., improvements in the quality of domestic services can directly enhance well-being and may appropriately be charged for at higher real levels. For example, the range of treatments now available to medical card holders, other things being equal, make it unsurprising that the relative cost of the GMS should be higher now than two decades ago. Similarly, the contributions that childcare workers with professional qualifications make to children's development

make it unsurprising that the relative cost of childcare should rise as a system becomes increasingly staffed by professionals. Quality enhancements across a wide range of service providers have similar potential to directly enhance well-being and to be recorded as higher value-added.

A third perspective on the importance of productivity in domestic or local services can be advanced here. This sees the very distinction between internationally traded and domestic services as becoming blurred and a growing proportion of the latter becoming, in fact, capable of generating some type and level of outward investment (ODI). As the Irish domestic market has become larger and more sophisticated, more service providers have discovered that what they are good at doing in Ireland they can be good at doing in other countries. More of them, therefore, are establishing overseas operations to supply their type of service from within other countries to clients and customers in those countries. Several different routes enable a service provider in Ireland to also become a service provider in another country; for example, they may establish a wholly owned subsidiary, enter a partnership with or take over an overseas company, franchise their service brand, or simply have staff travel to perform a service and return. A steadily widening set of sectors and organisations engaged in service activities in Ireland are realising that they are capable of operating in other countries because of what they have learned in and through serving the Irish domestic market.

The debate on the EU Services Directive raised challenging questions as to whether, and why, some service providers in Ireland will suffer if Irish clients/customers gain improved access to providers in other countries and travel to avail of them or have the overseas providers come to Ireland[21]. The Directive finally adopted at the end of 2006 advanced EU citizens' rights to avail of services, and of EU service providers to conduct operations, anywhere in the Union. Within some sectors at least, the additional user choice and greater cross-border establishment and provision of service activities is improving service quality and raising the standard of living. Where national standards are high, the opportunities for service providers to expand by conducting operations in other Member States (MS) or attracting users from them are, generally, more significant than the dangers that they will be undermined by competition from providers based in MS with lower standards. Service users in Ireland have twin stakes in the success of the EU Services Directive: on the one hand, that quality service provision in Ireland is protected and, on the other, that high prices and unresponsive provision are exposed for what they are by competition from appropriately regulated and supervised providers in other Member States.

The involvement of domestic service providers in overseas services provision can benefit the Irish economy in several ways. It may generate net financial inflows from repatriated profits, royalties, fees, dividends and the like; it may increase the earnings and numbers of managers and other head office staff in the Irish parent company; it may generate additional demand for Irish exports; learning may take place through the overseas operations that further enhances the productivity of the Irish operations.

21. See, for example, the discussion in NESC (2006), pp. 87-88.

These three perspectives add up to make productivity improvements in domestic services of major significance to the economy. They add support to the view that, despite their economic image problem, raising the productivity of domestic services now has a major role to play if Ireland is to continue its economic renaissance (Farrell *et al,* 2007: 54). Farrell *et al* also cite McKinsey Global Institute studies as showing that differences in productivity levels in the large employment-intensive local-service sectors of different countries, such as retail and construction, explain a substantial amount of the gaps between their respective GDPs per capita (60).

4.6.6 Productivity in Ireland's public services

There are strong linkages between the productivity of the public sector and national economic performance. They hinge essentially around what the public sector does with the level of resources that government raises for it through taxation, and depend less on the actual level itself. Some of the poorest countries in the world today have small public sectors while some of the most economically successful have very large ones. This illustrates that it is not only or primarily the level of tax which can impact negatively on the private sector by adding to its costs. Even more damaging is not using tax revenue efficiently to produce outcomes that so improve the wider environment for business that the net impact of public sector activity on international competitiveness is positive.

While instances of public sector resources not being used efficiently and effectively are disturbing, and public concern and attention is part of the on-going process to reduce them, there is no evidence that the country's public sector today in overall terms is either particularly large or wasteful by international standards. The share of public service employment in total employment in 2006 was 15 per cent, as noted in Chapter 1. The share of GNP absorbed to run the public service is one of the lowest in the OECD.

The public sector is diverse and can be viewed as made up of three concentric circles. The civil service may be considered its core or inner circle, all those employed in public sector bodies a second circle, and those employed by third parties or self-employed but whose wages and salaries are mostly paid by the State as a third circle. By international standards, the Irish public system relies to a large extent on 'third parties' to deliver services in exchange for public funding that, in many other OECD countries, are delivered directly by public bodies themselves (Salamon *et al*, 1999) , Within each circle, what is required to monitor and improve productivity presents specific differences and challenges. Within each circle, also, instances of good and weak performance by international standards can be found. It is not surprising that users of Ireland's public services record both increased satisfaction with its performance in some areas (e.g., revenue collection[22]) and rising dissatisfaction in others (e.g., specific health services[23]). The Council believes it is more in keeping with the evidence to acknowledge a significant heterogeneity in the quality of Ireland's public services, with some branches performing strongly and others poorly, than

22. For example, one study concludes: 'Ireland tends to come out of the analysis of the quality and efficiency of public administration relatively well' (Boyle, 2007).

23. Users of Irish health services accorded them a satisfaction rating that was the 12th lowest in the EU 15 in the 2002 Eurobarometer. See Alber, J and U. Köhler (2004).

to subscribe to either pessimism or complacency overall. This observation applies across local authorities too where a wide variation in performance suggests there is exceptional scope for learning from best practice through appropriately structured and resourced networks and mechanisms for benchmarking and cooperation.

It is probable that the needed improvements in productivity hinge much less on any measures that can be taken at the central level – for example, changes made by the Department of Finance to budgets and recruitment levels or strategic initiatives undertaken by the Department of the Taoiseach – than on the internalization of a commitment and responsibility to implement an outcomes-focused, coherent, user-centered approach within each line Department, public agency and third party in receipt of public funds. Ensuring the requisite autonomy, accountability and capability in each case is at the heart of the challenge of raising public sector productivity. Each Department and public agency must also internalize a responsibility for the public system as a whole. If capital and current budgets are not aligned and complementary, initial returns on capital and training investments can be zero – or negative – as when new premises and equipment sit idle for lack of staff to use them, or expensively acquired new skills are unused for lack of the equipment which the staff in question need[24].

The Council welcomes the publication of the OECD review of the Irish Public Service at this critically important time and anticipates that it will contribute to a step-improvement in the quality of discussion about the type of public services the country wants, how they are currently performing and how they can be improved (OECD, 2008a). Above all, it anticipates a debate that will be both less defensive and less aggressive, and lead more quickly to the identification and implementation of reforms that benefit service users and public sector workers.

This wider debate, however, must include the key contributions that public sector productivity makes to national economic performance. In this, some of the lessons as to how Ireland entered the Celtic Tiger period should be carried forward into the task of building a more innovative and knowledge-based economy. Five principal areas emerge in which the quality and speed of strategic decision-making, and the quality and effectiveness of service delivery, on the part of Ireland's public sector vitally affect national economic performance:

i. the timely identification and effective delivery of the improvements in infrastructure – from roads to broadband – that a growing and changing economy requires;

ii. ensuring that young people receive the first-time education and that all adults (including the now large migrant population) have access to the further education and training that will enable them to hold satisfying employment throughout their working lives;

iii. the continuing ability of the development agencies, in particular IDA Ireland, to mediate successfully between the needs of internationally trading businesses operating from Ireland and Ireland's broader policy goals;

24. Examples include new health facilities remaining idle, the emigration of newly trained physiotherapists, and the under-usage of teachers trained in ICT.

iv. bringing the services on-stream that are integral to sustaining high employment rates and rising productivity (childcare, life-long learning, public transport, affordable housing, prompt medical care and social services, etc);

v. ensuring that social cohesion, environmental protection and regional balance are associated with economic development as assets that support it rather than as afterthoughts which slow it.

A particular challenge and opportunity to Ireland's public service is that it continue to develop improved ways of working with the large number and wide diversity of organisations and self-employed with whom it concludes service agreements of one form or another for the delivery of public services. The modernisation of the civil service, the reform of local government and the restructuring of the health services are, justly, headline examples of how and where improved productivity in public services has major potential to improve national economic performance. But just as SMEs account for a significant part of the economy, though they have a lower profile than multinational and large indigenous companies, the equivalent of SMEs are to be found throughout Ireland's public system; they are engaged in providing care, education, accommodation, training, employment and other services. The quality of these services and the professionalism of the staff and organisations involved impact directly on the well-being of a significant proportion of the national workforce and the majority of Irish society's most vulnerable members.

Where exceptional expertise develops, these 'social SMEs' also can work in other countries where groups stand to benefit from the understanding, procedures and practices first developed for an Irish setting. This is currently happening in the reverse direction as social SMEs from other countries, including the USA, mentor or train their Irish counterparts in approaches and techniques that have proven effective in their different but related settings. The observation already made that wholly domestic services can no longer be sharply distinguished from those that are internationally traded extends, therefore, to the Community and Voluntary Sector also. If a non-profit organisation engaged in youth work, home helps, training for the long-term unemployed, mental health, or whatever, develops exceptional expertise, it, too, with appropriate supports, can engage in a type of ODI.

4.7 Innovation in Services

Innovation in services becomes more pivotal to a strong economy and successful society as services grow to account for larger shares of economic activity and employment. The rise of services, however, reinforces the need to take a broad rather than narrow view of innovation and how it occurs, and to adjust policy to the particular challenges and opportunities innovation presents in services.

Chapter 3 highlighted the significance of innovation to the future of manufacturing in Ireland. It emphasized the complexity of the innovation process, and the need to complement a linear model with richer accounts of the multidisciplinary, inter-organisational and iterative process of interaction that takes place across networks, variously formal and fluid. In some manufacturing sectors (e.g., pharmaceuticals) and research areas (e.g., biotech and nanotechnology), the linear model retains

stronger validity than in others, i.e., teams of researchers in formal R&D centres come up with ideas that companies, either owning the centres outright or with stakes as 'industry partners', sift to identify those which merit test piloting for commercial significance. This linear model throws light on the innovation process in some service activities as well. For example, among software companies in Ireland, it appears that 'the development of a product from conception to market is a well studied and formalised process' (Martinez-Solano, Giblin and Walsh, 2005). The authors believe they can distinguish the specific types of knowledge-intensive service inputs required as a project moves from conception through pilot development and testing to production and marketing.

The more dominant conclusion from the international literature on innovation in services, however, is that the processes followed, generally, are 'distinct and different to the types of innovation prevalent in manufacturing and process activities' (Forfás, 2006b: 5)[25]. Services innovation is less closely linked to science and technology than innovation in manufacturing and more linked to factors such as user demands, competition, regulatory pressures, public procurement policy, the networks that evolve in urban settings of a certain scale, and new business models made possible by ICT infrastructures. An approach to policy support that attempts to treat manufacturing and even internationally-traded services (ITS) in the same way, therefore, would, in fact, suit only a small subset of ITS and be applying a largely technological view of innovation to many service areas where non-technological factors are more important[26].

The sheer diversity and complexity of service activities in a modern economy make it difficult for policy makers to properly focus and influence how innovation in services occurs. The focus, for example, must embrace the large volume of not-for-profit services where innovation can contribute directly to key national objectives and, indirectly, to improving the economy's competitiveness. Within market services, also, the types of innovation and ways in which it occurs can are more easily sketched than comprehensively classified.

Innovation in market services

Innovation in market services – by multinationals or indigenous companies, engaged in 'new' knowledge-intensive activities (e.g., software) or traditional areas (e.g., tourism) – has the same strategic, instrumental value as in manufacturing, i.e., it enables companies to retain existing markets by serving them more efficiently or effectively, and to enter new ones. Some factors appear to be more important for successful innovation in services than even in manufacturing , e.g., user involvement and feedback (there is, generally, less intermediation between service providers and users than between manufacturers and consumers), speed in seizing opportunities (many service activities have low costs of entry, intense competition, short product life cycles and limitations on IP protection), multi-party dialogue (services are often highly regulated and with culturally specific aspects),

25. Forfás has a high-level Services Strategy Group to map out areas of opportunity and the policy requirements.

26. 'The key agencies have responded to the challenge of services innovation but they have done so with a generally implicit and an essentially technologically based approach utilising traditional manufacturing-based concepts and understanding of innovation' (2006: 4).

and advanced telecommunications (services, essentially, involve people- to-people contact). Other factors that are important to innovation in manufacturing play less of a role, e.g., science, technology and engineering skills, access to advanced logistical supports, and the size of R&D budgets.

Innovation in market services, sometimes, starts with a conceptual or technological breakthrough that leads to a wholly new service offering. Examples include new financial products in insurance or investment management, new forms of entertainment or leisure/health activities, new forms of security including techniques for controlling inventories and tracking/tracing items along supply chains, new forms of customer recognition and market intelligence gathering. A second form of services innovation arises primarily from the implementation of business models new to a company or sector. Prominent examples include the no-frills air carrier, the on-line educational course, and becoming a franchisor. A third form of services innovation arises through exploiting the potential of inward and outward investment across regions and countries. As in manufacturing, the isolation of the tasks that constitute a service provision process and identification of potentially different locations that offer the maximum net advantage for each can lead to the re-composition of the service delivery chain.

Innovation in non-commercial services

Innovation in public services and the wider not-for-profit sector can contribute directly to advancing core national objectives – such as improving the quality of human settlements and containing urban sprawl, promoting healthy living, protecting the environment, developing an age-friendly society, enhancing social cohesion and social inclusion, etc. The incentive and drive to innovate in non-market services is, inherently, not as spurred by the need to survive and the potential for gain as in market services, nor is there as ready a measure of success as turnover and profit margins. Innovation in public services, in particular, frequently entails deep changes within organisational cultures that are risk adverse and where accountability is significantly based on conformity in how inputs are used rather than on the outputs produced and their effectiveness in supporting the outcomes sought. Nevertheless, users of non-market services typically stand to benefit in major ways from innovation so that a specific challenge in managing the introduction of successful innovation in non-market services is to structure ways in which positive feedback from service users, in fact, reaches and rewards the staff who introduce and implement innovation.

A study by the UK's National Endowment for Science, Technology and the Arts concluded that forms of services innovation which improve well-being significantly in the UK are not captured by the traditional metrics applied to innovation (such as R&D spending, patenting activity, etc.) (NESTA, 2006). It instanced the high standard of clinical genetic services available across the UK within the NHS, the innovative activities of engineering consultancies, the use of public procurement policy to drive innovation in social housing, innovations in tax planning produced by mutually beneficial collaboration between private sector tax advisors and the revenue authorities, and the development of a national cycle network under the auspices of central and local government and leading environmental groups. In addition to being largely 'hidden' from the more conventional measures of

innovation, these examples, in NESTA's view, (i) reinforce the importance of different types of networks and relationships in conducting different forms of innovation, (ii) highlight the significance of innovation in non-commercial environments, (iii) demonstrate the crucial role played by the public sector through, variously, regulation, public procurement, funding and leadership, and (iv) demonstrate the need for a broadly distributed capacity for innovation across society.

While many specific service users are in no doubt about the beneficial effects of successful innovation in Ireland's public and not-for-profit sectors, the incidence and impact of such innovation deserve fuller study and to be more widely known. They certainly need to feature prominently in national policies supporting innovation. Prominent examples of successful innovation to date include the introduction of self-assessment by the Revenue Commissioners, the progress being made towards electronic conveyancing by the Property Registration Authority, and the new contractual arrangements (Design-Build-Operate) for improving the efficiency and effectiveness of water treatment plants being paid for by the State.

In summary, three broad enabling conditions emerge from a wide literature as particularly important to supporting innovation in services.

In the first place, services innovation more often follows the doing-using-interacting (DUI) model than the science-technology-innovation (STI) one. DUI is also important to innovation in manufacturing (Lundvall), while STI describes at least some innovative activity in services (see above). However, generally, DUI is dominant in services innovation, which makes the existence of networks essential and generates specific demands of their successful functioning, e.g., prompt and repeated feedback from users, inputs from actors external to the innovating organization as well as the organisation's own resources, and the pooling of complementary insights from multiple professions (regulators, lawyers, artists, financial controllers and public officials as well ICT experts and market analysts). As the following chapter will make clear, networks with these characteristics are particularly likely to emerge in specific urban contexts.

Secondly, innovation in services thrives when the capacity for innovation is widespread in society- in its public and not-for-profit sectors as much as the private sector, in SMEs as well as large companies, at the point of service delivery as much (or more than) in dedicated R&D departments, and on the part of users as well as of providers. This wide distribution of an interest and capability to innovate requires, in turn, an educational system that successfully imparts foundation skills (analysis, problem-solving, creativity, imagination, communication, resourcefulness and an appreciation of diversity), high levels of participation in first-time and further education, management and organizational cultures that value and competently guide innovation, and social policies that are seen to protect people while rewarding change.

In third place, services innovation requires developed ICT infrastructures, including access to high speed broadband on the part of SMEs and households. It was noted above that a major wave of benefits from ICT investments is lagged in time as new businesses and new business models only slowly emerge in response to all that the internet makes possible and how people are using it. For example, the 'open source software' movement that began in 1998, in effect, heralded a major new

phase in how the internet is used with multiple users co-creating portals, websites and service offerings[27]. The typical early use of the internet saw large companies providing customers the opportunity to access their services online; the newer usage sees internet users creating or co-fashioning their own service offerings, with a spectrum of commercial outcomes from conducting the on-line equivalent of car-boot sales to managing complex supply chains (Reynolds, 2008). The capacity to upload has become as important to many users as the capacity to download.

4.8 The Broadband Issue

Access to the internet via high-speed broadband (from whatever platform) has become, in every sense of the term, a fundamental enabling condition for innovation in services. Large commercial companies use it to cut costs and improve services. SMEs and self-employed workers use it to 'cast their net wider' when looking for suppliers, new market opportunities or to better link their business functions. Well developed and innovative web sites, in effect, give small and medium-sized enterprises access to large international markets that previously only the largest players enjoyed. As well as e-commerce, internet access via high-speed broadband fosters e-learning, e-government and a wide range of opportunities to foster business, professional and social networking.

In this context, Ireland's relative standing in the EU 15 for the number of its households that have broadband access to the internet is sobering and shows the country particularly far behind on the quality of its connections more than on the penetration rate. Just over 30 per cent of Irish households had broadband internet access in 2007 as compared to 74 per cent in the top-performing Netherlands (Table 4.12)[28].

Progress in making high speed broadband a normal feature of every school and in increasing the proportion of government services available on line are also lagging best practice in the EU to a considerable extent. In short, there are few signs that Irish society is making satisfactory progress in acquiring what is a basic enabling condition to support innovative users of ICT and forge mutually beneficial linkages between Irish society and the sophisticated ICT exporters in its economy. This passivity in society as regards its potential role in pioneering innovative uses for ICT is not compensated for by any particular ICT dynamism in the indigenous business sector, nor is it likely to: 'the fastest speed offered to business by the incumbent in Ireland (6 Mbit/s) costs 4 to 5 times more than considerably higher-speed services (16 to 18 Mbit) in countries such as France, Germany and Hungary' (Forfas, 2007b: 16).

27. An essentially elitist undertaking, the open source software movement started because leading developers of software solutions found that the intellectual property rights governing software products were inhibiting their efforts to evolve them to meet the needs of sophisticated software users for better solutions (in biotech, medical instrumentation, telecoms, sports equipment, etc., as well as in software itself). The shared insight that all would learn from the architecture of new solutions to these advanced problems led them to exchange access to the codes with which they had written their software, in effect allowing participants to tinker with each other's product. This design collaboration via the internet among many, widely distributed contributors focussed on the new needs of leading-edge users has been described as 'the most important transformation now redefining the world's innovation economy' [Eric von Hippel, The Financial Times, 11/07/07].

28. Montagnier and Vickery (2007) use data from countries with high rates of access (e.g., Finland, Korea, France, etc.), to document how the 'window open to the world' that high speed broadband provides accelerates the intensity and diversity of internet usage on the part of households and individuals, and has a major discernible impact on patterns of time use and household expenditure. Employers and industries, in turn, respond so that the increasing intensity, efficiency and creativity of internet usage by households and individuals contribute to innovation, organisational change, growth and employment in the wider economy.

Table 4.12 Household Access to Internet, 2007 – EU 15

Country	% households with access to Internet at home	...of which % with broadband connection	% households with access to Internet at home via broadband
Netherlands	83	89	74
Denmark	78	89	69
Sweden	79	85	67
Finland	69	87	60
Luxembourg	75	77	58
UK	67	85	57
Belgium	60	94	56
Germany	71	70	50
Austria	60	77	46
France	49	87	43
Spain	45	88	40
Ireland	57	54	31
Portugal	40	77	31
Italy	43	58	25
Greece	25	29	7

Source CSO (2008)

There is a clear need for a step-change in Ireland's ambition to have an economy and society in a position to reap the productivity enhancing capabilities of ICT. The need for what are called next generation networks (NGN) – which involve replacing copper-based telecom networks with fibre and old telecommunications exchanges with digital IP-based switches – should feature in the mid-term review of the NDP, and the case for mandatory telecommunications ducting on an open access basis in all relevant infrastructural projects being funded or sanctioned by government. Otherwise, the conclusion reached by Forfás is hard to avoid: 'If Ireland does not act quickly to ensure that a world class communications network is in place, the consequences ... will be substantial, including the loss of our international credibility as a knowledge economy and missed opportunities in the huge growth areas of entertainment, media, health and education services' (*op. cit.*, 21).

4.9 Conclusions

The large majority of people at work in the Irish economy are engaged in providing a service to other people. The professionalism and quality of their work impact directly on the well-being and quality of life of the people who use their services. The quality of people's first time education and the extent to which they keep learning during their working lives are exceptionally strong determinants of productivity and innovativeness in services; they influence, for example, the extent to which the national economy captures the full benefits of ICT. While a once-off surge in demand for housing undoubtedly exaggerated the role of domestic demand in driving the economy, and there is a need is to rebalance the composition of demand so as to accord net exports a larger role, providing one type of service or another is how most people will occupy their working lives. This should inform and reinforce every area of education and training in Ireland.

While all services jobs should be regarded as productive and having inherent contributions to make to national wealth, the level and diversity of services employment is highly dependent on the health of the internationally trading sector of the economy. The composition of Ireland's exports is shifting rapidly towards services; inward investment and the successful development of Dublin's IFSC have played major roles. By 2005, Ireland ranked as the world's ninth largest exporter of services, a transformation of the Irish economy's presence in international trade which is hard to exaggerate. Just as in manufacturing, however, there is a need to increase the value-added of services exports in overseas companies operating from Ireland.

At the same time, exceptional opportunities arise for a pattern of economic growth in which indigenous enterprise plays a stronger role than hitherto in the trading sector of the economy. As the education, skills and international exposure of the Irish population continue to improve, and access to broadband and low cost travel extends, the potential for a wider range of organisations to 'export a service' grows stronger. These include professional partnerships, higher education institutes, recruitment agencies, public bodies, SMEs, Irish franchisors, and others. Ireland experienced difficulty over decades in procuring a strong export contribution from indigenous industry; it may be relatively easier to procure a strong indigenous contribution to Ireland's services exports. Significant export performances of the part of, for example, SMEs, HEIs, professional partnerships and public bodies would be a confirmation that the Irish economy is maturing.

Services, thus, should move to the heart of policy for re-invigorating the export performance of Ireland's indigenous businesses. Such a strategic direction offers the prospect of procuring a greater diversity to the economy's exporting strengths, a diversity in the nature of what is exported and in the sizes, types and geographical locations of the companies and organisations that engage in exporting.

Appendix Table A4.1
The Composition of Ireland's International Services Imports, 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Import Category					Current US$ m.					
Transportation	1,891	2,016	2,219	2,382	2,577	1,773	1,796	1,947	2,223	2,405
Travel	2,197	2,221	2,368	2,474	2,633	3,127	3,710	4,727	5,195	6,071
Communication services	254	332	484	208	344	475	597	854	772	810
Construction services	348	437	526	498	18	36	37	47	10	10
Insurance services	173	188	212	1,418	1,458	2,353	3,092	6,260	7,498	7,057
Financial services	513	631	725	1,259	1,448	1,233	1,595	2,038	2,775	3,308
Computer and Information services	306	362	533	310	276	506	554	371	381	418
Royalties and License Fees	3,414	4,087	6,198	6,944	7,922	9,748	11,008	16,036	18,835	19,460
Other Business Services	3,960	4,489	6,121	9,941	12,183	17,377	19,311	21,977	27,498	30,216
Personal, Cultural & Recreational Services	341	417	533	586	11	22	73	87	104	95
Government Services, N.I.E.	30	33	60	63	53	57	68	81	57	50
Total Services Imports	***13,425***	***15,213***	***19,978***	***26,101***	***28,922***	***36,705***	***41,839***	***54,426***	***65,343***	***69,900***
					Relative to previous year					
Transportation		1.07	1.10	1.07	1.08	0.69	1.01	1.08	1.14	1.08
Travel		1.01	1.07	1.04	1.06	1.19	1.19	1.27	1.10	1.17
Communication services		1.31	1.46	0.43	1.65	1.38	1.26	1.43	0.90	1.05
Construction services		1.26	1.20	0.95	0.04	1.94	1.03	1.29	0.21	1.00
Insurance services		1.09	1.13	6.68	1.03	1.61	1.31	2.02	1.20	0.94
Financial services		1.23	1.15	1.74	1.15	0.85	1.29	1.28	1.36	1.19
Computer and Information services		1.18	1.47	0.58	0.89	1.83	1.09	0.67	1.03	1.10
Royalties and License Fees		1.20	1.52	1.12	1.14	1.23	1.13	1.46	1.17	1.03
Other Business Services		1.13	1.36	1.62	1.23	1.43	1.11	1.14	1.25	1.10
Personal, Cultural & Recreational Services		1.22	1.28	1.10	0.02	2.02	3.28	1.18	1.20	0.91
Government Services, N.I.E.		1.10	1.79	1.05	0.84	1.09	1.18	1.20	0.70	0.87
Total Services Imports		***1.13***	***1.31***	***1.31***	***1.11***	***1.27***	***1.14***	***1.30***	***1.20***	***1.07***

Source OECD Statistics on International Trade in Services, Vol. 1 (2007)

5

Regional Dynamism

5.1 Introduction

Specific insights into the constraints and opportunities for national economic development are gained by viewing Ireland as a region. It helps explain the economy's exceptional dependence on its export base and vulnerability to large movements of capital and labour, out and in. Since the mid-1990s, large net inflows of two different types have contributed to scaling-up the Irish economy – first, foreign direct investment and, more recently, immigration. These have confirmed that the Irish economy's export base and labour market have a capacity to expand or contract more typical of regions within large economies (e.g., California within the USA) than of large national economies themselves[1]. National economic policy (e.g., on corporation tax) has been significantly influenced by understanding the Irish economy as a regional economy.

At the same time, however, domestic policy has consistently had to address the spatial implications (economic, demographic, environmental and social) of successful national economic strategies by focussing on regions *within* the territory of the state and the balance between them. In this context, 'regions' have typically referred to the population centres outside the Greater Dublin Area and their development interests. There have been consistent efforts to support the widest possible participation in national economic strategies of these centres. The *National Spatial Strategy, 2002-2020,* published in 2002, remains the most recent, authoritative interpretation of this objective and how it is to be achieved.

This Chapter argues that it is necessary to be versatile again in understanding and applying the concept of 'region' to Ireland's particular economic circumstances. It is necessary because a burgeoning literature in economic geography on the role of urban regions in knowledge-intensive, services-oriented national economies suggests that, whatever the contribution national economic policy made to growth in Ireland's regions in the past, what happens – or fails to happen – at the level of the regions in the coming years will increasingly *account for* the success of the national economy in the first place.

1. Independently of this analytical use of the term 'region', the Republic of Ireland is classified as a region by the Nomenclature of Territorial Units for Statistics at the highest level (NUTS 1). NUTS was established by Eurostat to base regional statistics on a uniform breakdown of territorial units. Five other countries are also classified as NUTS 1 regions, i.e., the Czech Republic, Slovakia, Sweden, Norway and Switzerland; a further nine countries are classified as regions at an intermediate level (NUTS 2), Cyprus, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Malta, Slovenia and Iceland), at which level Ireland's Border, Midlands and West (BMW) and South and East (S&E) Regions also qualify. Ireland's eight Regional Authorities are classified as NUTS 3 regions, the smallest territorial units recognised by Eurostat.

In other words, a traditional approach to 'regional policy' for domestic purposes that viewed it as *distributing* the fruits of a successful national economic strategy in an acceptable way may need to shift to viewing it as *constitutive of* a successful national economy. The principal reason is that the scope for productivity enhancements and the potential for innovation in economies that are services-intensive and knowledge-intensive require dynamic urban regions. An urban region that attains a certain scale and capability to manage its needs is able to achieve the balance between clustering (specialisation) and spread (diversification) of economic activity, the developed infrastructures, the specialised labour markets and the high quality of life that are particularly supportive of innovative, high-productivity manufacturing and services. As expressed by the OECD: 'A well rounded national economic development strategy cannot ignore the spatial structure of the economy, or the qualities and characteristics of cities that affect economic performance, social cohesion and environmental conditions' (2006c: 211).

The rest of this chapter examines the spatial structure that has been – and which the evidence suggests will continue to be – intricately linked with Ireland's economy. Section 5.2 outlines two important concepts in the contemporary literature on regional development in developed countries, which throw a particularly useful light on the constraints and potential of regional policy in a country like Ireland. Section 5.3 reviews empirical data on actual regional developments within the State. Section 5.4 complements this national data with international data that place the Greater Dublin Area (GDA) in a global context. Sections 5.5 and 5.6 seek to draw the lesson from both sets of data in two different ways, by articulating a fresh understanding of how Dublin's growth and that of the regions affect each other (Section 5.5) and by offering a strong interpretation of the development potential of the gateways in the National Spatial Strategy (Section 5.6). It is argued that our understanding of development and satisfactory dynamism at the regional level should be based more on regional assets, capabilities and strategies and hinge less on national averages, which underlines the need to explore and clarify just what these are for each gateway. Ultimately, this suggests a degree of autonomy and agency for economic matters at the regional level that is quite challenging to Ireland. Section 5.7 concludes by discussing some particular issues in the development of the gateways.

5.2 Key Concepts in Understanding Regional Development

5.2.1 Agglomeration Economics

Clusters in general

Cluster theory underlines the potential advantages that can accrue when companies engaged in the same activity locate in the same region. When many of the companies involved are inward investors, as Ireland has successfully learned, additional advantages to such clusters include the 'signalling' effect that existing companies send to others that the region is good for their kind of operations and the specialist expertise that local authorities, higher education institutions, utilities providers, etc., acquire in dealing with the needs of the industry in question.

Regional development actors in Cork and Galway, for example, are keenly aware of the opportunities to grow their biopharmaceutical and medical appliances clusters respectively. The initial start of these clusters may have been quite arbitrary – e.g., hard to explain without the vigorous marketing of the IDA and strong support action from local actors rather than arising evidently from regional resource endowments and historical tradition – but, once established, a degree of momentum can develop that replaces the earlier friction and gives development agencies a much stronger hand in promoting a locality as an export base. Large metro-regions (defined below as having at least 1.5m people), of course, have the significant additional advantage over smaller urban centres of being more likely to house a diversity of clusters; this reduces their vulnerability to any industry-specific cycle that could spell major difficulties for smaller centres.

Concentrations of knowledge-intensive services

A new emphasis is now placed on the significant advantages for knowledge-intensive service activities of features that can potentially arise in *any* high-density urban area and which boost the productivity of these services. This is not clustering by sector so much as the ability of concentrations of high skilled and professional workers – employed across a diversity of sectors – to attract more such workers because they contribute to each other's employment prospects and quality of life. In the first place, as urban centres grow, they can provide additional forms of security to individuals who have taken the risk of being highly specialised as well as to companies. Specialist companies can secure more than one contract and avoid dependence on a single key customer; they also have a larger pool of skilled labour to draw on. Specialist employees know they can find more than one employer who can use their skills; they also find that the urban centre contains more of the amenities, quality services and cultural activities they seek. They are confident of their ability to find employment in an urban centre *somewhere* (they are mobile) and this confidence makes them as selective of the city in which they will live as of the employer they will work for. In what is a burgeoning literature, these factors that appear to make firms especially productive in places of dense economic activity are termed agglomeration effects.

Agglomeration effects

A major OECD study, drawn on extensively below, finds that most of the variation in GDP per capita across the 78 metro-regions it identifies as in the world today arises from differences in productivity in employment and concludes that understanding the agglomeration economies that bring productivity to particularly high levels in some of them is at the heart of understanding the success of metro-regions (OECD, 2006c). Ciccone (2001) similarly concludes that the main reason for regional productivity differences is to be found not in differences in levels of educational attainment or public infrastructure endowments but in agglomeration effects. As he summarized them, agglomeration effects arise for a variety of reasons:

1. Innovation. New technologies are adopted and exchanged more rapidly in places of dense economic activity. Technological diffusion across different firms is achieved through different channels, for example, greater opportunities for

person-to-person interactions in a variety of settings and hiring key workers from competitors.

2. Specialisation. The large volume of business in places of dense economic activity renders a large variety of specialized business services profitable. These specialized services make firms more productive.

3. Competition. The provision of business services is more competitive in places of dense economic activity, as the large volume of business attracts more service firms and results in pressure on profit margins.

5.2.2 The Concept of 'the Learning Region'

Growing international attention is also being paid to the institutional framework and formal and informal networks and processes that are seen to link key actors in dynamic regions. While the modalities such coordination and cooperation take are as diverse as the regions themselves, some common characteristics are considered to emerge. Effectiveness in raising the skills and educational attainment of the workforce is a fundamental attribute, but more a condition of possibility than a guarantee of economic dynamism. A key catalytic factor is less visible and measurable but makes its impact widely felt and ensures that rich human capital is effectively used. It is the frequency and fruitfulness of interaction among skilled people who work not just in diverse departments and disciplines employed by the same company or organisation but across different firms and industries within the private sector and across the private, public and not-for-profit sectors, and whose specialisations are as distinct as scientific research, public administration, financial services, design, education, marketing, etc. There is significant evidence that this type of interaction lies at the heart of the innovation process *and* that it occurs maximally in regions which have attained critical thresholds in scale, diversity, attractiveness and governance. As summarised by the European Commission:

> Innovation is increasingly characterised as an open process, in which many different actors – companies, customers, investors, universities, and other organisations – cooperate in a non-linear way. Ideas move across institutional boundaries more frequently, and the traditional linear model with clearly assigned roles for basic research at the university, and applied research in a company R&D centre, no longer holds. Innovation benefits from geographic proximity; it enables the flows of tacit knowledge and the unplanned interactions that are critical parts of the innovation process. This is one of the reasons why innovation is much more geographically concentrated than productivity or prosperity. (European Commission, 2006)

A national economic policy that is privileging innovation, boosting R&D spending and fostering industry-research linkages must, therefore, also develop a clear understanding of, and policy response to, the potential of regional and urban agglomeration effects to enhance these same factors. In other words, ensuring that knowledge, creativity and interaction really become key factors in Ireland's national economic development is an invitation to also appreciate that, at the level of regions *within* Ireland, specific and independent contributions can be forthcoming from regional development coalitions and regional innovation systems. In this context, the concept of the 'learning region', while it has a valid application to the country

at large, may also repay exploration at the level of the GDA itself and of each of the gateways.

> The concept of the learning region centres on the hypothesis that the economic exploitation of creative and innovative knowledge depends, not just on the total of educated individuals working within a local economy, but on interactions among them and the organisations within which they work. These interactions run across the boundaries of firms, in particular along the supply chain, but they also involve other key groups. Most important are relations between firms and higher education and research institutes. Also significant are links with locally embedded and specialised lawyers, accountants, venture capitalists and other professionals who acquire knowledge relevant to specific developments and sectors. This kind of knowledge is particularly important for innovative activities, where it cannot be assumed that up-to-date knowledge is readily available in, for example, general stock markets. There is, therefore, a major role for the informal and interactive transfer of un-codified and often even tacit knowledge[2]. (OECD, 2006c: 90)

5.3 Regional Developments viewed from within the State

Probably the most noteworthy feature of recent data on regional developments within the State is the extent to which growth – in economic activity and in population – has taken place in each region and divergence not been accentuated.

As Table 5.1 demonstrates, the Greater Dublin Area's (GDA) shares of the gross value added and population in the State was unchanged in 2004 on that in 1996; labour productivity in the GDA, however, was 11 per cent higher than the national average[3].

2. This is a central thesis in the work of Allen J Scott in the University of California Los Angeles (UCLA), i.e., that the tacit knowledge and rapid movement of pre-codified ideas that circulate in clusters and similar concentrations are added to the knowledge and ideas that can be found on the web, at international conferences, and in the international literature. While anyone active within a field can access these latter, those in concentrated areas have the additional resource that they can learn from each other.

3. The Greater Dublin Area (GDA) adopted for data analysis in this report, encompasses two Regional Authority areas (Dublin and Mid-East) and their respective seven local authorities (Dublin City, Fingal, Dun Laoghaire-Rathdown and South Dublin (Dublin Regional Authority) and Meath, Wicklow and Kildare (Mid-East Regional Authority). However if considering travel-to-work patterns, the GDA has more fluid boundaries and, currently, is widely regarded as extending inappropriately far North, West and South.

Table 5.1 Gross Value-Added, Population and People at Work in the State and Greater Dublin Area

	1996	2000	2004
State			
Gross Value Added (€m)	52,464	91,153	131,427
Population ('000)	3,626	3,802	4,044
People at Work ('000)	..	1,671	1,836
Labour productivity (€)		54,550	71,583
GDA			
Gross Value Added (State=1.00)	0.46	0.47	0.46
Population (State=1.00)	0.39	0.40	0.39
People at Work (State=1.00)		0.43	0.41
Labour productivity (State=1.00)		1.10	1.11

Source based on CSO's direct data base.

When the eight regional authority areas are considered separately (Table 5.2, which presents the Dublin Region and the Mid East Region separately, though the latter supplies a large proportion of the former's workforce), stability rather than change in regional shares of national economic activity is still the dominant pattern. The labour productivity in the GDA is seen to be the net result of labour productivity in the Dublin Region that is 26 per cent above the national average and labour productivity in the Mid- East Region that is 28 per cent below it. The South West, however, emerges as the most improving region in the State, particularly for the growth in its labour productivity. The Midlands provides most evidence of a regional economy losing ground nationally; its already low labour productivity in the year 2000 fell further to below 70 per cent of the national average in 2004.

Table 5.2 Gross Value-Added, Population, People at Work, Labour Productivity and Disposable Income per Person in each Regional Authority Area

	1996	2000	2004
	State = 1.00	State = 1.00	State = 1.00
Dublin			
Gross Value Added	0.38	0.39	0.38
Population	0.29	0.29	0.28
People at Work		0.32	0.30
Labour productivity		1.21	1.26
Disposable income per person			1.12
Mid East			
Gross Value Added	0.08	0.08	0.08
Population	0.10	0.10	0.11
People at Work		0.11	0.11
Labour productivity		0.77	0.72
Disposable income per person			0.98
Mid West			
Gross Value Added	0.08	0.08	0.08
Population	0.09	0.09	0.09
People at Work		0.09	0.09
Labour productivity		0.94	0.93
Disposable income per person			1.00
South West			
Gross Value Added	0.15	0.17	0.18
Population	0.15	0.15	0.15
People at Work		0.14	0.14
Labour productivity		1.20	1.26
Disposable income per person			0.97

continuation —>

—> *Table 5.2 continued*

	1996	2000	2004
	State = 1.00	State = 1.00	State = 1.00
South East			
Gross Value Added	0.09	0.09	0.09
Population	0.11	0.11	0.11
People at Work		0.10	0.10
Labour productivity		0.87	0.85
Disposable income per person			0.91
Border			
Gross Value Added	0.09	0.08	0.08
Population	0.11	0.11	0.11
People at Work		0.10	0.10
Labour productivity		0.81	0.80
Disposable income per person			0.92
Midlands			
Gross Value Added	0.04	0.04	0.04
Population	0.06	0.06	0.06
People at Work		0.05	0.06
Labour productivity		0.79	0.69
Disposable income per person			0.92
West			
Gross Value Added	0.07	0.07	0.07
Population	0.10	0.10	0.10
People at Work		0.10	0.10
Labour productivity		0.76	0.95
Disposable income per person			1.12

Source CSO's direct data base. Secretariat calculations. County Incomes and Regional GDP 2004 (CSO, 2007)

While the primary interest in this chapter is to understand better the current spatial distribution of economic activity in the State, and the potential and constraints this presents in developing a more knowledge-based and innovative economy, it is important to appreciate how regional living standards and regional economic dynamism are, and are not, linked. On the one hand, the latter does not determine the former. Strong and effective commitments on the part of the state to contain wide inequalities in individual and household incomes and to guarantee access to a range of essential services for all citizens[4] work to the advantage of living standards in regions with the weaker economic structures. Their living standards are particularly likely to benefit from significant income transfers of one form or another and from measures that either bring services to smaller populations or the people in them to services[5]. In this context, the Council's concept of 'tailored universalism' (NESC, 2005a) is also a challenge to the search for an affordable provision of services across the territory of the State. For example, where only large population catchments justify – and enable – a quality service to be provided (e.g., the 500,000 deemed necessary to support centres of excellence for cancer treatment), the challenge is to ensure that transport and other arrangements enable residents in the most remote households to be seen and treated as promptly and efficiently as any others. Where electricity, broadband and other services must reach even remote households, the challenge is to ensure that the charging structure is fair both to the households in question and the taxpayer.

Table 5.2 confirms that the variation across regions in disposable income per person is significantly smaller than variation in their labour productivity. The two regions where labour productivity is more than one-quarter higher than the state average (Dublin and the South West), for example, have a much reduced superiority in disposable incomes per person - they are 12 per cent above the state average in the Dublin Region and just below it in the South West. All other regions have disposable incomes per person closer to the state average than their labour productivity[6]. There is, therefore, little evidence of a dramatic divergence, either in growth rates or in living standards, between the GDA and other regions. By contrast, larger EU economies (particularly the UK, Spain and Germany) have experienced a much stronger pattern of divergence and appear to face greater challenges in fostering economic growth in their weakest regions (Ciccone, 2001)[7]. However, maintaining even similar growth rates but from different starting bases implies, of course, widening absolute gaps.

While this evidence confirms that regional and local living standards depend not only on the strength of the respective regional and local economies but on the effectiveness of inter-regional fiscal transfers, it has to be acknowledged, on

4. Termed 'services of general interest' by the European Commission.

5. Evaluating the extent to which reasonable access to essential services is compromised by where in the State a person lives is beyond the scope of this chapter.

6. There is, also, significant variation in disposable income at the county level within the regions. For example, one Border county is at 99 per cent of the state average, another at 85 per cent (2004 figures).

7. This study finds that France, Italy, and Spain have similar levels of inequality of regional labor productivity; average labour productivity in their most productive five regions (Departements, Provincie and Provincias) is, on average, some 65 per cent higher than in their least productive five. The inequality in labour productivity across English counties is less, about 30 per cent higher in the top five than in the lowest five.

the other hand, that a significant and persisting gap in regional incomes, and/or in the range and quality of services that local residents can access, may act as a deterrent to regional and local economic development. Other things being equal, the first gap reduces the range of commercially provided services to be found in the region/locality and the second the overall attractiveness of living and rearing a family there. The likelihood that knowledge professionals of one type or another will base themselves in smaller areas and 'export' their services from there to larger population centres will be lessened and the prospect of inward investment being attracted to the communities in question become almost zero.

Differences in the economic structure of each of the regions and in how each has participated in the strong national economic performance since the mid-1990s are illustrated in Table 5.3 (based on Appendix Table 5.1). Strong employment growth over the decade, 1997-2006, was recorded in all the regions. In percentage terms, the Border Region recorded the strongest growth, a 55 per cent increase, and the GDA the lowest at 35 per cent. However, in absolute terms, the 219,000 *additional* jobs created in the GDA were greater than the stock of employment any other region had acquired by 2006, with the single exception of the South West (total employment of 310,700 in 2006). The most characteristic feature of the GDA's employment structure in 2006 was the 20 per cent of its employment accounted for by financial and other business services, significantly ahead of the South West which had the next highest share at 11 per cent. The other regions, by contrast, had significantly higher shares than the GDA of their total employment in construction (the Midlands had the highest share at 17 per cent as against 11 per cent in the GDA), in manufacturing (the South East had the highest share at 19 per cent as against 11 per cent in the GDA) and in agriculture (again the South East had the highest share at 9.4 per cent as against 1.8 per cent in the GDA). There was little difference between the GDA and the other regions in the employment shares of the public sector, of hotels and restaurants, and of the wholesale and retail trade.

The dynamics of employment growth over the 1997-2006 period differed significantly across the regions. Declining numbers in agriculture continued to offset a significant part of the employment gains in other sectors in the West (minus 11 per cent) and the Midlands (minus 6 per cent); by contrast, the agricultural sector was already a negligible employer in the GDA in 1997. Construction contributed hugely to employment growth in every region, accounting for 21 per cent of employment growth in the GDA but for 33 per cent in the South West and for shares of over 30 per cent in the West, Border and Midlands. The contribution of manufacturing across the regions was the most variable of the sectors; its employment level declined significantly in the Border Region (down 12 per cent) and by smaller amounts in the GDA (down 5 per cent) and the South West (down 3.4 per cent). In the other five regions, the employment level in manufacturing increased, particularly in the South East and West.

Table 5.3 Regional Employment Structure, 2006, and Sectoral Share of Employment Growth, 1997-2006[1].

	GDA		South West		Mid West		West		Border		Midlands		South East	
	Share of 2006 total	Share of 1997-2006 growth	Share of 2006 total	Share of 1997-2006 growth	Share of 2006 total	Share of 1997-2006 growth	Share of 2006 total	Share of 1997-2006 growth	Share of 2006 total	Share of 1997-2006 growth	Share of 2006 total	Share of 1997-2006 growth	Share of 2006 total	Share of 1997-2006 growth
Sector														
Agriculture, Forestry and Fishing	1.8	-0.6	7.4	-3.4	7.3	-4.6	9.2	-11.1	8.6	-3.0	7.6	-6.2	9.4	-1.1
Manufacturing[2]	11.1	-4.9	15.4	-2.6	18.1	2.4	15.1	6.3	13.7	-11.8	17.4	5.0	18.8	11.2
Construction	11.2	21.4	15.1	32.7	14.0	25.2	16.2	31.1	15.8	30.6	16.9	30.6	14.5	26.0
Wholesale and Retail Trade	13.8	11.2	13.5	9.9	13.8	15.4	13.8	16.5	14.9	20.1	14.4	16.9	14.1	12.9
Hotels and Restaurants	5.3	3.0	6.0	5.2	5.5	2.2	5.8	2.4	6.4	7.5	5.6	4.8	5.6	4.0
Transport, Storage and Communication	7.4	6.9	4.8	5.1	6.1	8.5	2.9	1.1	4.3	4.6	4.4	5.0	4.6	6.5
Financial and Other Business Services	20.0	26.8	10.9	17.7	9.6	14.3	8.5	13.9	7.7	12.1	6.9	9.7	8.7	14.3
Public Administration, Defence, Health, Education	22.6	28.1	21.7	31.8	20.4	32.0	23.9	36.3	22.8	32.7	21.6	27.6	19.4	24.2
Other Services	6.9	8.0	5.2	3.6	5.3	4.6	4.7	3.5	5.8	7.2	5.1	6.7	5.0	2.3
Total	***100***		***100***		***100***		***100***		***100***		***100***		***100***	
Employment level, 2006 ('000)	843,200		301,700		171,000		198,600		213,600		119,200		219,100	
Employment growth, 1997-2006 ('000)		219,000		88,500		46,000		63,100		69,200		42,100		70,800
Employment growth, 1997-2006 (%)		35%		42%		37%		47%		48%		55%		48%

Notes 1. Persons aged 15 and over in employment, Q4
2. 'Other production industries'

The level of employment in firms assisted by the development agencies (principally IDA Ireland and Enterprise Ireland) in each of the regions is an important indicator of developments in their export bases and of a region's ability to support firms that are trading internationally. Table 5.4 records trends in employment in agency assisted firms, in absolute terms and as a proportion of total employment in each region. From 1995 to 2001 (when the dot.com bubble burst), agency-assisted employment grew strongly in most regions, with the exceptions of the Border Region (stagnant) and the Midlands (only a 10 per cent increase); it grew by as much as 57 per cent in the GDA and 40 per cent in the West. Between 2001 and 2006, by contrast, the level of agency-assisted employment has been stagnant or in decline in all of the regions with the exception of the Midlands (a further 11 per cent increase).

As a proportion of each region's total employment, agency-assisted employment accounts for a declining share in all regions over the ten-year period – dropping dramatically in some regions (e.g., from 25 per cent in 1995 to 15 per cent in 2006 in the Border Region) and marginally in others (e.g., from 16 per cent to 15 per cent in the GDA). This is because, in all regions, employment in sectors that are not the focus of the development agencies grew faster (principally construction and public sector employment, see Table 5.3)[8]. Interestingly, the distribution of agency-assisted employment across the regions shows remarkable stability and has altered little since the late 1990s in particular. In 2006 as in 1995, some 40 per cent of total agency-assisted employment was to be found in the GDA, some 15 per cent in the South West, 10 per cent each in the South East, Mid-West, West and Border and 5 per cent in the Midlands.

Further insight into the extent to which the different regions have participated in the strong national economic performance is provided by Census 2006 data on people's occupations (which classifies people by where they live and not where they exercise their occupation). Table 5.5 confines the analysis to a comparison between the GDA and the Border, Midlands and West (BMW) super-region, which aggregates three of the smallest regional authorities. It is noteworthy that a *growing proportion* of the people whose fast-growing occupations are particularly associated with Ireland's drive to build a more knowledge-intensive economy (i.e., 'business and commerce occupation','computer software occupations' and 'scientific and technical occupations' – aggregated as 'knowledge intensive workers' in Table 5.5) are living in the BMW – 17.5 per cent in 2006 compared to 15.7 per cent in 1996. Over the same period, the proportion of 'managers and executives' living in the BMW has also risen. This trend – depicting a more promising context to regional economic prospects in the BMW – has, however, not been sufficient to alter a more major fact, i.e., well over one-half of all knowledge intensive workers and of all managers and executives in the State are to be found in the GDA.

When occupational groups more associated with a weak regional economic base are considered, however, Table 5.5 appears to confirm that the BMW region is becoming more, rather than less, reliant on activities that are particularly vulnerable to economic restructuring imposed by globalisation and to the business cycle; for

8. The direct and indirect contribution of agency-assisted firms to total employment may not have declined by as much if account is taken of the higher value-added of agency-assisted employment.

Table 5.4 Numbers Employed in Agency-assisted Enterprise, by Region, 1995-2006.

	Dublin & Mid East		South West		South East		Border		West		Mid West		Midlands	
	Agency Employ-ment	As per cent of Total	Agency Employ-ment	As per cent of Total	Agency Employ-ment	As per cent of Total	Agency Employ-ment	As per cent of Total	Agency Employ-ment	As per cent of Total	Agency Employ-ment	As per cent of Total	Agency Employ-ment	As per cent of Total
Year														
1995	83,488	16.3%	33,930	18.1%	25,526	19.0%	33,828	24.6%	20,733	16.6%	25,524	22.2%	11,589	16.4%
1996	89,931	16.4%	35,142	18.1%	27,080	19.9%	33,525	24.3%	22,455	18.2%	26,470	23.3%	11,753	15.8%
1997	100,154	16.0%	36,122	17.0%	27,673	18.7%	34,126	23.6%	24,246	17.9%	27,601	22.0%	12,413	16.1%
1998	107,276	16.3%	37,858	16.9%	27,839	17.7%	34,974	23.0%	26,208	18.4%	29,856	22.6%	12,795	16.0%
1999	119,526	17.2%	39,918	16.8%	28,685	17.0%	34,252	21.5%	26,577	17.3%	31,833	22.1%	12,629	14.6%
2000	133,491	18.4%	45,413	18.6%	28,812	16.6%	34,100	20.0%	29,087	18.2%	33,596	22.9%	12,674	14.0%
2001	131,457	17.7%	45,779	18.3%	29,280	16.0%	33,063	19.0%	29,161	17.5%	32,230	21.6%	12,711	13.6%
2002	128,060	17.1%	45,333	17.9%	29,584	15.8%	31,742	18.0%	27,260	15.9%	29,896	20.2%	12,946	13.3%
2003	122,678	16.2%	44,911	17.2%	29,389	15.4%	30,673	16.5%	27,311	15.4%	28,819	18.8%	12,726	12.5%
2004	120,861	15.6%	45,957	16.8%	28,893	14.8%	30,667	15.6%	27,590	14.8%	28,714	18.0%	12,811	11.9%
2005	120,665	14.9%	46,291	15.9%	28,480	14.0%	31,768	15.9%	28,778	14.9%	28,869	17.0%	13,521	12.0%
2006	124,596	14.8%	46,019	15.3%	28,828	13.2%	32,710	15.3%	29,006	14.6%	29,600	17.3%	14,158	11.9%

Source Forfás Regional Strategic Agendas (2008)

example, its share of all food, drink and tobacco production workers in the State increased by over 4 percentage points over the 1996-2006 period to 34 percentage points, and its share of construction workers by 2 percentage points to 32 per cent. By contrast, the proportions of people exercising these occupations who live in the GDA declined by larger amounts.

5.4 The Growth of the Greater Dublin Area in a Global Perspective

As the national economy performed strongly, the number of people at work in the State increased hugely and population growth occurred in every county, the regional economy of the Greater Dublin Area has also been transformed. Indicators of a profound change in the region began to appear at the start of the current decade. Up to the 1990s, comparative studies of European cities, generally, painted an unflattering picture of Dublin's international standing or omitted it altogether. Since the year 2000, however, Dublin has begun to register as a significant urban centre in the wider European and global context in a variety of ways (see Box 5.1).

Not just commercial and inward investors but skilled, young workers from across the EU and wider afield find the city attractive. ICT companies now regard Dublin as a good location for recruiting talent from across the EU rather than having to rely chiefly on the (dwindling) supply of computer graduates from Irish higher education institutions[9]. More impressionistic accounts also attest to the city's attractiveness to the mobile, educated young, praising it – for example – for being of 'a manageable size, offering security and also career advancement opportunities, a place with an identifiable elite, and innovative enough to manage economic development and prosperity' and describing it as 'a magnet for the young elite"[10].

At the time the National Spatial Strategy was being prepared, authoritative assessments of Dublin's performance in an international context were notably lacking (Goodbody et al, 2000: 3). It is a welcome development, therefore, that the first major study of metropolitan regions undertaken by the OECD (*Competitive Cities in the Global Economy,* 2006) includes the Greater Dublin Area. It offers a developed analysis of the role of metro-regions (defined as large concentrations of population and economic activity that constitute functional economic areas) in the global economy and their national economic contexts. Table 5.6 provides an example of the data included in the OECD study, comparing Dublin solely to the other smaller EU capitals (populations of 3m or under) also included in the study. It shows that Dublin had the smallest population of this subset and was second only to Copenhagen in the concentrations of national population and GDP for which it accounted.

9. EGFSN (forthcoming) – Irish Independent, 07/01/08.

10. This paraphrases the German news magazine, Der Spiegel's definition of a 'cool city' (Irish Times, 23/08/07). See also data complied for Forbes business magazine by Mercer Human Resources Consulting (01/04/07).

Table 5.5 Occupational Classification of Persons Aged 15 Years and over: Census Data

	1996	2006	2006/1996
All Occupations	1,506,372	2,080,126	1.38
...of which in GDA (%)	41.1	41.4	
...of which in BMW (%)	25.4	25.7	
'Knowledge intensive' workers	94,324	183,628	1.95
...of which in GDA (%)	57.4	56.0	
...of which in BMW (%)	15.7	17.5	
Managers and executives	64,857	125,398	1.93
...of which in GDA (%)	59.0	55.9	
...of which in BMW (%)	15.6	17.9	
Building & construction workers	109,798	183,429	1.67
...of which in GDA (%)	35.1	31.9	
...of which in BMW (%)	29.7	32.0	
Food, drink, tobacco production workers	32,339	26,076	0.81
...of which in GDA (%)	30.5	26.4	
...of which in BMW (%)	30.0	34.2	
Personal service & childcare workers	126,592	205,197	1.62
...of which in GDA (%)	42.7	38.9	
...of which in BMW (%)	24.0	26.8	
Sales occupations	156,259	205,102	1.31
...of which in GDA (%)	41.9	39.7	
...of which in BMW (%)	23.7	25.8	

Source Census 1996, Vol. 7 (Occupations); Census 2006, Vol. 8 (Occupations).

Box 5.1 The GDA: Something Has Gone Right

- **The European Regional Economic Growth Index (EREGI) is used to identify the cities and regions across Europe with the greatest economic growth potential over the short-to-medium term. The ultimate purpose is to throw light on the strength of demand for real estate. In the year 2000, Dublin was ranked in first place; in 2005 and 2006, it ranked third and, in 2007, fourth.**
- **The LOCO monitor of global trends in direct investment identified the 50 leading cities worldwide in 2003-2006 that, between them, attracted 28 per cent of all inward investment over the period. Dublin was 18th in this global ranking, with only four European cities ahead of it (London, Paris, Bucharest and Budapest).**
- **The Global Financial Centres Index (GFCI) was developed for the City of London in 2007 to alert it to the competitiveness of alternative locations around the world. In its third edition, Dublin is ranked in 13th position worldwide and ahead of Paris. London is in pole position and three other European cities are also ahead of Dublin – Zurich, Frankfurt and Geneva.**

The GDA in a comparative international perspective

(i) The most significant finding for Ireland of the OECD study is the inclusion of Dublin. The impartial application of three criteria to identify 'metropolitan regions' across the developed world – i.e., a population size of at least 1.5 million, a population density greater than 150 persons per km^2, and evidence of a contained labour market (confirmed by the incidence of commuting) – identified 78 'metro-regions' in the 30 OECD Member States. Their average population size was 5m, and five were mega cities with populations of over 15m. The Greater Dublin Area just qualified on the basis of an estimated population size in 2003 of 1.6 million[11] and was the smallest of the 78 regions after Auckland (included for special reasons[12]). In all, 32 of the metro regions were small, meaning they had populations of between 1.5 and 3 million people.

11. 1,660,000 in Census 2006. The NSS estimate for 2020 on the basis of sustained economic and employment growth is 2.2m.

12. Auckland, New Zealand, qualified under a special fourth criterion, viz., that the study should include small cities important in their national context and with more than 20 per cent of their national population.

Table 5.6 Dublin and selected European Capital Cities: some Comparisons

Metropolitan region	Population (millions)	Share of national population %	Share of national GDP%	GDP per capita ('000 USD in PPPs)	Labour productivity ('000 USD)	Employment rate %	Activity rate %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dublin	1.6	39.2	47.6	38.9	79.7	95.9	50.9
Vienna	2.2	27.2	33.7	37.6	82.6	92.4	49.3
Stockholm	2.2	24.6	31.5	36.7	71.7	94.3	54.3
Oslo	1.7	37.0	36.5	35.0	68.5	95.7	53.4
Helsinki	1.8	34.6	42.1	34.0	68.1	93.2	53.5
Copenhagen	2.4	44.4	49.5	33.5	65.3	94.9	54.1
Lisbon	2.7	26.0	37.9	27.1	57.6	92.4	51.0
Prague	2.3	22.5	34.7	25.6	51.4	95.4	52.3
Budapest	2.8	27.6	45.6	23.5	54.3	95.5	45.4
Warsaw	3.0	7.9	16.2	23.1	60.7	88.5	43.0

Source OECD (2006); column 2 NESC Secretariat.

(ii) On the basis of GDP per capita in 2002, Dublin ranked as the 23rd richest region in the OECD world and the third richest in Europe (after London and Paris). There is an element of improbability to this reflecting the extent to which the scale of operations by multinationals in Ireland pushes GDP higher than GNP. Converting Dublin's data to GNP per capita (but not that of the other regions[13]) would see the GDA fall to 46th place globally and 18th in Europe, a more modest ranking but still ahead of cities such as Hamburg, Madrid and Barcelona. On the basis of the average annual growth rate in regional aggregate GDP (over the period 1995-2002), Dublin actually ranked as the fastest growing metro-region in the OECD world (OECD, 2006c: 48). Adjusting to GNP does not significantly affect this particular ranking.

(iii) On the basis of labour productivity (measured as GDP per person employed[14]), Dublin's ranking was much lower than on GDP per capita – in 28th place overall, 7th in Europe and well below the average of the 78 metro regions when GNP rather than GDP is used for Dublin. Interestingly, some European cities that ranked well behind Dublin on GDP per capita ranked higher on labour productivity, evidence that their more productive workers live alongside larger retired populations (Lyon, Brussels, Vienna and Rome).

13. The effect of doing so leads to an element of underestimation of Dublin's relative position, but by less than GDP overestimates it.

14. Note: not adjusted for hours or multi-factor productivity.

(iv) Some perspective on the relatively low (adjusted) labour productivity in Dublin is provided by evidence on the relative skills level of its population. The share of the population aged over 15 in Dublin with tertiary education (2004) placed it in the bottom quintile of the 78 regions; London, the leader, had 48 per cent of its population educated to third level as against only 22 per cent in Dublin (op. cit. 62).

(v) The OECD study examined each metro region in its specific national context. Some metro-regions lagged their national averages on indicators such as GDP per capita, economic growth rate, productivity per worker, employment rate and employment growth but it was more typical that the economic performances of metro regions were far ahead of their national economies. The superior economic performance of Dublin over the Irish economy as a whole emerges clearly from the OECD data but the extent of the superiority is quite moderate by OECD standards (confirming the observation made on foot of the CSO data above)[15].

(vi) In ten other small, European countries as well as Ireland, the capital city was the sole metro-region that qualified for inclusion in the OECD study (the Czech Republic, Austria, Hungary, Ireland, the Netherlands, Norway, Denmark, Finland, Sweden and Portugal). Reflecting on why this is so, the OECD observe that the concentration of political, administrative and diplomatic headquarters typical of a capital city can prove attractive to corporate head office functions, be associated with high standards in infrastructure and amenities from which high skilled workers in the private sector also benefit, be rich in social capital, and benefit in further ways by being favoured in policies and resource allocation.

(vii) Though the metro-regions in the OECD study, by definition, constitute economically functional areas, few were contiguous with political and administrative boundaries. The GDA, therefore, is no exception made up, as it is, of two regional authorities (Dublin and the Mid-East), and their seven constituent local councils (see footnote 3).

The inclusion and strong relative performance of the Greater Dublin Area in the 2006 OECD study of metro-regions, therefore, is despite the fact that the region does not boast a particularly strong form of metropolitan governance and despite the relatively rapid emergence in the region of significant congestion and other externalities. The thrust of the analysis conducted by the OECD, however, would suggest that the GDA is the economic success it currently is because of a still insufficiently understood preference on the part of a broad range of activities associated with an internationalising, services-driven and increasingly knowledge-intensive economy to concentrate in urban areas of a certain scale and with specific features. As Haynes, Vecchi and Wickham (2005) note, 'Dublin is the centre of almost all the sectors that expanded rapidly in the 1990s, financial services, professional services and the location of choice for much of the ICT sector (especially multinational but including 60 per cent of indigenous ICT companies as well)'.

15. See also the moderate degree of regional differences in high-tech employment recorded for Ireland relative to other European countries in Eurostat's Statistics in Focus, 102/2007, Figure 4.

5.5 New Perspectives on Metro Regions in their National Contexts

The Council believes that the Greater Dublin Area has been, and must continue to be, viewed simultaneously from two distinct vantage points.

Dublin viewed from the global economy

From the vantage point of the global economy (the perspective adopted by the OECD study), it is a small region – far below the 6 million population threshold over which the OECD begins to find evidence that congestion and other externalities gain the upper hand over agglomeration effects, a positive association between size and income per person turns negative, and productivity begins to lag that of smaller metro regions. At the same time, the recent and current dynamism of the GDA is impressive, even in the global context. And there is still room for 'catch up' with dynamic metro-regions elsewhere - for example, in the educational attainment of the population, the level of R&D spending in the region and, particularly, in the speed and effectiveness with which emerging planning and infrastructure issues are addressed.

As noted (Box 5.1), the EREGI index has fairly consistently pointed to the business case for commercial investment in Dublin since the start of this decade. It can be argued in similar fashion that national investment policies and public spending can expect to reap large returns from supporting and consolidating the GDA's expansion. This entails dealing with congestion and other externalities speedily and in innovative ways, particularly through strategic planning and transport investment interventions. There is considerable potential for Dublin to have a larger population *with* a higher quality of life if the benefits of higher density are carefully brought on stream to replace the costs of urban sprawl. A larger and more compact population will, in turn, make easier to further develop knowledge-intensive services and manufacturing and a greener regional economy. The OECD analysis, in fact, largely corroborates that in the National Spatial Strategy (NSS). The thrust of the latter is that Dublin can and must continue to be an engine of national economic growth – paraphrasing the OECD report, 'it would be hard to imagine a strong national economy for Ireland without a thriving and innovative Dublin' (OECD, 2006c: 211) – but that the quality of spatial development in the GDA needs to be monitored and improved. This poses major interrelated challenges – to increase housing densities, produce step changes in the quality of public transport, bring Dublin airport's new terminal and road improvements on-stream adroitly, address water services infrastructure requirements, make a success of integration and social inclusion policies, and much else.

Arguably, the single most important challenge in protecting the GDA's dynamism and attractiveness will be a step-improvement in the integration of transport planning and land use. The new Dublin Transport Authority must achieve this and effectively lead the seven local authorities to deliver new standards in urban planning and development that minimise car use and maximise shared amenities. Failure to surmount the challenges of urban sprawl in the GDA in the medium-term would not see benefits displaced to other regions within Ireland but to metro-regions elsewhere in Europe to which the businesses, young professionals and migrant workers currently attracted to Dublin are more likely to move.

Dublin viewed from elsewhere on the island

The other vantage point from which the GDA must be viewed is, of course, from the rest of the island. In comparison with all other population centres in Ireland, even the second largest, Cork, Dublin is, simply, very large; the capital sum associated with a specific infrastructural project for the Dublin area can be equivalent to several years of total capital spending in other regions. On the question of whether and how the interests of the GDA and of other Irish regions (the NSS gateways, for example) can be reconciled, the OECD provides a particularly valuable perspective on what 'balanced regional development' in a small country with a strong metro-region entails. Basically, it argues strongly that 'regional development must be about wealth creation, and upgrading regional assets, and not just a redistribution policy':

> Reconciling national and dominant-region interests in a positive-sum game requires a new strategy that goes beyond the typical "centre versus periphery" dichotomy. Under the paradigm shift in regional development policies[16], the most effective measures do not consist in distributing direct subsidies to lagging regions while ignoring the best performing regions, but in capturing differentiated regional competitive advantages. The condition is that all of a country's regions strengthen their own functional specialisation enough to develop cross-regional complementarities (OECD, 2006c:101).

This perspective is not new to the NSS or to NESC itself; the discussion of how regional policy and innovation policy can complement each other in Ireland goes back to, at least, the 1980s (NESC, 1989). It is implied in the current arguments that the GDA competes globally to attract to Ireland several types of activities for which no alternative locations exist elsewhere on the island but only in the metro-regions of other countries, and that the ferment of activity in the GDA offers the other Irish regions opportunities to capture spillovers, specialise in sub-supply and learn from what emerges as successful. But the OECD analysis is still a challenge to go beyond any vestigial traces of a traditional mindset which focused 'balanced regional development' in Ireland as 'the rest versus Dublin'. By contrast, it points out that the goal of the 'new political economy for territories' is not to shift jobs from one region to another... but 'to lift overall output by developing the assets of all regions', with many of the key issues revolving around 'intangible assets' such as 'linkages between universities, research communities and the private sector, clustering, stocks of social capital, and natural features often associated with water or other environmental assets' (233). In short:

> The most effective measures do not consist in distributing direct subsidies to lagging regions while ignoring the best performing regions, but in capturing differentiated regional competitive advantages. All of a country's regions need to strengthen their own functional specialisations enough to develop cross-regional complementarities (OECD, 2006c:18).

16. The 2006 study cites here an earlier one, Building Competitive Regions: Strategies and Governance (OECD, 2005).

Implied here is a concept of regional potential and performance that is more autochthonous and less dominated by comparisons with a dominant region than hitherto. Assessment of what constitutes development and satisfactory dynamism at the regional level is based more on regional assets, capabilities and strategies and hinges less on national averages. There is, thus, a vision of a degree of autonomy and agency for economic matters at the regional level that is quite challenging to Ireland. Even when the re-appraisal of regional assets and strengthening of regional strategies to realise their potential is appreciated as integral to driving the economy and not just for attaining 'balance', there are significant difficulties in framing and implementing these strategies. The actors capable of playing major roles within the GDA and each of Ireland's other potential urban growth nodes can be poorly served by structures, institutions, analyses and data designed primarily to support local authorities and the delivery systems of national agencies. The ensuing difficulty that regional development coalitions experience in making their case and taking action prolongs, in some instances, the 'shelf life' of outmoded and unrealistic concepts of regional 'balance'. However, this is far from a prescription for public policy 'quietism'. On the contrary, it posits a vigorous but empirical search to uncover those aspects of regions outside the GDA that have the potential to become assets and support enhanced regional competitiveness. 'Underperforming regions', simply, 'represent a lost opportunity, as the human and other resources of the region are not being fully utilized'. It is also the case that one of the best ways to improve social cohesion in a country is by strengthening the competitiveness of its regions.

A degree of false opposition between Dublin's development and that of the other gateways is created when developments in the latter are exclusively benchmarked against the former. Consolidation of the GDA as a metropolitan region in the global economy should lead to metrics that are unique by Irish standards, but a fair assessment of its performance and what it needs should be based on comparison with other European metro-regions, not – for example – Cork or Limerick. In a similar way, dynamic and balanced growth in the regions should be assessed primarily against standards they generate themselves of what is deemed attainable and compatible with their distinctive characters, while their gateways should be benchmarked against successful international cities of a scale to which they can realistically aspire[17]. The gateways – particularly the four new ones adopted in 2002 – are, properly understood, not in a second division to Dublin but playing a different sport. Their difference in scale, the prominence of the environment in determining their regional strengths, their potential to exploit complementarities with Dublin, the greater intimacy among the regional actors, etc., are assets to be exploited for authentic development and not regrettable differences from the GDA.

On the other hand, policies for the GDA that will ensure that an engine of growth and theatre of experimentation for the other regions is not brought to a stand-still by congestion, excessively rising costs or a deterioration in its social cohesion and quality of life, need to be pursued with equal vigour.

17. Inverness in Scotland (pop. 60,000) and Oulu in Northern Finland (pop. 166,000) are two examples given in Fitzpatrick Associates (2007), Implementing the NSS: Gateway Investment Priorities Study. Final Study.

> The continued development and world city status or goals of [a country's sole metro-region] do not necessarily contradict national plans for balanced economic development. ...Allowing market forces alone to determine relations between [a metro region and its national hinterland] – a pure *laissez faire* approach – would involve taking no public-policy measures to address congestion or to co-ordinate land-use policy within a metro-region, allowing the costs of inconvenience to mount until the area becomes uneconomic and firms move to other zones, leaving the metro-region to shrink in size. But that process would be prolonged and painful and, in the meantime, potential synergies from the existence of the metro-region would be lost. [For example] ...given there is uncertainty [at the national level] over what kinds of new economic initiatives will be successful, metro-regions have the advantage of being areas with considerable internal diversity and therefore stand a better chance than smaller, more specialised or less pluralistic areas, of becoming the locations for successful innovation. On the other hand, action to support the infrastructure of a metro-region and ensure its development will mean ensuring that it continues to attract labour, firms and capital away from other regions. To pursue this path requires confidence that the metro-region will deliver the expectations held of it (OECD, 2006c: 100).

It is fair to say, that many of the concepts essential to making Dublin a more consolidated, cohesive and innovative metropolitan city region have become clearer and are beginning to be given more effective purchase. Existing city plans for the four Dublin local authorities emphasise the importance of compact and public transport served development. The Draft Planning Guidelines on Sustainable Residential Development in Urban Areas (2008) of the Department of the Environment, Heritage and Local Government promote new concepts and mechanisms to capture the "density dividend'. The transport improvements contained in Transport 21 include elements essential to a better quality of life for the city region.

However, there are still considerable challenges to be faced in offering the kind of leadership necessary to deliver the elements described above in an integrated and timely manner. The proposed Dublin Transportation Authority (DTA) offers the welcome prospect of a much deeper integration between transport and spatial planning. It will need to be supported by efficient follow-through on the public transport investment front, particularly on signature items such as the Heuston-Docklands Interconnector and Metro North, and by firm action in containing any promoted developments that lie outside the public transport mesh for the city outlined in Transport 21.

5.6 Understanding the Gateways

If the GDA is the acknowledged engine of the national economy, the gateways are accorded a similar role in each of the regions. They are key to addressing the vulnerabilities in the economic structures of the regions identified above, namely the extent of their employment reliance on construction, manufacturing and – in some cases – agriculture. As the gateways increase the scale and sophistication of their economic activities, both by participating directly in international markets

and taking advantage of opportunities presented by the GDA, they will demand more goods and services from the smaller urban centres and rural areas in their hinterlands.

The gateways are, in fact, the most striking feature of the National Spatial Strategy (NSS). This is for several reasons: (i) through their vitality, the majority of the rural areas and smaller urban centres in the state are to find themselves pulled into, and part of, Ireland's new economy; (ii) their growth is to complement the growth of the GDA by offering feasible alternative locations for activities particularly impacted by the latter's congestion and by 'exporting' to the GDA and further afield goods and services which they can provide more efficiently; (iii) the growth of each gateway is integral to protecting and enhancing its immediate environment, restraining urban sprawl and commuting. In the case of the gateways on the Western seaboard the protection of some of Europe's most unique environments is at stake; (iv) the NSS added four new gateways (Letterkenny, Sligo, Dundalk, and the triad of Athlone-Tullamore-Mullingar) to the four largest urban centres outside Dublin that had already, and more obviously, been identified as gateways in the National Development Plan 2000-06 (Cork, Limerick, Galway and Waterford). This last innovation continues to generate debate, in particular the fear that identifying eight urban centres in addition to Dublin as foci where scale is to be fostered and by which national development policy is to be assessed, in a territory with just over 4m people, discounts agglomeration economics and will spread resources so thinly that not even the GDA, and much less the other gateways, will be serious global players by 2020[18].

That the gateways do not have, and will not acquire, the scale of Dublin does not mean agglomeration economies have no role to play in their development. As in the case of the strong growth of the GDA, the economic dynamism of Cork, Galway and other urban centres is testimony to the benefits which knowledge-intensive manufacturing and services can derive from regional human capital resources, specialist services, infrastructure, international connectivity and internal flows of information and ideas. In the case of Ireland's gateways, too, the availability of pools of regional assets can be highly important to the locational decisions of regional exporters. The small scale in the international context of these centres, far below the size that would classify them as metro-regions, increases the likelihood that many of their significant exporters will be unique and 'plugged in' in parallel fashion to quite different global supply chains; however, they can yet benefit from a set of business advantages specific to their region. At the same time, if a degree of traditional clustering can emerge, the linkages that traditional cluster theory describes can be of greater significance in smaller urban centres than in the case of metro-regions like the GDA.

There is a tension, which no state should seek to eliminate, between, on the one hand, facilitating the agglomeration of market activities so as to achieve higher productivity and competitiveness and, on the other, fostering their geographical

18. The Dublin Chamber of Commerce (Irish Times, 23/01/08) and the Futures Academy in the Dublin Institute of Technology's School of Spatial Planning (see, e.g., its study, Twice the Size: Imagineering the Future of Irish Gateways) are among those who argue that insufficient national priority is given to supporting the GDA.

spread so that all households in the state participate meaningfully in the national economy and social cohesion is strengthened. The NSS's twin commitments, to ensure that the potential of the GDA is fully realised and to develop the gateways, acknowledges and embraces this tension. Differences between the gateways outside Dublin, particularly since the addition of the four identified in the NSS, are as significant as their shared trait of being impacted by Dublin's growth. For example, Cork (population plus catchment area estimated at 380,000 in 2002) and Sligo (similar estimated at 68,000) share the title 'gateway' but are more dissimilar in scale than Dublin and Cork (approximate ratios 6:1 and 4:1). This diversity in current scale of the gateways reinforces a diversity that must also be recognised in their potential for development and the trajectories they must follow to achieve their potential.

The NSS envisages similar functions being exercised by each gateway on behalf of its hinterland but provides no template for their economic development. The development of the required governance frameworks that will allow key actors in the gateways to take coordinated and effective action together is, probably, the greatest and most urgent challenge facing the implementation of the NSS. The NSS has set in motion a process that, in some instances, is already resulting in stronger leadership being given by local authorities to other gateway actors. The process has featured the drawing up by each Regional Authority of Regional Planning Guidelines[19] that embody the implications of the NSS for its region (a step completed by mid-2004) and the framing of County and City development plans in keeping with these Guidelines (these have the significant added advantage of a statutory requirement to renew them every 6 years). A strong case can be made, however, that an assessment of the implementation of the NSS itself, and of measures to strengthen its implementation, is still needed. This should include some capacity to adapt it should particularly strong new trends emerge (demographic, economic, climatic, etc.) This need not endanger the fundamental insight that the fruits of spatial planning can only be delivered if there is policy consistency and adherence over a long period of time.

The development trajectory of each gateway will be shaped by the energy, vision and effectiveness of all the different gateway actors working in concert to identify and harness their region's economic assets. This will include exploiting the opportunities latent in their urban centre's current pattern of connectedness with the global economy (building on its existing foreign investors, tourist profile, Irish diaspora, etc.), its proximity to a European/global metro-region (the GDA), and the commitment and readiness of the states' development agencies and other public bodies to assist their urban centre in exercising gateway functions. The current regional structures (the eight Regional Authorities and two Regional Assemblies) were created in the 1990s because of the need to draw down European Structural Funds. The core objective now is the implementation of the NSS and a similar creativity and decisiveness should be exercised in recasting regional structures around its challenges, including on an all-island basis.

19. In response to the Planning and Development Act 2000.

Most important of all, the unique development trajectory of each gateway requires the local authorities who share responsibility for promoting it to co-ordinate their goals, strategies and actions (every gateway straddles two or more local authority boundaries and some four or five). Currently, local authorities effectively determine the capacity of Regional Authorities to deliver, which can limit them to function as fora for dialogue and exchange that generate some development but little action. County loyalties, therefore, can and do get precedence over strategic regional issues. A much stronger pooling of power and resources by local authorities in the common interest of implementing a gateway development plan should go hand in hand with the recasting of regional structures already referred to. The 2008 Green Paper on local government is a timely and important exploration of what this may entail (for example, in the cases of, at least, some gateways, directly elected metropolitan mayors with executive powers on a number of strategic issues and resourced mayoral offices) (DEHLG, 2008).

That the development of the gateways' economies cannot be 'delivered by' the state on their behalf but requires an ambitious but realistic gateway development vision to be forged by the actors in each region has been effectively signalled by the Gateway Innovation Fund (GIF). Applications to the GIF required the local authorities in each gateway to come together with a project or projects that would implement their vision for the gateway and to bid for funding that would be additional to their own local authority funding, to private sector investment and to the sectoral investments already outlined in the National Development Plan 2007-2013. The GIF will operate for the first half of the NDP to 2010. This €300m tranche communicates clearly both that 'central government does *not* necessarily know best' when it comes to developing the regions and that leadership and concerted action at the gateway level are vital, even in the national economys interest. The early indications are that the GIF has served to strengthen co-ordination and planning at the sub-regional level and that it effectively incentivised local authorities to work better together and with regional actors. This success and the quality and delivery of the projects which have been successful should be carefully weighed in considering the extension of the GIF beyond 2010.

5.7 Particular Issues in the Development of the Gateways

5.7.1 Services

A major function of a gateway in its region is to ensure that, through it, the population in its hinterland is guaranteed access to a core set of quality services. In some instances, such as acute medical services, this does not mean ignoring the insights of population-based health planning but that the smaller gateways ensure, with the help of advanced infrastructure and linked facilities, that every resident can avail of the same treatments within similar time frames as residents of the GDA and largest gateways. The combination of outreach strategies from gateways to the remotest rural areas and gateway linkages with each other and the GDA must ensure that every household in the state has access on reasonable terms to the services that underpin meaningful social and economic participation and an acceptable quality of life. These services include health, education and

training, transport, financial services, the services of public administration and high speed broadband. There is, already, diversity in achievement across the state in this regard, which provides a fertile ground for learning, and a large number of international instances where relatively small population centres have achieved a high quality of life and social cohesion on the strength of shared access to a wide range of quality services.

5.7.2 Broadband

The separate chapters on manufacturing and services have made clear that access to high capacity broadband is playing a pivotal role in contemporary economic trends. It is making possible the efficient functioning of globally dispersed supply chains in both manufacturing and service provision, and the emergence of wholly new types of services. The increased ability to isolate a service task and base it where specific locational factors confer added comparative advantage is making much service activity, simultaneously, more mobile and more concentrated. Several metro-regions (Dublin included) are growing rapidly as a result. The potential growth path of each gateway needs to lever these trends to its own advantage, but in ways specific to its current scale, economic structure and cost base. Some relocation of back-office, call centre and data-processing activity from the GDA to the gateways has already been prompted by their lower office rentals, staff turnover and housing costs. For this to continue and local enterprises in the gateways to also link with the metro-regions of other countries, gateways must be able to guarantee not just inward investors but all SMEs access to high capacity broadband so that participation in global supply chains from within their gateway is on a secure footing. The option must extend to individual households also if skilled knowledge workers are to experience living in a region attractive, including by being able to seize opportunities for work-life balance and self-employment.

As argued in the previous chapter (4.8 above), high capacity broadband is increasingly acquiring the status of a core household utility (similar to water, electricity, etc.). Gateways, hubs and county towns stand to gain particularly from a step-improvement in Ireland's currently low average broadband speed. For example, there are clear regional disparities in householders' access to broadband connectivity with 7.8 per cent of households in Leitrim having such access as against 36 per cent in Dun Laoghaire-Rathdown (the lowest and highest rates of connection by local authority area recorded in Census 2006). National policy must ensure that the Metropolitan Area Networks (MANs) in place are fully connected to the main national and international nodes so that there is every reason for potential service providers to connect to their MAN[20]. It should also ensure that, wherever possible, every piece of relevant infrastructure paid for by or requiring sanction from the state (roads, railway lines, gas pipelines, housing) has telecommunications ducting on an open basis (small access routes through which fibre optic lines can be passed).

20. Without what is termed this 'backhaul capacity', SMEs and organisations connecting to their MAN may still not get the service they are seeking.

5.7.3 Education and Research

Every gateway has at least one Higher Education Institution (HEI). HEIs are already playing a major role in promoting the economic and social development of their regions and their potential is greater still. Multiple activities on the part of HEIs make them one of the most important regional assets of all as gateways seek to realise their role. These include, in the first place, the education and training they provide, both for young people to become graduates and adults to return to education. Their regional impact also embraces their research support to local industry, the international presence they attract (students and lecturers), their outreach activities to smaller hubs and remote areas, their responsiveness to regional economic and social developments, their ability to bring local employers, public officials and others into the same 'thinking space', the specialised research centres they create, and their cultivation of strong links with former graduates.

As noted above, R&D activities have an internationally noted propensity to concentrate in metro-regions. However, at the same time, several of Ireland's gateways have starting advantages in research areas key to national and global concerns (renewable energy, climate change, biodiversity, etc.). Visiting experts noted, for example, the international strength of the network of facilities in marine and environmental sciences in the West of Ireland (Forfás & HEA, 2007a). The major emphasis on research and innovation as key to improving economic competitiveness and societal well-being is, thus, inclusive of all regions. The research income received by a HEI is a significant indicator of the scale of its dialogue with industry, government and international interlocutors. In this context, it is testimony to the dynamism already under way in the gateways that the first, fourth and fifth highest levels of research income in the state in 2005/06 were received by UCC, NUIG and UL respectively (Forfás & HEA, 2007b).

5.7.4 The economy of rural areas

Ireland continues to be a country where, by the standards of advanced OECD countries, a large proportion of the population still live in rural areas (about 40 per cent). Rural living, just as life in a metro-region or gateway, can provide characteristic opportunities for people to enhance their quality of life as well as specific hazards in doing so. In the case of rural life, the challenge is to maximise the advantages of access to the natural environment and independence while minimising risks associated with distance from service centres and a high proportion of solitary housing. The long-term trajectory of policy in Ireland can be described as having moved from the assumption that rural life, overall, supplied the better framework for people's lives to a deeper appreciation of urbanisation and an interest in fostering stronger mutually supportive relationships between rural and urban living. The number of gateways in the NSS, with their associated hubs and county towns, for example, can be fairly interpreted as the minimum grid considered necessary to offer every rural resident in the state a real prospect of participating in the consolidation and further development of the national economy.

Rural areas are hugely heterogeneous. Some on the Western seaboard have access to environments so highly valued that long tourist seasons and their attractiveness to high skilled workers as places to live provide good conditions for micro-enterprises to flourish. Some, though relatively near the Eastern corridor, struggle to counter

rising opportunity costs associated with continuing to reside and engage in agriculture in their area.

The economy of rural Ireland need not be considered as endangered by the trends outlined in this report, for two principal reasons. In the first place, there are multiple ways in which larger and more affluent urban populations generate additional demand for rural goods and services, such as more health-conscious food consumers, visitors, holiday-makers, investors and new residents. The challenge, then, is to manage the economic activity this demand generates in a way that is sustainable and in the interest of year-long residents. Managing this urban (and international) spending in rural areas requires distinguishing between what is enhancing qualitative aspects of the areas in a sustainable way from what creates a wasting asset whose enjoyment by users may entail significant negative externalities. In second place, ICT technologies that, on the one hand, fuel agglomeration economies and urbanisation also offer a new wave of opportunities in the on-going search to find sources of economic activity that compensate for declining employment in agriculture, forestry and fishing. Micro-enterprises and self-employed activities can be viable from rural locations where the quality of internet access enables rural service providers to interface as effectively with service users as any urban-based provider. As large gateways may benefit from the off-shoring strategies of multinationals, rural areas can benefit from 'home-shoring' by urban-based organisations in the private, public and non-profit sectors. Challenges attend here also. The more sophisticated the services provided via the new ICT highways, the higher the incomes earned and the more stable the employment generated[21].

Underlying this conditionally positive appraisal of the prospects for Ireland's rural economy are two particularly fundamental assumptions, viz. that rural residency is not a disadvantage either in accessing education and training or attaining ICT literacy and access[22]. These challenges form part of the broader one embraced in the National Development Plan 2007-2013 of minimising 'rural-urban differences in the supply and quality of ...infrastructure and services provision' (84) generally. In the context of this report on the economy, they appear as particularly pivotal. The National Broadband Service which seeks to bring broadband to remoter households where commercial provision is least likely must ensure its clients access at speeds similar to urban residents so that the growing sophistication of services on-line are available to them too.

21. Some countries provide particularly challenging and inspiring examples of progress in bringing internet access to rural populations. In the US, for example, the difference in likelihood of having high speed internet access between residents in the most densely populated and most sparsely populated areas was almost closed between 2000 and 2006.

22. Some countries provide particularly challenging and inspiring examples of progress in bringing internet access to rural populations. In the US, for example, the difference in likelihood of having high speed internet access between residents in the most densely populated and most sparsely populated areas was almost closed between 2000 and 2006.

5.7.5 Northern Ireland

Developments in three gateways (Letterkenny, Sligo and Dundalk) have exceptional significance for adjacent areas in Northern Ireland. This is both an opportunity and a challenge. The principal challenge is to respect the internal priorities and distinct evolution of institutions and policies within Northern Ireland, as the process of preparing the NSS endeavoured to do. There is a welcome awareness in both jurisdictions of the extent to which people's lived lives and market forces link in particular Letterkenny and Derry, Dundalk and Newry, and Sligo and Enniskillen, independently of public policy. Northern Ireland's Regional Development Strategy (2001), for example, acknowledges in particular the pivotal role of Derry in the entire North West while also ascribing important sub-regional roles to Newry and Enniskillen[23]. It is clear that the scale factor for Letterkenny, Sligo and Dundalk is considerably boosted if, in providing – or drawing on – at least some services, their population sizes can be aggregated withDerry, Limavady and Strabane in the case of Letterkenny, Fermanagh in the case of Sligo, and Newry and Mourne in the case of Dundalk. Major opportunities to enhance services and prosperity for the populations in these cross-border regions are at stake and the Council unreservedly welcomes the emergence of a high-level, non-statutory framework for collaboration in the implementation of the NSS and its equivalent in Northern Ireland – the Regional Development Strategy. Progress in finalising the framework is expected in 2008. When in place, it will set an agenda for practical co-operation in the areas of spatial planning, the co-ordination of infrastructure investment and further improvements in data collection that will permit better analysis of trends on an island of Ireland basis.

Footnote 22 (cont.): ZIP Codes with at least one high-speed subscriber by population density – US

Persons per square mile	June 2000	June 2002	June 2004	June 2006
More than 3,147	97.3	98.7	98.9	99.4
Fewer than 6	23.0	49.6	73.4	89.3

Source Henderson (2007).

23. For example: 'In addition to the regional city gateways of Belfast and Londonderry and the gateway town and seaport of Larne, . the Strategy identifies two other centres – Newry and Enniskillen – which have a major inter-regional gateway role reflecting the availability of access by several modes of transport including a port or airport' (Department of Regional Development, 2001: 59).

5.8 Conclusions

The conceptualisation of the gateways and the dynamics of market forces have run ahead of the development of the data systems needed to monitor the specific needs of gateways and the implementation of policy on their behalf. More significantly still, the development of the required governance frameworks that would allow their key actors to take co-ordinated and effective action together lags the theory of the NSS and the flow of market forces.

Quite different approaches can be taken to identifying the boundaries of a gateway and what constitutes its catchment area or hinterland. Sophisticated use of Census data, for example, allows their catchment areas to be empirically based on travel-to-work patterns (Walsh et al, 2002) but no established data sources routinely report on these indicated (and changing) areas. Data gathered on the basis of formal town, city and county boundaries are more useful in monitoring some gateways than others. The requisite data to track the economic development of the gateways may be the most elusive of all. The data reviewed in Section 5.3 above, for example, are based on Ireland's eight Regional Authorities[24] but their correspondence with gateways is particular uneven; for example, data on the Border Region contains the data for three gateways – otherwise, each Region has one gateway to 'champion' but data for the Region as a whole may include, variously, large rural areas and significantly large towns.

The development of governance frameworks that will allow key actors in the gateways to take co-ordinated and effective action together is, probably, the greatest and most urgent challenge facing the implementation of the NSS. It is clear that a major – if not the lead – role lies with the local authorities making up each gateway in the first instance who must have the internal structures – supported, as already mentioned, by refashioned regional structures – that allow the specific challenges and opportunities of 'their' gateway's development to be distinguished from their other responsibilities and receive the requisite attention. This may entail resourcing a unit or vehicle within each local authority and giving it a specific gateway remit to participate in a meaningful way with the other local authorities, government departments, public agencies, private sector, HEIs, NGOs and others who share the responsibility for promoting the gateway.

Most, but not all, of the gateways, in fact, already have such co-ordination or steering groups in place, some as a direct result of the Gateway Innovation Fund (GIF) described above. There is scope, however, to improve significantly on the effectiveness of these arrangements. It is also desirable that a single champion or voice emerge for each gateway that is endorsed by its local authorities and other key stakeholders (e.g., the development agencies, chambers of commerce and central government) (Fitzpatrick Associates, 2006). The renewal of the GIF could be the occasion to ensure that the appropriate driving and co-ordinating vehicle is in place and operating effectively in each Gateway. The Green Paper on local government reform will also provide an opportunity to examine practical mechanisms that secure greater regional and sub-regional cohesion in the pursuit of higher performance and prosperity.

24. NUTS 3 Regions (see footnote 1). There are four NUTS 3 regions in Northern Ireland.

Table 5.7 Who Speaks for the Gateways?

Gateway (pop. + catchment area in 2002)[1]	NUTS 3	City/County Councils	Others
Greater Dublin Area (1.6m)	Dublin Region Mid East Region	Dublin City, Fingal, Dún-Laoighaire Rathdown, South Dublin, Meath, Kildare, Wicklow (Louth, Westmeath, Laois, Carlow and Wexford)	
Cork (382,500)	South West Region	Cork City, Cork County	
Limerick/ Shannon (260,700)	Mid-West Region	Limerick City, Limerick Country, Clare (North Tipperary)	
Galway (184,000)	West Region	Galway City, Galway Country	
Athlone-Tullamore-Mullingar (135,000)	Midlands Region	Westmeath, Offaly (Roscommon)	
Waterford (110,000)	South East Region	Waterford City, Waterford County (Kilkenny County, Kilkenny Borough, Clonmel Borough)	
Sligo (68,000)	Border Region (West Border Region–NI)	Sligo Borough, Sligo County (Fermanagh District Council)	
Dundalk (63,000)	Border Region (East Border Region–NI)	Louth (Newry and Mourne District Councils)	
Letterkenny (60,000)	Border Region (North Border Region–NI)	Donegal (Derry, Limavady, Strabane District Councils)	

Note 1. Population of gateways and catchment areas as in Walsh et al (2002)

Table A5.1 Employment[1] by Sector in Regions, 1997 and 2006

	GDA		South West		Mid West		West		Border		Midlands		South East	
	1997	2006	1997	2006	1997	2006	1997	2006	1997	2006	1997	2006	1997	2006
Sector														
Other Services	40700	58300	12600	15800	6900	9000	7100	9300	7300	12300	3300	6100	9400	11000
Public Sector, Health, Education, Defence	128700	190300	37300	65400	20100	34800	24500	47400	26200	48800	14200	25800	25400	42500
Financial and Other Business Services	109500	168300	17100	32800	9800	16400	8100	16900	8000	16400	4100	8200	8900	19000
Transport, Storage and Communication	46800	62000	10100	14600	6500	10400	5100	5800	6000	9200	3100	5200	5400	10000
Hotels and Restaurants	38600	45100	13500	18100	8400	9400	10100	11600	8400	13600	4700	6700	9400	12200
Wholesale and Retail Trade	92000	116600	31900	40700	16500	23600	17000	27400	18000	31900	10100	17200	21800	30900
Construction	47400	94200	16800	45700	12400	24000	12500	32100	12600	33800	7300	20200	13300	31700
Other Production Industries	104200	93400	48700	46400	29800	30900	25900	29900	37500	29300	18700	20800	33400	41300
Agriculture, Forestry and Fishing	16300	15000	25200	22200	14600	12500	25200	18200	20400	18300	11600	9000	21300	20500
Total	***624200***	***843200***	***213200***	***301700***	***125000***	***171000***	***135500***	***198600***	***144400***	***213600***	***77100***	***119200***	***148300***	***219100***

Source CSO online database

Notes 1. Persons aged 15 and over in employment, Q4 each year.

6

Supporting People in a Small Open Economy

6.1 Introduction

The previous chapters have constructed a picture of how the Ireland's economy can and should develop. The knowledge-based, innovation-driven, services-intensive economy made up of dynamic regions is feasible and already emerging in some respects but its full flourishing is far from an automatic process. It needs to be made happen. It will be the joint construction of myriad people at work doing new things and only happen if sufficient of them do new things. Furthermore, the emergence of this economy will only be associated with – and facilitated by – the parallel development of a socially cohesive and attractive society if the widest possible spectrum of people in Irish society are equipped with the motivation, skills and competencies to participate fully in both. The Council's study of the deepening inter-dependence between economic and social policy at this stage in Ireland's development concluded: 'in a globalised world, the strength of Ireland's economy and the attractiveness of its society will rest on the same foundation – the human qualities of the people who participate in them' (NESC, 2005a: xxiii).

This chapter begins with an overview of the labour market and social protection policies that, cumulatively, support a population which is reliant on a small open economy and enable them to experience the demands it makes on them with confidence (Section 6.2). It then addresses the principal challenges facing the educational system, a system whose quality, comprehensiveness and responsiveness have become absolutely central if Ireland is to consolidate and further develop its economy (Section 6.3). People at work and not just young people preparing for adult life will have to access education and training in much larger numbers and the challenges associated with this are discussed in Section 6.4. Economic restructuring, which is impacting particularly but not exclusively on workers in construction and manufacturing, is addressed in Section 6.5. Finally, the potential in many people currently outside the labour force to enter it and the supports they need if they are to do so is the subject of Section 6.6.

6. 2 An Overview

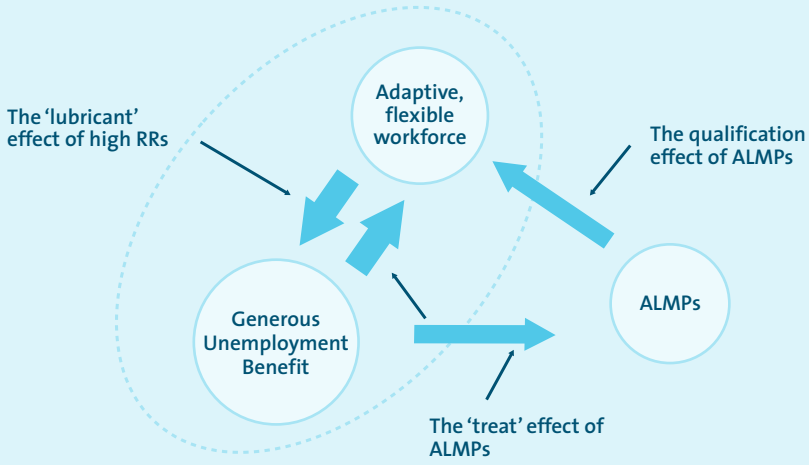
6.2.1. Focusing the Challenge

The framework conditions which enable the society and workforce of a small country to enjoy good living standards and a high level of social cohesion under the contemporary conditions of globalisation are complex. Confining a comparative

perspective to just the European Union, it is clear that a great deal depends on policies at the national level as to whether full employment, high living standards and social cohesion are maintained or not as supply chains restructure, international trade embraces more activities, and people and capital become more mobile. Solid economic performance is not a steady state but the repeated achievement of a society that has learned to manage the challenges and dislocation associated with on-going economic restructuring.

Well directed attention is paid to the labour market policies that protect workers rather than jobs. The outcomes sought include a skilled and adaptable workforce, enterprises and sectors that restructure successfully, and a high level of employment that is sustainable and of good quality. Key elements in the required labour market strategy are given prominence in the "flexicurity" model, associated in particular with Denmark (Figure 6.1). This emphasises the potential for complementarity between, on the one hand, employers' needs for flexibility in adjusting the tasks and numbers of their workers and, on the other, workers' needs for security in having an income and a job. The model combines three core elements: freedom under appropriate employment legislation for enterprises to adjust their staffing needs as they see fit but for enterprises that have the technological, marketing and management capabilities capable of complementing this freedom to successfully capture new markets; high levels of income replacement for a sufficient period for time for workers who are displaced, which enables them to search for employment effectively and not be forced to take new jobs below their capabilities; active labour market programmes, in which employers and educational institutional participate, that genuinely enhance participants' skills and which people who wish to continue claiming compensation for their unemployment after the exhaustion of their entitlement to unemployment benefit are obliged to participate.

Figure 6.1 The Labour Market Model of Flexicurity



It is clear that the key features of this model should continue to inspire the development of Irish labour market policy, and in three particular ways.

i. Knowledge-based innovation requires that enterprises have the freedom when necessary to relinquish tasks or workers they no longer need to serve their markets. Protecting current work tasks or jobs is not the best way to protect the workers themselves. The implicit contract between employers, employees and the state's development agencies here is that, in return for supporting companies in their restructuring, the remaining jobs are rendered more secure and, in the medium term, the enterprises begin to recruit again.

ii. High income replacement rates during the initial period of unemployment should be viewed not as a perverse incentive to become unemployed but as critical to supporting job search and an eventual good 'match'. This requires efficient and effective placement services and the smooth administration of unemployment benefit. The participation of employers and trade unions can make significant contributions in both areas.

iii. Labour market programmes should be of a quality and with such engagement from employers that they provide – and are seen to provide – re-entry to decent employment. The primary role of the state here is to ensure the quality of the programmes on offer, the matching of people to the programmes that 'deliver' for them, and guaranteed access.

It is also clear that the flexicurity model does not come cheap. Public expenditure on labour market policies in Denmark, for example, absorbs in excess of 4 per cent of its GDP annually, whereas (after adjusting for GNP) Ireland spends less than one-half of that (e.g., OECD, 2007c: Table J). On a more sophisticated measure, namely, levels of spending per person wanting to work[1] and in terms adjusted for countries' different price levels (PPS, purchasing power standards), Denmark is also the highest spender in the EU but Ireland emerges this time in a better light and is one of only six Member States spending in excess of 10,000 PPS per person on labour market policies (2005 data) (Eurostat, 2008b)[2].

However, while the particular labour market policies which the flexicurity model highlights and the level of resources devoted to them are extremely important, background conditions support the model's functioning. In these areas, in particular, Ireland continues to have considerable ground to make up. Denmark, for example, has, over time, invested more than Ireland in its educational system and in a system conceived broadly to span the pre-school years and adult learning. As a result of this, the average educational attainment and level of participation in further education and training in Denmark are considerably higher than in Ireland. In second place, Denmark has pursued levels of investment and programmes of reform in its welfare state and public services for much longer than Ireland, as a result of which the reach and quality of the service infrastructures on which the

1. Eurostat define persons wanting to work as the unemployed plus the labour reserve. The unemployed according to the ILO definition are persons without work, currently available for work and actively seeking work. Persons aged 15 and over who are neither in work nor unemployed are, conventionally, termed 'inactive' or 'outside the labour force'. However, significant numbers of persons inactive or outside the labour force want to work and can be identified from Labour Force Survey data – these are the labour reserve.

2. Statistics in Focus, 45/2008, 'Expenditure on Labour Market Policies 2005'.

Danish population can rely, in or out of work, such as housing, childcare, public transport, health, and the like, are strongly supportive of individuals' mobility and flexibility in employment.

Particular examples of differences in the support frameworks in place to help Irish and Danish workers deal with the demands on them of economic restructuring are provided by the respective levels of recourse to childcare and job-related training in each country. In Ireland, 15 per cent of children under 3 years and 48 per cent of 3 year olds are enrolled in childcare and early education, as against 62 per cent and 82 per cent respectively in Denmark. The out-of-pocket costs of formal childcare to a family are, typically, 3 to four times higher in Ireland than in Denmark (expressed as a percentage of net family income, OECD, 2007a)[3]. The second example tells a similar story; 11 per cent of adults (25-64 year olds) participate in job-related education and training in Ireland as against 39 per cent in Denmark – and the annual average hours of those who participate in Denmark are four and a half times longer than the average hours of participants in Ireland (OECD, 2007b)[4].

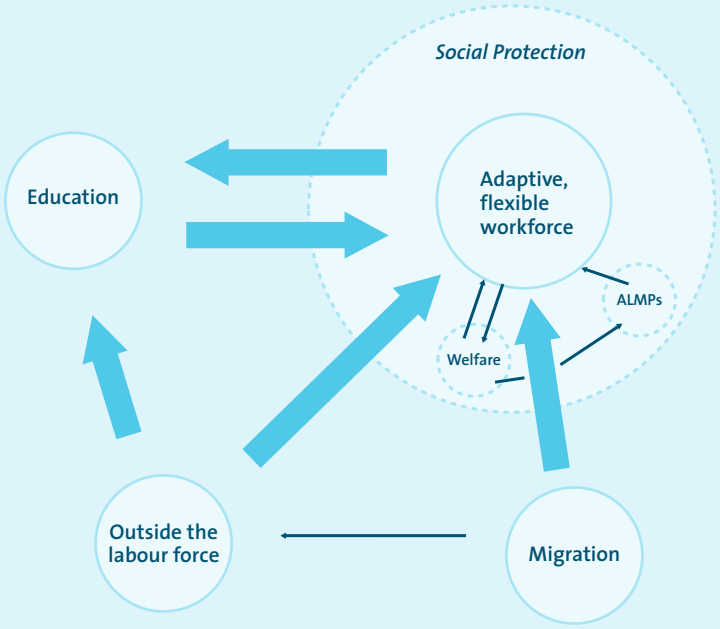
Figure 6.2 sketches the wider challenge on which policy in Ireland must focus if its population is to be properly supported to play a full part in the modern world and the Irish economy attain its potential as outlined in the previous chapters. The circle denoting Ireland's workforce in this case is surrounded by a wider circle (dotted line) denoting comprehensive, high quality social protection on which people and their families can rely in and out of work and which greatly ease the risks associated with job change and transitions in and out of employment. Generous unemployment benefit is part of this social protection but so is affordable housing, affordable childcare, good public transport systems, effective health services, support with eldercare, etc. In an earlier study, NESC described these improved service infrastructures as the 'services dividend' that a population achieving a high employment rate should receive[5].

3. The figures are for 2004. OECD (2007), 'Can Parents Afford to Work? Childcare Costs, Tax-Benefit Policies and Work Incentives. Chapter 4 in *Benefits and Wages: OECD Indicators. 2007 Edition*.

4. This light classification of EU 15 welfare states differences is explained more in NESC 2005, Chapter 4.

5. At the risk of overcomplicating the diagram, an additional concentric circle could be inserted between the inner workforce circle and the outer social protection one. This would denote dynamic employers (the fruit of the work of the development agencies and of public sector modernisation) whose capabilities in technology, management and marketing maintain high levels of demand for competent and flexible workers.

Figure 6.2 Supporting People in Ireland's Open Economy



Note At the risk of overcomplicating the diagram, an additional concentric circle could be inserted between the inner workforce circle and the outer social protection one. This would denote dynamic employers (the fruit of the work of the development agencies and of public sector modernisation) whose capabilities in technology, management and marketing maintain high levels of demand for competent and flexible workers.

Figure 6.2 also highlights how the size, composition and capabilities of Ireland's workforce now and over the coming years are highly dependent on three sources. The continuing inflow from the educational system is the largest. The skills, competences and attributes with which people leave the educational system and enter the world of work remain the single most important enabling condition of flexibility and productivity in the workplace and, in the final analysis, govern the feasibility of attaining flexicurity in how the labour market functions. As the Figure shows, the inflow from the workforce to the educational system develops a strong circular aspect. For example, more people who enter employment directly after completing their Leaving Certificate return at a later stage for a further or higher qualification, while more third level graduates also return to up-date their competences or acquire altogether new qualifications.

The second major inflow to the workforce is from among people of working age who currently consider themselves outside the labour force, a significant number of whom are in receipt of social welfare and for whom it is vital that their welfare receipt is experienced as an opportunity to advance rather than a block to doing so. As the Figure shows, a significant number take a route through the educational system, availing of specific programmes that are on offer (e.g., BTEA, VTOS, etc.).

The third inflow is due to net migration and - particularly since the 2004 enlargement of the EU - has been of such a magnitude that the 16 per cent of the total at work for which migrants accounted at the end of 2007 (Table 1.4 above) requires that their particular circumstances be integrated into every policy for supporting people in Ireland's small, open economy. Migrants in the workforce first need opportunities to master English, the recognition of their qualifications and decent accommodation on reasonable terms. As families are reunited or formed and children are born, the levels of English-language support in communities and the school system also become important, as does the quality of opportunities for social interaction generally with the indigenous population.

6.2.2 How is Ireland doing?

To a considerable extent, Irish policy is currently embracing the breadth of the challenge sketched in Figure 6.2. Each area evoked by the diagram features significantly in the National Development Plan, 2007-2013. The current NDP, in fact, broke new ground on its predecessors for the extent to which it included social as well as economic spending, and current as well as capital spending, in recognition of the high level of interdependence between economic and social progress at this stage in Ireland's development. An important part of monitoring and reviewing the NDP, 2007-2013, thus, is ensuring that proportion and balance are maintained in the progress made on the many different fronts.

If the challenge should be conceived this broadly, some idea of the progress being made and of the road still to be travelled can be captured from summary comparisons of expenditure on education and social protection respectively between Ireland and selected Member States. The latest available data are for 2004, a point in time corresponding to the latter half of the 2000-2006 NDP. The impact of the 2007-2013 NDP, which incorporates social spending in an unprecedented way, is, therefore, not captured in the tables reviewed below. A still more fundamental *caveat*, of course, also applies: spending is an input and can relate to outputs and outcomes in significantly different ways across countries. The following two tables group the EU 15 Member States into four welfare state 'families' that, loosely but usefully, capture some of their core distinguishing features – the Nordic, citizen-based welfare states; the Continental, insurance-based ones; its two English-speaking, targeted welfare states; and Southern European, family-reliant systems[6].

6. This light classification of EU 15 welfare states differences is explained more in NESC 2005, Chapter 4.

Comparative spending on education

Table 6.1 shows that expenditure on education in Ireland in 2004 was particularly low relative to the EU 15 when expressed as a percentage of GDP, (the second lowest after Greece); as a percentage of GNP, it was at the EU average that year of 5.4 per cent. The most educationally focussed states, however, were devoting 6 per cent or more of their GDP to education. The rate of increase in real spending on education in Ireland over the period, 1995-2004, was exceptionally high (a cumulative rise of 71 per cent as against 38 per cent on average for the EU 19) and second only to Greece[7].

Expenditure levels per student are a better indicator of the quality of education students actually receive. These spending levels in Ireland were approximately at average levels for the EU 19 in 2004 but, at each level - primary, second level and tertiary - Ireland was being significantly outspent by at least one third of the EU 15 Member States. The number of students in primary, second level and post-second level non-tertiary education in Ireland fell by 4 per cent over the period 1995-2004, and this boosted the impact of higher spending on what was available for each student. By contrast, the number of students at third level grew by 37 per cent over the period, the fourth largest increase in the EU, and that this was still accompanied by a 26 per cent increase in spending per student was because the overall increase in third level spending in Ireland was the highest in the EU after Greece.

Broadly, the picture that emerges is of rapid catch-up taking place in Ireland with the higher levels of educational spending in the best performing EU member states. However, the levels reached in 2004 were still some way off from placing Ireland among the highest spending five or six states at any level of the educational system.

7. Where data are from the OECD, the EU average is over the 19 EU member states who are OECD members.

Table 6.1 Expenditure on Education, Level and Trends, Ireland and Selected EU Countries, 2004.

	Expenditure (public and private) on educational institutions (all levels) as % GDP (2004)	Change (1995 =100, constant prices)	Annual expenditure per student for all services, by level of education (2004)			Change in expenditure per student (1995 =100, 2004 constant prices)					
						Primary, secondary, post-secondary non-tertiary			Tertiary		
			Primary	Secondary	Tertiary	Change in expenditure	Change in no. students	Change in expenditure per student	Change in expenditure	Change in no. students	Change in expenditure per student
Denmark	7.2	138	8081	8849	15225	130	108	121	133	107	123
Sweden	6.7	139	7469	8039	16218	139	119	117	144	145	99
Finland	6.1	134	5581	7441	12505	135	111	122	128	116	110
Austria	5.4	108	7669	9446	13959	108	m	m	126	103	122
Germany	5.2	109	4948	7576	12255	106	101	105	112	105	107
Netherlands	5.1	134	6222	7541	13846	143	106	136	115	113	101
Belgium	6.1	m	6636	7751	11842	m	m	m	m	m	m
France	6.1	m	5082	8737	10668	m	m	m	m	m	m
United Kingdom	5.9	139	5941	7090	11484	149	124	120	122	130	93
Ireland (%GNP)	4.6	171	5422	7110	10211	174	96	181	174	137	126
Italy	4.9	107	7390	7843	7723	104	98	105	144	111	130
Greece	3.4	208	4595	5213	5593	172	90	192	312	207	151
Spain	4.7	124	4964	6701	9378	107	79	136	162	97	167
Portugal	5.4	136	4681	6168	7741	133	86	154	143	146	98
EU 19	5.4	138	5788	7236	10191	134	98	137	158	148	107

Source OECD Education At a Glance 2007.

Comparative spending on social protection

Table 6.2 compares social spending per head of population across the different areas of risk against which EU Member States seek to protect their citizens. Again, the data are for the latest available year, 2004, and in purchasing power standards (PPS, thus, in terms independent of any national currency and that remove distortions due to price level differences)[8].

In comparing levels of social spending across countries, even greater caution is needed in interpreting differences than in comparisons of educational spending per student. Social spending is per head of the total population, not per head of the potential client group for each category of spending. (NESC (2005a) attempted to adjust social spending under the different headings by the size of the sub-groups in the population eligible for the spending). A given level of spending may reflect a small group receiving a high level of benefits or a large group receiving a low level. A high level of spending may connote satisfactory or unsatisfactory policy performance. For example, spending on unemployment per head of the population may be high because the unemployment rate is high, generous pay-related unemployment benefit is paid for a relatively long period, and/or large recourse has been had to early retirement schemes. As Eurostat observes, 'the disparities between countries are partly related to differing levels of wealth, but they also reflect differences in social protection systems, demographic trends, unemployment rates and other social, institutional and economic factors' (Statistics in Focus, 46/2008).

With these *caveats,* Table 6.2, nevertheless, provides a useful overview and reminder of the significant differences across the EU 15, including between states in the same welfare 'family'. The summary picture that emerges is that Ireland is prominent for the *rates of growth* recorded over the period 2000-2004 in per capita real terms in every area of social spending. However, depending on the area of spending in question, the relative level of Irish spending varies enormously. It was among the top four in the EU 15 in Sickness/Health Care and Family/Children, close to the EU 15 average in Unemployment and Housing/Social Exclusion, and at or near the bottom in Old Age/Survivors and Disability.

8. The data are available online under Eurostat's Long-Term Indicators following the tree - Population and Social Conditions/Living Conditions and Welfare/Social Protection/Social Benefits per head of Population by Function, PPS.

Table 6.2 Expenditure on Social Benefits (PPS) per Head of Population by Functional Category – EU 15 Member States, 2004.

	Sickness/Health Care		Disability		Family/Children	
	2004 (PPS)	2000-04 (% pa)	2004 (PPS)	2000-04 (% pa)	2004 (PPS)	2000-04 (% pa)
Denmark	1654	3.3	1116	6.7	1048	2.6
Sweden	2048	1.9	1218	7.3	792	4.4
Finland	1640	5.6	849	2.5	740	1.6
Austria	1968	1.6	650	-0.1	842	2.2
Germany	1931	-0.6	559	0.3	767	0.2
Netherlands	2264	4.2	785	1.4	360	4.7
Belgium	2056	8.1	530	-3.2	551	-1.2
France	2128	4.5	416	3.3	602	1.6
United Kingdom	2063	8.0	627	2.7	454	2.6
Ireland	2089	10.6	262	10.0	770	13.6
Italy	1522	3.4	353	3.2	262	6.6
Greece	1223	5.6	231	6.5	319	3.7
Spain	1353	5.7	327	3.1	239	9.2
Portugal	1134	4.3	388	0.4	198	5.1
EU 15	1840	3.8	519	2.5	522	2.3

	Old Age/Survivors		Unemployment		Housing/Social Exclusion	
	2004 (PPS)	2000-04 (% pa)	2004 (PPS)	2000-04 (% pa)	2004 (PPS)	2000-04 (% pa)
Denmark	2991	2.2	761	0.10	469.6	1.8
Sweden	3296	3.9	513	0.10	308.2	0.3
Finland	2380	4.6	631	2.00	201.7	1.0
Austria	4504	2.0	466	7.00	109.6	8.8
Germany	3096	1.1	601	1.00	186.8	-0.2
Netherlands	3116	2.8	462	8.50	440.5	0.3
Belgium	3295	4.4	932	6.00	135.6	4.3
France	3092	3.0	550	5.30	310.5	1.6
United Kingdom	3014	1.0	179	-0.20	430.9	3.4
Ireland	1397	7.7	410	5.90	274.0	9.6
Italy	3559	1.8	116	6.70	15.3	12.8
Greece	2346	6.1	273	4.50	215.4	1.8
Spain	1848	3.0	544	6.30	70.7	7.2
Portugal	1762	7.1	212	17.50	37.3	-3.8
EU 15	2929	2.2	426	3.80	224.9	2.2

In more detail:

- Spending on Sickness/Health Care per head of the population increased faster in Ireland than elsewhere in the EU 15 over the five year period, 2000-2004, and was the third highest in 2004 and 13 per cent above the average for the EU 15. The high rate of increase can be considered to reflect the scope for 'catch up' with the superior health services of other countries, but the level itself may be considered surprising given Ireland's relatively young population.
- Spending per capital on Family/Children recorded exceptionally rapid growth rate in Ireland (reflecting both improvements in both Child Benefit and Maternity Benefit) and, by 2004, was at the fourth highest level and some 47 per cent above the EU 15 average.
- The rate of increase in per capita spending on Unemployment (5.9 per cent) was modest by EU 15 standards and the level of spending in 2004 the fifth lowest, behind all the states in the Nordic and Continental European traditions. Ireland's low unemployment rate is a significant part of the context but the differences with the UK, sometimes considered a similar type of welfare state, are notable too.
- The level of per capita spending on Housing/Social Exclusion, by contrast, was much lower in Ireland than in the UK in 2004, though above the EU 15 average. Spending had increased over the 2000-04 period, however, at a rapid rate, bettered only by Italy.
- A young age structure, by EU standards, means that spending on Old Age and Survivors accounts for just 23 per cent of total spending on social benefits in Ireland as against 46 per cent on average for the EU 15 (Statistics in Focus, 99/2007). Not surprisingly, spending per head of population on this heading is below one-half the EU 15 average and, for example, less than one third that in the highest spending state (Austria). Nevertheless, here too Ireland's spending grew at the fastest rate in the EU 15 over the 2000-04 period, reflecting improvements in pension rates as well as a growing number of pensioners.
- The growth rate in spending on the Disability function in Ireland was, by some margin, the highest in the EU yet, by 2004, the level of per capita spending was still the second lowest in the EU 15 and equivalent to only one-half the bloc's average. The National Disability Strategy has been a major acknowledgment of the need for 'catch up' here and subsequent data can be expected to reflect significant progress in doing so.

6.3 The Educational System

There is justifiable pride in the contribution that Ireland's educational system in particular has made to the country's impressive economic development. The earliest inward investors appreciated the quality of Ireland's Leaving Certificate, while today's multinational employers value the numbers and quality of Ireland's third and fourth level graduates. The rising levels of educational attainment brought more women to take employment and ensured many of the emigrants of the late

1980s would subsequently return. Indigenous employers, the public sector, SMEs and every type of service provider have also benefited from more educated staff and the demands and expectations of more educated customers. Several features of Ireland's educational system continue to bear comparison favorably with those of other advanced countries, principally the high literacy levels attained in schools in Ireland and the high probability that young people will progress to third level[9]. More generally, Ireland's educational system is regarded as having used a relatively moderate proportion of GDP by international standards to procure major expansions in capacity at second and third levels while pushing up standards at the same time (NCC, 2007). In a sophisticated comparison of school performance across the OECD, Ireland's schools emerge as using the resources devoted to them efficiently and its national system as good in restraining wide variation in performances across schools (OECD, 2008b)[10].

However, Ireland's educational system is being called upon to innovate and change in several specific and profound ways if it is to meet the new and higher demands coming from the general population, the workforce and employers. Those who speak for the enterprise sector point to urgent improvements if a knowledge-based, innovative economy, capable of attaining and sustaining competitiveness through high productivity rather than on the basis of low costs, is to become a reality. Those seeking to ensure social inclusion emphasise the need for more rapid progress in addressing early school leaving and educational underperformance among young people, the specific barriers facing minorities, restricted literacy among adults and low levels of participation in life- long learning. Those concerned for the economy and social inclusion alike underline the educational needs of migrants and their families who are now a major part of Ireland's workforce and society.

The Expert Group on Future Skills Needs (EGFSN) has examined in detail what is required of Ireland's educational and training systems if they are to meet the skills requirements of enterprise in the Irish economy by 2020 (EGFSN, 2007b). This landmark report sets objectives that, in being attained and when achieved, will have profound social and economic consequences. The EGSFN's National Skills Strategy Research Report quantified the implications for the economy of the educational system improving and performing to the year 2020 on the basis of current policies. This is their baseline scenario and relies for an increase in skill levels in the workforce primarily on the dynamic of younger cohorts gradually replacing older cohorts retiring. By 2020, the proportion of Ireland's workforce with less than a completed secondary education will have come down, but to the level that Denmark – for example – had reached in 2005. It further estimates that there will be a shortfall of some 4,700 graduates a year, meaning that employers will either have to source a further 14.5 per cent of their overall need for graduates from overseas between now and 2020 or revise downwards their business strategies to the detriment of the national ambition to develop a more knowledge-intensive

9. The reading proficiency of Ireland's 15-year olds ranked them fifth out of 27 countries in the year 2000 (OECD, 2004: 96), while the proportion of 25-34 year olds with a tertiary education is one of the highest in the OECD and only Finland has a higher transfer rate from upper secondary schooling to third level (OECD, 2007: 29, 44). Note, however, that Ireland's tertiary education system includes courses of 2 years duration whereas some other countries (such as Finland) include only courses that are longer than two years. This contributes to Ireland's high relative ranking.

10. Chapter 4, 'The Scope to Enhance Efficiency in Primary and Secondary Education', in *Economic Policy Reforms: Going for Growth.*

economy. The conclusion is that the good standards the educational system has attained over recent years must be improved on further.

The key improvements on which the EGFSN, therefore, focuses are the completion rate to the Leaving Certificate (or its equivalent) and the transfer rate to higher education. It argues, not for the minimum changes needed to ensure a further 4,700 graduates a year (which risks giving an indicator of need a spurious precision), but for step increases of sufficient magnitude to generate a dynamic whereby the scale and quality of graduates from the educational system will even be capable of encouraging enterprises to increase the ambition of their business plans (thus, of supply of skills *creating* demand for more skills). The step increases are that the completion rate to the Leaving Certificate or its equivalent rise from 82 per cent to 90 per cent, and the transfer rate to third level from 55 per cent to 72 per cent. These are formidable challenges. That seven out of ten students who complete secondary schooling or its equivalent will be able and willing to enter third level, for example, requires decisive breakthroughs in addressing educational disadvantage, the intergenerational transmission of low expectations, the cinderalla status of programmes that are outside the traditional Leaving Certificate, and the growing exposure of young people to new hazards to their health and well-being (drugs, obesity, alcohol abuse, bullying, etc.). That the majority of Ireland's young people should successfully complete a third level education is to make HEIs even more pivotal institutions in the nation's economic and social life than they currently are. It implies that the quality of their teaching and their flexibility and responsiveness to a more diverse student body will become major determinants of economic prosperity and social cohesion, at the same time as they must increase the volume and quality of research carried out by their staff.

The Council wholly endorses this level of ambition for Ireland's educational system and believes it needs the widest possible ownership to be delivered on. Attaining these high-level objectives are, in effect, conditions of possibility that Ireland's economy develop the new bases for competitiveness that will be required to sustain higher quality employment and living standards into the 21st century[11].

Previous NESC Strategies have underlined the cardinal significance of two particular perspectives to delivering on this ambitious educational agenda. In the first place, it is essential to acknowledge the cumulative nature of educational success. While the enterprise sector and development agencies in Ireland must pay particular attention to developments at third and fourth levels, the origins of – for example – a plentiful supply of fourth level researchers are traceable as far back as the quality of early childhood and the cultivation of wonder and disciplined inquiry at primary school. That success is cumulative does not mean that education has to be continuous. On the contrary, the strategy of life-long learning seeks to ensure the value and effectiveness for many adults of leaving and returning to education at different times in their lives as their circumstances change. In their case, cumulative success means returning each time to a higher level with a confidence and capacity to benefit boosted by their previous exposure to formal learning.

11. Chapter 7 will reflect further on the implementation challenge.

A second pivotal perspective is that significant social benefits flow from the educational improvements that are critical to the development of the economy. The skills and qualities which enterprise needs the educational system to foster in people are also key to improving people's health, autonomy, social relationships, civic participation and general well-being. To a significant extent, they are skills for life as well as for the workplace.

It follows from both these perspectives that, while the improvements needed in education are multiple, they are interrelated and due proportions need to be maintained in the allocation of resources to achieving them. The following sub-sections reflect on the particular perspectives that a concern for the economy throws on how well first-time education and training is currently being provided. A life-cycle approach is taken to review briefly the principal strengths and weaknesses of formal education from the pre-primary years through to fourth level. While this approach postpones until last some of the most pressing issues for economic performance, namely, the number and quality of graduates and researchers at third and fourth levels, it serves to highlight the cumulative nature of success where national educational systems are concerned and the corresponding need for a comprehensive, proportionate and long-term strategy if the educational goals in the National Skills Strategy Research Report are to be attained.

6.3.1 Early childhood and the pre-primary years

Today's infants and pre-school children have a lifetime's participation in the knowledge economy and learning society ahead of them. There is a correspondingly huge responsibility towards them on the part of Ireland's policy system. The Council has underlined before how the quality of early childhood has acquired a new strategic significance in all advanced industrial countries and in meeting several of Ireland's high-level goals at the start of the 21st century (e.g., NESC, 2002; 2006b). In particular, quality pre-school education enhances children's capacity to benefit from primary schooling and lays the foundation for a lifetime of learning. More generally, wide access to formal childcare makes indispensable contributions to enabling parents combine childrearing with employment, the attainment of greater gender equality, the reduction of child poverty and wider options for people parenting alone. Formal childcare can also contribute in a significant way to social cohesion when the same centers bring children together from different social backgrounds, including the children of migrant families. Childcare facilities can also help strengthen a local community through the social interaction that is fostered around it.

Significant strides have been taken in increasing the quantity and improving the quality of the childcare services that families in Ireland can access. The National Childcare Investment Programme, 2006-2010, is on target to exceed €1 billion by 2010 and in the process create over 85,000 new childcare places, well within the commitment in *Towards 2016* to increase the number of childcare places by 100,000 over its lifetime 2006-2015). Other significant measures include the National Childcare Training Strategy, the adoption of the National Quality Framework for Early Childhood Education (Síolta) in 2006, the forthcoming National Curriculum Framework for Early Learning and the Community Childcare Subvention Scheme to be introduced in 2008. While the contributions of these significant recent additions

to the policy mix have yet to make themselves felt, it is extremely important that their cumulative impact be major and decisive.

Until 2006, there was little evidence of change in the pattern of childcare arrangements used by parents for their pre-school children (Table 6.3)[12]. Sixty per cent looked after their own children, while another 30 per cent had recourse to a paid or unpaid relative or childminder. Only one in ten pre-school children was placed in a crèche. Of the additional 15,700 families who had to make arrangements for a pre-school child over the period, 2002-05, two had recourse to an unpaid relative or paid relative or childminder for each one who used a crèche. Some of this stability and low degree of reliance on crèches may reflect parental preference. Some undoubtedly reflects the high cost of crèches *despite* a parental disposition to use them if they could afford them[13]. Internationally comparable data for 2004 showed out-of-pocket childcare costs higher in Ireland than *anywhere else in the OECD* for families reliant on average or lower earnings (OECD, 2007a: Figures 4.2 and 4.3).

Into 2008, it is clear that the cost to parents of formal childcare in Ireland remains high, both relative to earnings levels and in an international comparative context. Increased supply is unlikely to reduce this cost, as staff/child ratios need to be maintained and there is still significant scope to improve the qualifications and career trajectories of staff, which would raise costs[14]. In a comparative international context, Ireland's current early childhood system is characterized by the still large role played by the family and informal care, the rapidly emerging roles of increasingly regulated not-for-profit and for-profit sectors respectively, and a low level of public investment overall. In effect, a two-tier system is developing with publicly-subsidised early childcare focused on some socially disadvantaged children, while the majority of families purchase services that range from the developmentally excellent to those that simply 'park' children while their parents work.

12. The QNHS (Q1 2006) inquired about families' regular arrangements during the working week (Mon-Fri 7am-7pm).

13. The cost of paid childcare rose 23 per cent over the period covered by the Table; the average cost of 40 hours paid childcare in 2005 was €184 a week.

14. An informed estimate of the cost of a full-day childcare place in a centre catering for 47 children and meeting all regulatory requirements in 2007 was between €215 and €254 per week (Deloitte & Touche, 2007). This was estimated for non-profit providers (those represented by the National Children's Nurseries Association). Quality commercial providers, therefore, can be assumed to charge more. The Early Childcare Supplement, after its increase to €1,100 on 1st January 2008, would cover some 10-12 per cent of this cost depending on whether parents used such care between 40 and 46 weeks in the year.

Table 6.3 Families classified by main Type of Childcare Arrangement used for Pre-School Children

	2002	2005	2005	2002-05[1] increase
Care type	%	%	'000	'000
Parent/guardian	62	60	122.3	4.9
Unpaid relative	10	12	23.6	3.8
Paid relative	5	4	9.2	0.5
Paid carer	12	12	24.7	2.0
Creche/montessori	9	10	20.6	3.0
Other	2	2	4.5	1.5
Total	***100***	***100***	***204.9***	***15.7***

Source QNHS (Q1 2005)

Note 1. Effectively a two-year period (from Sept-Nov 02 to Dec-Feb 05).

There are potentially serious weaknesses in these emerging patterns. Giving the market a large role in determining who gets what quality of childcare has obvious risks. Parents may regard high fees as partial confirmation of quality as they contribute to keeping out children from more disadvantaged backgrounds. When household incomes come under pressure and/or childcare fees rise, families may curtail their purchase of quality childcare and 'consume' less than the public good requires. Even with the active vigilance of the City and County Childcare Committees, the quality of what parents purchase will be uneven[15]. A significant proportion of workers in the sector are on low pay and providers may be reluctant to support their upskilling or recruit new staff at a higher level because they feel unable to pass on the higher costs. The tradition, begun under the Equal Opportunities Childcare Programme, of concentrating public support on areas considered socially disadvantaged shares in the general weakness of services targeted in this way (*The Developmental Welfare State,* 2005). Disadvantaged families are encouraged to identify with their local 'community' in a way that more advantaged families are not, potentially inhibiting the former's social mobility; positive peer influences from more advantaged families are reduced; the many disadvantaged families not living in disadvantaged areas do not receive the same level of support. NESC has

15. 'Many parents have never purchased childcare before and, by the time they learn what they need to know, their children are old enough so that the parents may never purchase childcare again. Working parents have little time to seek out and evaluate childcare, even if they knew entirely what they were looking for. The child him or herself cannot easily communicate with the parent about what kind of care is being delivered. And the effect of good or bad childcare is seldom immediately apparent' (Cleveland and Krashinsky, 2003: 39).

argued (*op. cit.*, 2005) that an approach which beams services at the entire public with a differential subsidy structure enabling families at different income levels to yet access the same service (tailored universalism) more surely guarantees the consumption levels and quality of the service that are in the public interest[16].

The Council considers that, in constructing a national system of early childhood education and care, policy has, so far, not displayed anything like the boldness with which Ireland remedied deficits in the provision of secondary education in the late 1960s and in third level in the 1970s. This theme is returned to in Chapter 7.

6.3.2 Primary schooling

Exceptionally high levels of change characterize Ireland's primary school system. To the need to address an historic deficit in the quality of many school buildings has been added the need to cater for an estimated growth of 100,000 in the primary school-going population over the lifetime of the NDP, 2007-2013, with much of the growth occurring in new housing areas. Necessity has prompted significant changes in how new capacity is brought on stream (the use of generic designs, PPPs, design-build contracts and a much greater role for school boards). After a slow start, high levels of investment are resulting in significant numbers of new primary schools beginning to open (30 are expected to open in September 2008). Qualitatively, a revised curriculum has been introduced, standardized testing in literacy and numeracy is to begin, English language support for migrant children has rapidly expanded[17], and the increased diversity of Irish society is prompting new responses from within denominational schools and accelerating the emergence of alternatives to faith-based school patrons.

At the same time, the urgency of further improvements to the primary school system in several respects is widely acknowledged. It is too early to assess the effectiveness of new strategies to address educational disadvantage; DEIS is to bring a multi-faceted and sustained approach - following children from age 3 to 18 - to ensuring additional supports for schools serving disadvantaged areas on account of the socio-economic composition of their pupil intakes. However, the limited impact of previous measures that identified schools needing additional supports in this way was all too clear. A study of literacy and numeracy in primary schools serving disadvantaged areas in 2005 found that two-thirds of pupils achieved at or below the 20th percentile on standardised tests (compared to 20% nationally), and that their performance declined as pupils progressed through the school[18]. The Comptroller and Auditor General concluded that the persistence of this performance gap between schools, receiving significant levels of additional spending, and ordinary schools was disappointing[19]. When, at a later stage, a

16. This was a shared conclusion of an IBEC/ICTU Sub-Committee in 2005: 'Ireland needs to refocus what it has been doing under the EOCP so that concentration is given to the needs of all parents and not just those facing economic disadvantage' (*Quality Childcare from a Social Partnership Perspective:* p.56).

17. The number of English Language Support Teachers in primary schools rose from 400 in 2004/05 to 1500 in 2007/08 and an annual cost of €90m (DES).

18. Department of Education and Science (2005), *Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners.* See also Eivers et al, 2004; Surgenor et al, 2006.

19. C&AG/DES (2006), Educational Disadvantage Initiatives in the Primary Sector.

minority of students become disaffected with their secondary schooling and their at-risk status begins to emerge, it is frequently apparent that they had transferred into second-level with a preparedness to benefit significantly lower than their peers. In other words, underperformance and premature exit at second level is, often, traceable back to underachievement at primary level and a lack of stimulus in the home environment that were insufficiently compensated for by early childhood services and other measures.

Further significant challenges include: the pedagogy in infant classes is insufficiently tailored around the developing child and their limited hours pose problems for a growing number of parents (DES, 2004); there is significant scope to improve joint planning between the DES and Local Authorities in bringing new schools on stream in response to population growth; even achieving the current targets set for class size will still leave the average Irish primary school class large by OECD standards; the broadband access and ICT capabilities generally of primary schools is poor by EU standards; a successful and popular pilot programme that introduces primary school children to a foreign language is currently constrained (only 15 per cent of primary schools currently teach one) for lack of an overall policy on languages in schools (Council of Europe, 2007)[20]; old and new school buildings are frequently unsuited to and unavailable for additional community uses (e.g., out of school childcare) that would be consistent with their educational mission.

6.3.3 Second-level and post-second level education

Most teaching at the senior cycle of second-level schooling is geared to equip young people to meet the requirements for third-level entry and provide them with the attitudes and habits necessary to benefit from the third-level learning experience. At the same time, a significant minority of young people who complete secondary school or its equivalent choose paths other than immediate entry to third level (apprenticeships, Post-Leaving Certificate Programmes, etc.). Even the successful realization of the aspirations in the National Skills Strategy Research Report will still see 28 per cent of those who complete secondary school in 2020 not transferring to third-level (and 10 per cent who complete the Junior Certificate leaving school at that stage).

The Youthreach Programme, apprenticeships, Community Training Centres, Senior Traveller Training Centres and youth organizations in their different ways continue education for young people who leave school after the Junior Certificate, while the Leaving Certificate Applied prepares its students for PLC courses, traineeships and specific skills training provided by FÁS or other bodies as alternatives to immediate third level entry. The Council accepts that the diversity of young people's needs and preferences make an overly uniform path for all young people unwise to insist on (for example, by raising the school leaving age in a bid to address early school leaving) and underscores the importance of continuing to monitor and improve the quality and status of these alternative routes.

20. The Modern Languages in Primary Schools Initiative (MLPSI).

The outcomes sought for all young people at secondary level – those entering apprenticeships, post-leaving certificates, third level or whatever – are clear. They include that students have high levels of basic proficiency in core areas – reading, mathematics, science, ICT and language-learning – and, as importantly, that they have learned how to learn and developed higher order thinking skills. This, in turn, is influenced by how they experience their schooling and on the degree to which they are active agents in their own learning and engage in collaborative learning. Research carried out for the NCCA establishes the extent to which students recognize good teaching and respond to it (NCCA, 2007). This puts a huge premium on the success of on-going curricular reforms, developments in professional training and organizational changes in secondary schooling. It also underscores the pivotal contribution of the gifted teacher; a high status for the teaching profession is a national asset that should be carefully guarded.

In this context, there are grounds for concern that the Junior Certificate exam in particular may be having an unnecessary 'backwash effect' on classroom practice and children's relationship with school at a key moment in their development (e.g., Smyth *et al.*, 2007; NCCA, 2007). By the third year of the junior cycle, and even earlier, it is difficult for teachers and students to keep their focus on the acquisition and consolidation of core competences and attributes, and not be preoccupied with the demands of an inflexible and crowded subject-based curriculum and the advantages of rote learning for exam success. It is challenging to the pedagogies associated with 'academic' subjects that variation in the learning environment, learning-by-doing and general activity make 'vocational' subjects particularly appealing to pupils (NCCA, 2007). The success of the Department of Education and Science in implementing curriculum design, pedagogy and classroom management at the junior cycle will have a huge bearing on improving retention rates to the Leaving Certificate and enabling students who take alternative routes to succeed.

Improvements are also needed on behalf of the majority of students who successfully complete the academically oriented mainstream Leaving Certificate and transfer immediately to third level. Low levels of mathematical and physical science attainment at junior level[21] is feeding through to the senior cycle and restricting the choice of third-level courses and programmes for a significant number. The Government's recent decision to introduce significant reform of the second level mathematics curriculum ('Project Maths') is welcome. This issue is so critical, however, it may need to be reinforced by additional measures such as innovative professional development supports, incentives for maths teachers and specific encouragements for students to take the subject at a higher level.

Weak attainments in mathematics and science but, also, young people's perceptions of careers in science, mathematics, engineering and IT (SMET) have resulted in a declining interest in SMET courses at third level (a trend apparent in other countries too). The strong interest of employer bodies and the development agencies in the level and trends of CAO applications for technology-related courses reflects their

21. Ireland ranked 22nd in mathematics and 20th in science among the OECD countries in the 2007 PISA survey.

strategic importance to the economy[22]. The conditions under which schools can communicate clearly to their students the potential value of SMET careers and ensure that teaching in the relevant subjects is at the level the economy requires may still need to be understood better and require innovative approaches[23].

The numbers of students taking a foreign language in the Junior and Leaving Certificate have been falling[24]. In partial explanation of this, German and French appear as subjects considered particularly difficult, uninteresting and irrelevant by students themselves (Smyth *et al.*, 2007). The Council believes that the growing dependence of Ireland's economy and society on the non-English speaking world requires a steady improvement in the linguistic skills of students and the general public. While the global power of English and the limited extent to which foreign languages are used on a daily basis in Ireland by comparison with some other small European countries (e.g., Belgium, Luxembourg and Switzerland) make this difficult to achieve, newer trends make a high level of ambition appropriate - e.g., the growing weight of populous non-English speaking regions in the global economy, the large foreign national population now in Ireland and wider opportunities for Irish people to travel and work abroad. In addition to the linguistic competence acquired, foreign language teaching at school has significant potential to strengthen key attributes in future citizens, e.g., cultural sensitivity, confidence in diversity, the ability to learn, etc. (Council of Europe, 2007). The appropriate place of foreign languages in the primary school curriculum is particularly challenging to gauge. On the one hand, the need to ensure teacher capacity and continuity into second-level prompt caution; on the other, children's receptivity at this age and the changed world awaiting them as adults suggest rapid action. The forthcoming policy decisions on the place of foreign languages at all levels of the educational system will be extraordinarily important not only in their implications for the economy but for the signal they send about how Ireland views its niche in the modern world[25].

More generally, it is important to stress the pivotal role of secondary schooling in helping young people acquire dispositions and habits that buttress their interest, ability and confidence to continue learning, and their problem-solving and team-participation capabilities, along with developed literacy in reading, mathematics, science and IT. The comprehensiveness of young people's attainments at this level is vital to supporting the drive to raise productivity across the full range of service activities in the economy as well as to realizing the strategy for life-long learning.

In common with most other European countries, Ireland is finding it difficult to make significant progress in reducing early school leaving (ESL) from its current level. The proportion of young people not attaining the Leaving Certificate is

22. For example, EGFSN (2007: 74-76).

23. The support provided by the HEA through the Strategic Innovation Fund for the establishment of a National Centre for Excellence in Mathematics and Science Teaching and Learning in the University of Limerick is a headline in this regard.

24. The per cent of students taking a foreign language as a subject in their Junior Certificate fell from 94 per cent in 2001 to 88.5 per cent in 2005, and at Leaving Certificate level from 79 per cent (2001) to 75.3 per cent (2005).

25. The converse challenge, i.e., improving the English of secondary school students for whom it is not their first language, is relatively new, on a lesser scale than in primary schools but already requiring significant resources -there were 470 English Language Support Teaches in Ireland's secondary schools in 2007/08 costing €30m p.a., up from 200 ELSTs in 2004/05.

one available indicator of ESL. The retention rate to the Leaving Certificate of the successive cohorts who entered the secondary school system between 1991 and 1999 improved marginally from 77 per cent to 80.5 per cent (DES, 2008). There are major regional differences, with a high of 91 per cent for Leitrim and a low of 72 per cent for Dublin City. Allowing for students lost sight of by the official tracking system[26], a 'truer' estimate is that 83.7 per cent of the 1999 cohort attained their Leaving Certificate. A different but internationally comparable definition of ESL (based on the percentage of 18-24 year olds with at most lower secondary education and not in further education or training) estimate it at 12.3 per cent in Ireland (2006), the tenth best performance in the EU 27 and fifth best in the EU 15 (Eurostat). Nevertheless, such evidence as the high levels of serious absenteeism in primary and post-primary schools serving disadvantaged areas (Ó Briain, 2006) and the deep social disadvantage evident among Youthreach participants (DES, 2007) suggests that a significant number of young people still struggle to acquire the competences and confidence to lead full and productive lives. The effectiveness of the additional resources being given to schools needs to be assured and research and learning strategies speedily put in place. Priority should be given to learning, from the different experiences of schools and from international best practice work (e.g., Finland), as to where and how the work of Special Needs Assistants, learning support teachers and those who promote school attendance and 'catch up' learning is integrated most effectively by schools and classroom teachers.

A critical confirmation of the quality of initial schooling is if, in later life, early school leavers are seen to have the confidence and willingness to avail of further education and training (FET). The established finding that participation by adults in FET is positively correlated with their level of educational attainment partly reflects the extent to which formal schooling failed people who exited it early doubting their capabilities for education and its relevance to them.

6.3.4 Higher education: third and fourth level

The quality of young people's secondary schooling has a major bearing on the number and quality of people enrolling in Higher Education Institutions (HEIs). The ethos and culture of HEI campuses play a major part in supporting active and successful learning, developing synergies across their steadily more diverse student populations (more different in age, social background, nationality, disability status, etc., than before) and ensuring a learning environment that is tailored and responsive to the individual student. The combined effect of a higher transfer rate from upper secondary to third level education, greater numbers of mature students from across the socio-economic spectrum, a larger presence of international students and improved completion rates is that the student numbers on HEI campuses are set to grow significantly for some time[27].

26. Principally because of transfers to private schools and 'exits' due to emigration or death. Participation in Youthreach, apprenticeships and other alternative educational pathways, however, are, also, not tracked and, in effect, treated as early school leaving. The renewal of the official tracking system to encompass all valid routes which a young person may take is overdue.

27. There were 108,000 full-time places in higher education in 1998. This rose to 140,000 in 2007/08 and is expected to reach 176,000 in 2015/16 (HEA figures).

The principal contribution HEIs make to the economy and to national life is through the number and quality of their graduates. That contribution has been immense – to multinational and Irish employers, to the public service and to the not-for-profit sector. The quality of graduates from Ireland's HEIs, however, should not be taken for granted and they face growing competition as EU enlargement gives mobility to more graduates. For example, multinational employers in Ireland consider German and Eastern European graduates to have better domain-specific, theoretical knowledge and a greater ability to apply it in real world contexts than their Irish counterparts (the Irish graduates are considered better, in soft and generic skills), an edge that may be due to their longer courses of study and slightly older age (Forfás, 2007d). There is a major need to understand afresh what is required of graduates in Ireland's new economy and society, and of how HEIs must adapt and change to equip them accordingly. The 'new third level graduate', for example, will have 'not only specialist knowledge in their field but also the range of generic competencies (managerial and technological) required to participate in a workplace subject to constant change, the skills to continue learning throughout a professional lifetime, and sufficient breadth of knowledge and understanding to react to entirely new challenges and to place their work in a broader social and cultural context' (IUA, 2005).

There are significant changes underway in undergraduate teaching in Ireland's HEIs – such as greater modularization and semesterization, more on-line learning, tailored support programmes to ensure equity in opportunities to benefit, the more rapid adaptation of courses and approval of new ones in response to the economy's needs, and more out-reach learning. The Strategic Innovation Fund (SIF) has been a particularly important catalyst stimulating and enabling HEI's to bring innovations on stream. It is important that the most successful initiatives with which it is associated are evaluated to the benefit of learning across the entire third level sector, and that they are sustained with the funding implications for institutions and learners being fully identified and addressed.

The quality of undergraduate teaching, in turn, powerfully underpins success at fourth level. Students' motivation and ability to pursue doctoral studies and undertake postdoctoral research arise largely from the quality of tuition and the successful cultivation of their skills that occurs at the undergraduate level. The cultivation of a much larger body of fourth level researchers in Ireland requires several specific measures, most of which have been clearly identified. This includes – most obviously – maintaining the high levels of R&D spending that have been attained relatively recently in the history of Ireland's Higher Education Institutions (HEIs), thanks principally to the PRTLI and SFI. But other factors are equally important to ensuring the effectiveness of this expenditure – for example, the presence and leadership of outstanding academics, clearer career paths for researchers and technicians, more developed graduate schools, the attraction of graduates and researchers from overseas, further improvements in the infrastructural facilities for research, greater autonomy for the HEIs and stronger collaboration among them in the pursuit of international excellence. (The importance that a vibrant fourth level sector should link effectively with enterprise and the conditions under which knowledge transfer takes place that contributes to economic development were discussed in Chapter 3).

The research done in HEIs has a particularly interested and important potential stakeholder in industry and enterprise. There are difficulties, on both sides, in developing research projects that are, at the same time, commercially relevant and academically stimulating for staff involved in international peer assessment[28]. Conflict between commercial research and academic research, however, is not inevitable; contributing to solve real problems can motivate high academic standards while conundrums facing industry can require the insights of advanced scholarship. The national interest in seeing stronger links emerge between industry and HEIs - because of their potential to improve economic competitiveness, regional dynamism, students' careers and the resources available to HEIs themselves – has been increasingly well focused. Research conducted in HEIs has other important potential stakeholders, however. Government, service providers (in particular the health and education systems) and the not-for-profit sector – in short, service productivity and performance across the entire spectrum discussed in Chapter 4 – can potentially benefit also. A balanced research effort on the part of HEIs collectively has to feature strong activity in the humanities and social sciences as well as in the science and technology areas of immediate interest to industry. Indicators used to monitor research output on HEI campuses should reflect the full range of society's interests in harnessing knowledge to improve performance in every sphere.

Under most of the indicators used to compare the size and performance of fourth level education across countries, it is clear that Ireland is making good progress but still has significant ground to make up if it is to support its ambition for its economy[29]. An international assessment of the research infrastructure in place in Ireland's HEIs ten years after the commencement of the PRTLI (1998) describes progress as 'extraordinary' and the research landscape as 'transformed'. It notes, for example, stronger interdisciplinary and inter-institutional collaboration, a new scope to set longer-term research agendas and priorities, and the establishment of a more collaborative research culture. However, it is also clear that the gap with what researchers – in the humanities and social sciences as much as in natural sciences and technology – enjoy in best practice countries (from where members of the review team were drawn) remains wide: 'we find a research system in transition, still at a relatively immature stage, and lacking the scale and critical mass of its realistic international competitors' (Forfás and HEA, 2007a: 18).

While the research effort of HEIs still has significant ground to make up, few EU countries anticipate undergraduate education continuing to expand by as much as in Ireland. This is for several reasons – the demands from the economy outlined above, the demand for wider participation in higher education from under-represented groups, and the potential and desirability of significantly increasing international student numbers.

28. See, for example, the 'Contribution from the Business Sector' in the HEA/Forfas 2007 Report, *Research Infrastructure in Ireland - Building for Tomorrow.*

29. The NCC's Annual Competitiveness Report 2007 highlight the low international ranking of Ireland's third-level institutions, the level of higher education expenditure on R&D, the number of researchers at third-level per thousand in employment and the number of PhD graduates per thousand of the population aged 25-34.

The much higher level of funding for research in HEIs is, in fact, challenging their capacity to absorb it effectively while, at the same time, rising student numbers place increasing pressure on their core educational activities. A number of bodies have mentioned tensions between the availability of funding for research and under-graduate teaching. As the HEA does not allocate separate grants for teaching and for research, and as universities do not separate the costs associated with teaching and research, the true facts are difficult to establish. The universities have discretion to apportion their block grant between teaching and research so these tensions may be capable of being resolved within the third level institutions themselves. A 2007 OECD working paper found similar difficulties in jointly managing universities' missions in research and teaching in other countries (OECD, 2007d).

Hugely increased capital and current spending on higher education research and teaching in Ireland over the last decade still leaves the absolute levels of spending per student significantly below the levels in countries with notably good knowledge-based economic development and social cohesion. This is illustrated by the data in Table 6.4. Ireland's low cumulative expenditure per student over the average duration of tertiary studies is influenced, but not wholly accounted for, by the lower number of average years students are typically involved in study. The relatively short average duration of third level studies in Ireland reflects the large role of the Institutes of Technology. While this can be interpreted as a strength rather than a weakness, the data on annual spending per student remains unambiguously challenging. Average annual expenditure on core educational services per student in Ireland was lower (2004) than in the comparator countries but average *annual* expenditure on R&D per student particularly so; in Switzerland and Sweden, for example, R&D spending per student exceeded spending on core educational services per student in Ireland.

In summary, HEIs have a pivotal role to play in bringing Ireland's economy and society into the learning age and are having to become more porous institutions to do so. This porosity is required in several ways: giving students greater mobility across courses and programmes so that they are equipped with the multidisciplinary grounding and generic skills that will enable them to be effective problem-solvers and team players whatever their chosen career; more extensive and intensive collaboration between HEIs to pool their specialist resources and create internationally attractive teaching and research programmes; ensuring that a much greater cross section of society - by age, socio-economic background, disability status, etc. – can access their programmes in forms that suit different individual circumstances; blurring further the distinction between academic and vocational programmes – the foundations for a life of teaching and research, on the one hand, and for on-going learning in a chosen career, on the other, have become more similar; ensuring a commensurate presence is given – in their thinking, planning and governance – to the interests of each of the key constituencies they serve – industry, certainly, but also the public service, service providers, regional development coalitions, and the not-for-profit sector.

The major increases in capital and current spending on research and tuition in HEIs over the last decade register Ireland's serious intent to develop a learning

Table 6.4 Level and Composition of Expenditure[1] per Tertiary Student, 2004 (selected Countries).

	Ireland	Finland	Denmark	Sweden	Netherlands	Norway	Switzerland
Cumulative expenditure per student over the average duration of tertiary studies	33,083	60,659	56,333	75,901	72,555	m	79,611
Average duration (in years) of all tertiary education	3.24	4.85	3.70	4.68	5.24	m	3.62
Annual expenditure per tertiary student (educational core services only)	7,445	7,697	11,387	8,355	8,634	10,265	12,515
Annual expenditure per tertiary student (R&D only)	2,766	4,808	3,838	7,863	5,210	4,548	9,451
Ratio of R&D expenditure to educational core services expenditure (per student)	0.37	0.62	0.34	0.94	0.60	0.44	0.76

Source OECD Education at a Glance 2007 (Table B1.1b and BI.3b)

Note 1. All expenditure in USD adjusted for PPPs

society and a knowledge-based economy. Rapid progress is being recorded. Comparison with countries on a similar scale to Ireland but with more developed learning societies and knowledge-based economies, and the tensions noted within HEIs between research and teaching suggest, however, that a satisfactory and sustainable funding structure for Ireland's HEIs is still work in progress. Achieving and sustaining the ambitious goals set for third and fourth level also requires the success of the significant complementary investments taking place at prior levels of the educational system and in social policy to ensure that wide participation in third level is based on an equally widely dispersed ability, desire and opportunity to benefit so that third level participation loses all traces of social selectivity.

6.3.5 Making the most of resources

The Council strongly reiterates that the search to make improvements at each level of Ireland's educational system is integral to building the successful economy outlined in the previous chapters and to ensuring that Irish society remains attractive. Delivering on the principal educational goals outlined in the National

Skills Strategy Research Report is not a challenge to government alone. It is vital that the urgency, desirability and feasibility of the transformation it advocates are understood and embraced by parents, young people themselves, teachers and other educational professionals, the boards and patrons of schools and HEIs, and by all the social partners. At the same time, Government and public policy must play the leading role in ensuring that improvements in education continue at a pace and in a proportion that meets people's needs and matches the agenda for the economy.

The manner in which resources are used is as important as the level of resources committed to education. An example of the scope for reviewing how resources are used and learning whether and how outcomes may be improved by doing things differently is provided by comparing Ireland and Finland. The two countries have similarly sized student bodies (expressed as a percentage of their populations) and spend a broadly similar amount in cumulative terms on each young person over the typical duration of primary and lower secondary schooling in each country (OECD, 2007b: 189). The attainment of Finland's 15-year olds, however, not only consistently outperforms their Irish equivalents[30] but sets the gold standard for the OECD in what young people nearing the end of their compulsory time in school can achieve (by way of reading proficiency and mathematical and scientific literacy). The point is not to suggest there is any Finnish 'model' that can be imported but to highlight the evidence that significant 'intangibles' also play a role in the effectiveness with which inputs support outcomes in education – e.g., the status and professionalism of the teacher, the supports provided the teacher and school and the effectiveness with which they are used, the degree of local ownership of the school's task, the socio-economic and migrant composition of the student body, etc. Econometric analysis conducted by the OECD establishes that higher spending per student on educational institutions does improve the average performance of its students but that the relationship is not a strong one – expenditure per student explains only 15 per cent of the variation in mean performance between countries (*op. cit,* 263).

Extensive research into the sources of the skills and competences that enable advanced economies to function effectively identifies two major sources in add ition to the formal educational system, namely the home and the workplace (Heckman and Masterov, 2005). It is important to appreciate how learning in each of these areas can draw on and contribute to learning in the others. For example, teachers are well aware of the extent to which children's home environment, including their parents' educational levels and expectations for their children and the degree of harmony in the home, make their own task easier or harder. Less studied but linking the school and the workplace is the influence of learning pedagogies and of young people's relationships with their teachers on their willingness to participate in further education and training in later life (Lundvall, 2002). At second and third level education, the foundations are laid for expecting, and being able, to continue learning during later life. This emphasizes the need, frequently articulated by

30. Finland's 15-years olds are the highest performers among the 27 odd countries who participate in the OECD's Programme for International Student Assessment (PISA) in all areas for which students have been tested to date -reading proficiency (Ireland ranks 5th), mathematical ability (Ireland is 17th) and scientific literary (Ireland is 20th). PISA is the only international education survey to measure the knowledge and skills of 15-year-olds, an age at which students in most countries are nearing the end of their compulsory time in school.

educationalists, to retain self-development and enjoyment as integral dimensions to young people's learning and not to allow its aspects as an 'investment' to unduly commercialise the process.

In the particular search for improved school performance, an awareness of the three areas within which significant skills and competences are acquired avoids the adoption of crude measures of a school's success. For example, overlooking the important learning which takes place in the home means that contributions coming from a privileged socio-economic and ethnic intake to a school's performance may be wholly attributed to the school's effectiveness. Vice versa, exceptional advances which a school achieves for young people from less privileged backgrounds, of a less academic orientation or from migrants' homes where English is not the first language may be wholly missed if the transfer rate to third level is considered the key criterion of success. For example, a school in which a significant number of children leave at age 16 and many do not transfer to 3rd level after their Leaving Certificate may yet be accomplishing more for its students – and, in fact, have a higher 'productivity' – than a school where all complete the senior cycle and a high proportion continue into higher education.

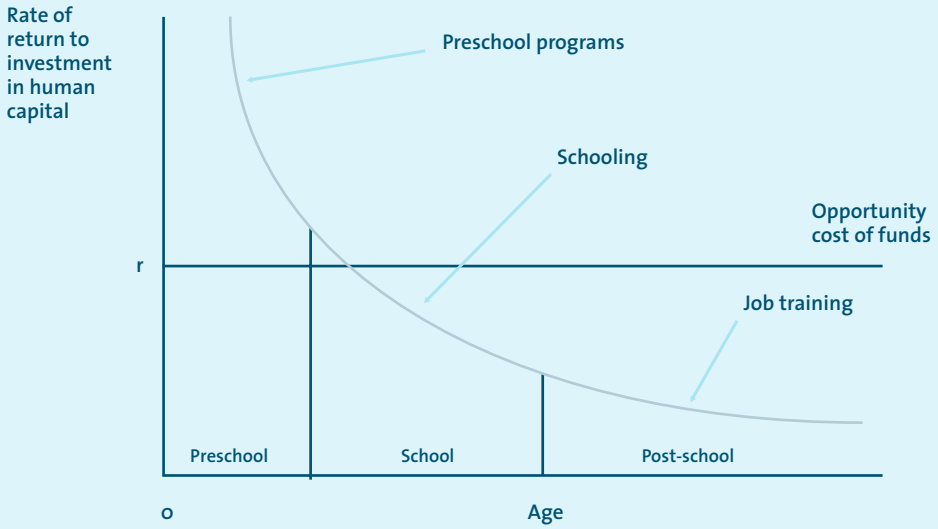
The extent to which good education outcomes are 'co-produced' by children themselves, their families and their schools helps to underline the extent to which complementary advances in other areas – for example, health services for children, family policy and community development – are also integral to achieving the indicative targets for school completion and transfer to third level already discussed. For example, community initiatives that improve adult literacy or adult migrants' command of English may, indirectly but significantly, lead to improved school performances by children from the same households.

Is Ireland's public investment in education weakest where it should be strongest?

The Council is deeply aware of the multiple and competing demands for increased public spending that emerge from this brief review of the strengths and weaknesses in first-time education and training in Ireland. There must be balance in the proportions of scarce public resources allocated across the educational continuum if they are to achieve the best results. The Council would like to contribute to the national debate by querying the suitedness to Ireland's ambitions for its economy of the current situation where, for eminently understandable reasons, most spending on pre-primary care is private while most spending on higher education is public.

Figure 6.3 can be described as summarizing the major findings of an entire literature. This literature has established that the rate of return to investment in human capital is greatest in the early years and declines as people get older. The basic dynamics are intuitive: the earlier the investment, the longer the potential pay-back period; early investments contribute to increasing the rate of return on later investments. For example, Heckman argues strongly that spending on young people in the late teens in a bid to increase the number entering third level misses the essential point that their capacity to benefit from third level is a function of what was – or was not – spent on them at earlier ages.

Figure 6.3 Rates of Return to the same Investment made in a Person of a given Ability at different Ages



Source Cunha et al. (2005), Interpreting the Evidence on Life Cycle Skill Formation

Against this backdrop, it is important to review recent progress in extending and improving childcare in Ireland. While the jury must remain out on how effectively existing measures will contribute to reducing their cost and improving their quality the Council is aware of major long-term costs that may result if existing provision proves too little too late. These include lower lifetime earnings for some current mothers and their offspring, higher spending on educational disadvantage, social inclusion and the integration of migrants, etc. The argument that quality early childcare services have the character of a public good - in a similar fashion as primary education - as Ireland gears up for the knowledge economy and learning society deserves to be taken more seriously. On the one hand, it is true and important to appreciate that even fundamental and radical transformations of systems are seen, with hindsight, to have been achieved by following path-dependent processes of incremental innovation. These processes are typically characterized by a problem-solving approach, a systematic and institutionally supported approach to social learning (seeking to see and understand the same realities), the articulation of a shared vision, and a developed system for conflict resolution. On the other hand, hindsight may prove cruel and it can become clear that historic opportunities were missed. This underlines that abrupt and bold departures sometimes also form part of the history of successful institutional adaptations.

6.4 Life Long Learning

It is estimated that 60 per cent of those who will be in the labour force in 2020 were already in employment in 2005 (EGFSN, 2007b: 82). This illustrates the extent to which what people learn on the job, on release from work or while in-between jobs will influence productivity growth, the success of enterprises and living standards over the coming decades. As ambitious as the National Skills Strategy Research Report is for Ireland's educational system, what is proposed by way of upskilling people already in the workforce is equally so. It, too, constitutes a programme for deep social change as much as an economic policy with the specific goal of ensuring an adequate supply of skills to enterprises.

While Ireland's young cohorts are among the best educated in the OECD world, older age groups in its workforce have much lower formal educational attainment on average than in most advanced countries. This polarized composition of the workforce is a particular feature of Ireland's heritage; by international standards, Ireland has above average shares of people (under 35) at work who hold a third level qualification and of people (over 45) who did not complete secondary education. This polarization reflects the particularly poor opportunities for continuing education that people leaving primary schools faced until as late as 1970 and the dramatic catch-up with prevailing international standards that has occurred since then. It remains a core characteristic of the workforce that, today, is having to adjust to the deep changes taking place in the Irish economy and outlined in the previous chapters.

The current skills and competences of people at work may, of course, be only poorly indicated by their highest level of formal educational attainment. Some employers view even third level qualifications as simply the starting point for acquiring skills that the company itself must teach if graduates are to become productive employees (e.g., the financial services industry, [EGFSN,2007c]). It follows that employees with more limited formal educational qualifications may also, over the course of their working life, acquire formidable levels of skill and specialist expertise through learning 'on the job'. The workplace is as important a source of human capital formation and of the skills actually valued in modern economies as the formal educational system itself and the home.

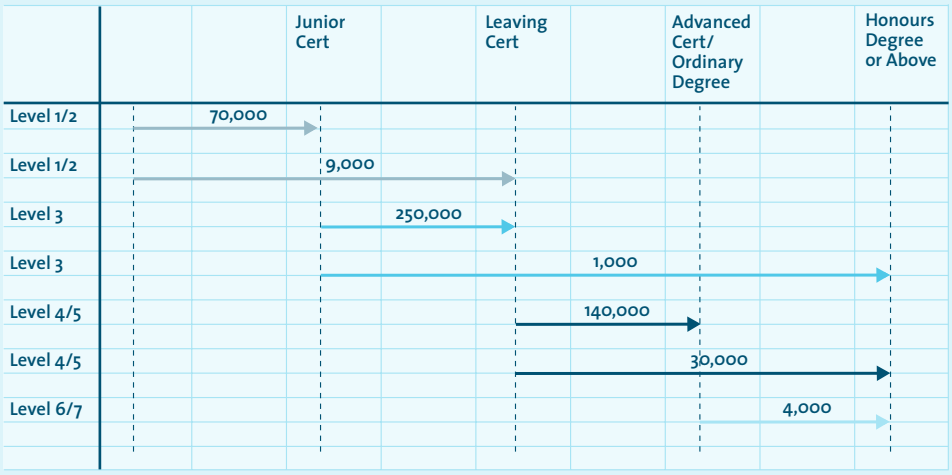
The advanced work done in Ireland in developing the National Framework of Qualifications (NFQ) is to be particularly welcomed in this regard. In advancing the objective of lifelong learning, the importance of a flexible and integrated system of qualifications that accommodates all shapes and sizes of education and training in Ireland has been accepted. The NFQ addresses this need. It is, essentially, a framework for placing all types of educational and training qualifications in an agreed relationship with each other, with an eye to facilitating international comparisons as well. However, it is also determined to recognize prior learning – difficult though it is to rank and validate the results of interrupted or incremental learning, of unique, once-off training, and of learning acquired through employment and other types of social participation. This should be a new stimulus to employers, trainers and employees to more formally monitor and document training, learning and achievements that may already be taking place. The NFQ also undertakes to

facilitate the recognition of migrants' qualifications and ensure their comparability with Irish awards, to the benefit of both migrants and employers. Rapid progress in this area will contribute significantly to ensuring that migrants are not employed in the Irish economy at levels below their qualifications and also help them adjust to the slowing economy (e.g., by enabling them to seek better employment less vulnerable to the economic cycle, or to undertake further education or training).

In the first exercise of its kind, the EGFSN, in its National Skills Strategy Research Report, organized the available evidence on the skills and competencies of the people in Ireland's labour force aged 25-64 using the ten levels of the NQF (EGFSN, 2007b: 91). It then sought to illustrate the magnitude of the implications for these individuals of their playing a part in the advance of the economy towards higher value-added activities (Figure 6.4). The Council acknowledges that the figures are indicative only and that precision in estimating the demand and supply of skills is inappropriate, dependent as they are on the cumulative decisions of very large numbers of free individual actors. Nevertheless, the EGFSN's research report is a useful reminder of the scale of the mobilization required if the current workforce is to have a secure future in Ireland's new economy. In particular, it serves to underline how the increase in numbers advancing to honours degrees and to fourth level is only part of a much broader up-skilling that embraces people at every level. In Figure 6.4, the EGFSN Research Report advocates that 33 per cent of the approximately 500,000 people aged 25-64 whose highest educational attainment is the Leaving Certificate should advance one or more levels on the NFQ. The shifts factored in for people with lower levels of attainment are greater still. The Figure implies that 83 per cent of the 300,000 who have a Junior Certificate only and 40 per cent of the 195,000 people aged 25-64 with less than a Junior Certificate should advance one or more levels.

These are formidable challenges when it is considered, for example, that 10 per cent of all persons in employment - approximately 200,000 individuals - were classified as labourers in 2006. And their numbers are growing. Over the period 2001-2006, over 55,000 net new posts were created for labourers (9,000 more cleaners, 7,000 more labourers in the manufacturing of food and medical devices, and 6,700 more labourers in construction. [(EGFSN, 2007a]). At the end of 2006, the stock of labourers in construction stood at 38,800 of whom 64 per cent had lower secondary education or less, and one fifth were aged 15-24. There were a further 138,000 employed in construction trades of whom 45 per cent had lower secondary or less and 18 per cent were aged 15-24. These figures give a good indication of the likely numbers and location in the current workforce of the people most in need of the effective implementation of a National Skills Strategy.

Figure 6.4 The Up-Skilling Required of the Population Aged 25-64 in 2005 to Achieve the National Skills Strategy's Vision for Ireland' s Workforce in 2020.



Source EGFSN (2007a: 94)

The Council wholly endorses the view of the Expert Group on Future Skills Needs that 'the success of many policy initiatives resides with the implementing body' (2007b: 60). It is important to move from its valuable research report to a clearly articulated National Skills Strategy in consultation with all the relevant stakeholders. An Inter-Departmental Committee on the Implementation of a National Skills Strategy has been established under the Chairmanship of the Minister of State at the Department of Education and Science and the Department of Enterprise, Trade and Employment. The membership of the committee will comprise representatives of those two Departments and the Department of Finance. The purpose of the Inter-Departmental Committee is to oversee the development and subsequent activation of an implementation plan for a National Skills Strategy, including any implications for resource deployment and additional resource requirements. The Council urges this Inter--Departmental Committee to embrace the need to coordinate and support the large number of actors – employers, training and education providers, trades unions, professional associations, regional bodies, the community and voluntary sector, etc. – without whose active and expert participation the required mobilization of the adult population, in particular of those with the lowest starting qualifications, is unlikely to take place.

There are encouraging examples of how a workforce can be supported to continually renew the competences that enable it to experience security in employment despite repeated exposure to job changes (see Box 6.1). This evidence, that training can be designed and delivered that upgrades the skills of people in employment and spares them, their employers and society the costs of unemployment, should inspire Ireland's labour market authorities and social partners to be ambitious and innovative in drawing up and implementing Ireland's first National Skills Strategy. It would bring a new focus to people in employment just at a time when enterprises in the exposed sector are under increasing pressure to reposition themselves within global production networks and supply chains.

Box 6.1 A Danish Case Study

Denmark's labour market is widely considered to function extremely well. Enterprises are relatively untrammeled in hiring and firing, people find good replacement jobs relatively quickly and generous unemployment benefit replaces most of their lost earnings while in-between jobs. Unemployment and earnings inequality are low, and workers feel secure despite a high level of employment churn.

While generous unemployment benefit (paid out of funds administered by the social partners) and well-resourced active labour market policies (ALMPS) (managed, in most instances, at the local authority level) are essential features of Denmark's system, a core background feature is that many of the people whom the Social Insurance Funds and ALMPs stand ready to assist have marketable skills that enable them avoid long spells of unemployment and having to resort to ALMPS in the first place. That employees, no longer needed for their current workplace contributions, are quickly needed by the same or different employers for other tasks is a tribute to Denmark's vocational education and training system. It is able to build on levels of educational attainment among adults that are much higher for older cohorts than in Ireland; it attracts high percentages of them to participate in further learning and provides them with competencies that enable them to meet emerging work trends.

The Danish Ministry of Education co-ordinates the provision of a large number of courses (2,500) whose content and quality – and, thus, relevance to emerging workplace needs – are developed by the social partners themselves (who also vouch for the training of teachers). The shared focus of these courses is to deliver competencies for the labour market as opposed to merely completing a course. The outcome is the acquisition of the competence (participants may leave programmes as soon as competences are acquired) and the social partners agree 'joint competence descriptions'. These require three elements: a description of the typical workplace at which the competence is required, the competences required at that workplace and a list of the programmes or courses that will provide this competence. The courses are provided, mainly though not exclusively, by public institutions. Sources: Storrie (2007), Bredegaard et al. (2006, 2005), Madsen (2002).

There are some quite specific areas in which urgent progress is needed if the breadth of the up-skilling required across the workforce is to be achieved.

There is a significant motivational issue to be addressed for people who may have had a poor experience of formal education in their youth, already experienced training that 'led nowhere', perceive the knowledge economy as primarily involving graduates and cosmopolitan urban areas, and/or believe that migration places younger and more educated workers in competition with them. In addition, there is the fear – sometimes well founded – that an aspect of a person's identity (e.g., Traveller or refugee status, mental health status, criminal record, etc.) will be used against them no matter how well they train. The Council believes that resolving individuals' potentially deep-seated reservations about the feasibility and effectiveness of FET for them is an area in which trades unions and the community and voluntary sector should be welcomed to play a major role along with employers, education and training providers, and statutory bodies. Particularly for people with employment experience despite limited formal schooling, the commitment of employers and unions to a specific FET programme can be a strong signal that the training in question will be meaningful and 'lead somewhere'. When trainees see employers, whom they regard as 'quality' employers, taking a close interest in a training programme, issues of motivation, attendance, application and individual capability can significantly diminish and be seen, with hindsight, to have been symptoms of exclusion not its causes. In this context, the potential for employers with significant in-house skills and in-depth knowledge of an industry or sector to apply for and receive FETAC or HETAC accreditation for their training should be actively developed[31].

Adults with restricted literacy skills[32] face formidable barriers to full social and economic participation and their situation particularly challenges the inclusiveness of Ireland's learning society and knowledge economy. Community, work-place and family-based initiatives each have a role in reaching them. Where effectiveness is demonstrated, the Council considers the resourcing of the programmes in question should, as far as possible, be demand-led until restricted literacy skills in Ireland are a thing of the past. The National Skills Strategy should include specific methods and procedures for ensuring as rapid progress as possible in improving the effectiveness and scale of the measures that will end restricted literacy skills among adults.

As the number of education and training providers grows, and the courses and programmes they offer become more diverse and modularised, a comprehensive and disinterested overview helping people identify the courses most suited to them becomes more difficult to provide. Yet, in the society and labour market that are now developing, every adult needs to be able to access – not once but repeatedly – a skills/careers guidance service that is able to provide independent and expert advice on the specific courses and programmes likely to contribute to specific employment outcomes in their instance. The Task Force on Lifelong Learning

31. Other than commercial education providers, only two private sector enterprises were registered with HETA and one with FETAC in early 2008.

32. Defined as Level 1 on the International Adult Literacy Survey (IALS) and implying that an individual may, for example, have difficulty identifying the amount of medicine to give to a child from the information found on the package.

recommended the development of a single national source of information on the jobs available and likely to appear, their required qualifications, the education and training routes through which those qualifications can be acquired, and the costs and subsidies entailed in the education and training. This information, it envisaged, would be available on the internet and in conjunction with an individual counseling and guidance service. An appropriate national system in this regard is currently being actively explored by the Department of Enterprise, Trade and Employment and the Department of Education and Science and the Adult Education Guidance Initiative and online National Courses Database (Qualifax) constitute particularly valuable building blocks. The Council believes further progress on this issue is of crucial importance in empowering people and increasing their confidence in the knowledge economy and learning society. The success with which the internet has been harnessed and used to help people renting or buying property, for example, sets a standard that ought quickly to be emulated and surpassed for people seeking to improve their skills and competencies.

The financial costs of training should not be a barrier for people in the workforce with less than a completed second level education. The Council notes the Expert Group's position that the State should pay the tuition costs of awards that serve to raise any person currently below levels 4 and 5 on the NFQ (the Leaving Certificate or equivalent) to that level[33]. In recognition of the fact that some people at low NFQ levels yet have good incomes, that some co-payment may increase the likelihood of course completion, and that costs other than fees associated with training may be the more serious obstacle, the Council believes that the Department of Enterprise, Trade and Employment and the Department of Education and Science, between them, must be able, flexibly and speedily, to ensure financial obstacles are never responsible for an individual not being able to progress to NFQ levels 4/5. Supply side measures, also, may continue to be necessary and the two Departments should be encouraged to be developmental and foster innovative pedagogies and providers, including where necessary by introducing them from overseas.

There may be a case that, where State support for training and education is to adults with good initial education and who face good options from which they can choose, the support should go directly to the individuals concerned. The Council welcomes the intention of the Department of Enterprise, Trade and Employment and Department of Education and Science to explore the potential of different forms of individual learning accounts;

Apart from finance and identifying the courses from which given individuals would benefit, further barriers to access exist, particularly for workers in SMEs. Their hours of work may be a significant constraint, day release may pose major problems for their employers, and they can be a particularly difficult constituency for providers such as VECs to target[34]. Research shows it is not unusual that outsourced training subsequently finds little practical application back in a company and, thus, provides

33. The Expert Group cost this at €153m over the thirteen-year period, 2008-2020 inclusive.

34. Formerly, many of the people with weak literacy, numeracy and ICT skills were reached by VECs on the basis of where they lived through area-based programmes. Now, more of them are in workplaces, often within SMEs, and locating them, and their availability, are more difficult challenges.

a poor rate of return (IMI, 2007). The motivation of workers and employers to engage in further training is, then, clearly weakened. The organizational characteristics and requirements that, in fact, reward both workers and the company's bottom line for training in the Irish context need to be thoroughly understood and communicated.

It is of particular concern to the Council that the inclusive and feasible nature of the up-skilling challenge should be communicated effectively and any perception of the knowledge economy as exclusive or elitist be vigorously challenged. On the one hand, it is true that the actual content of many third level courses attracts high rewards in specific enterprises and professions. Thus, for example, the emphasis by the development agencies on honours degrees in mathematics, science and engineering is not misplaced; the domain-specific knowledge acquired through them is of high value in high-technology manufacturing engaged in R&D[35] and in many business and financial service activities. The thresholds to proficiency or 'mastery' within specific occupations are also increasing; the EGFSN cite the example of laboratory science to which a two year certificate used give access but for which a honours bachelor degree is now required (EGFSN, 2007b; 50).

On the other hand, it is acknowledged that there is considerable room to learn more about which specific skills make the key difference to employability and productivity in the modern economy and how they are acquired (Kleese, 2006). Even for graduates, several studies find that a competence more rewarded in the knowledge economy than even in-depth specialization is the ability to grasp and appreciate the core insights and operating principles of disciplines other than one's own. The breadth of an individual's knowledge can facilitate the innovation process much more than its depth, particularly on the part of managers, project leaders and the heads of specific corporate functions (research, marketing, IT, financial control, etc.) (Lester, 2007b)[36].

What is true of the demand for graduates in the knowledge economy has strong parallels in the demand for other types of worker also. As Chapter 4 in particular made clear, the knowledge economy is intensive in services, many of which involve direct interface with customers and clients and a small but significant proportion of which are relatively simple services (driving, retailing, hotel work, etc.). Frequently and, to a growing degree erroneously, the latter are termed 'low skilled' but, in fact, Even in the event of implementing the hugely ambitious agenda in the National Skills Strategy Research Report, 28 per cent of young people in the year 2020 will not be transferring to third level.

The growing evidence on the importance of generic skills to enterprises and individuals' working lives is, simultaneously, a message of hope and a challenge in making the knowledge economy an inclusive project.

35. An informed perspective on the thriving British engineering industry, for example, sees the most serious challenge coming not from emerging markets, a strengthening pound or high interest rates but from skill shortages, i.e., the decline in engineering apprenticeships and in the proportions of students choosing science and engineering degrees [The Financial Times, 07/09/07].

36. This, for example, is presented a key requirement if Ireland's economy is to benefit fully from offshoring: 'outsourcing creates a demand for Irish employees with a ...different skills set ... [we need] employees with a board knowledge set in relation to design, manufacturing, component, processing technologies and customer management skills... with not only the technical skills required but the necessary business aptitudes' [Paul Ryan, vice president, Avocent, a US subsidiary providing IT infrastructure management solutions from Shannon. Irish Times, 29/06/07]

There is substantial evidence to indicate that generic skills are regarded as of at least, if not more, importance for employers as technical or job-specific skills for the 21st century workplace. Based on the national and international academic evidence available, the Expert Group has identified the key and most widely shared elements that should be included in a generic skills portfolio as: Basic/ fundamental skills – literacy, using numbers, using technology, etc.; People-related skills -communication, interpersonal, team-working and customer-service skills; and Conceptual/thinking skills – collecting and organizing information, problem-solving, planning and organizing, learning-to-learn skills, innovation and creative skills (EGFSN, 2007b: 48-49).

The core insight is that these generic skills apply, with due variations in intensity, across the full spectrum of jobs generated by the knowledge economy to influence individual worker's productivity, earnings and job-satisfaction. For example, they apply in driving and hairdressing as well as in software and financial services. The Council strongly endorses the work of the NCCA in developing new curricula that strengthen the acquisition of generic skills at school and the commitment by the NQAI to include generic skills as a measured output at various levels in the NFQ. There will, however, always be personal traits and a capacity for creativity and relating to others which even the NFQ cannot hope to capture.

6.5 Employees Displaced by Company Restructuring

The effectiveness of the educational and training systems and the design and implementation of the National Skills Strategy face a particularly exacting test in the need to address the on-going attrition of jobs in manufacturing, the current downturn in construction employment and the growing vulnerability of employment in internationally-traded services.

Ireland has one of the most open economies in the world. While the proportion of its trade with non-OECD countries remains small (Chapter 3), its economy has been profoundly shaped by the growth of international trade in intermediates. Much of the inward investment to Ireland has been the offshoring by multinational companies of activities previously sited in more advanced economies. By the year 2000, a conventional measure of the significance of offshoring to national economies (i.e., the proportion of gross output accounted for by the import of intermediates) showed Ireland's economy had one of the highest levels in the OECD (Callen, 2007). The net effect of this inward investment on Ireland's labour market to date has been hugely positive.

While inward investment is expected to remain at a good level over the medium-term, the analysis in Chapters 3 and 4 make clear that the activities which multinationals continue to base in Ireland will have to grow in sophistication and that even the least skilled tasks remaining in, otherwise, high-tech operations are likely to be offshored. Employment in multinationals in Ireland, thus, is likely to increasingly become the domain of third level graduates. A significant level of churn is already in evidence in the sector, some of it creating particular fears because the companies involved are considered representative of the knowledge

economy. The offshoring of internationally traded services, currently strongly in Ireland's favour, is also likely to become more of a two-way flow and the analysis in Chapter 4 suggests some of the service jobs 'exported' are likely to be of a good quality. Several indigenous industrial and, in particular, service companies are already adept at locating parts of their current operations overseas near to large markets or where production costs are significantly cheaper. 2004, in fact, was the first year in which investment outflows exceeded inflows (Forfás, 2007c).

Some international perspectives

Detailed analysis (OECD, 2007c[37]) of the impact on OECD workforces of growing outsourcing to, and trade with, lower cost regions contains three particularly important findings of relevance to Ireland.

1. A wide rather than narrow view of the impact of outsourcing needs to be adopted. While it enables given levels of sectoral output to be produced with fewer workers, the increased competitiveness of the final output made possible by cheaper imported intermediates may result in higher sales and net job creation (in technical language, a positive scale effect may outweigh a negative substitution effect). This is the OECD's finding even for employment in the industries and sectors directly absorbing the imports. The impact on overall employment is more positive still if other industries and sectors reap benefit from the cheaper imports without, in their case, having had to close or relocate jobs in procuring them.

2. Though overall employment is higher as a result of outsourcing, significant adjustment challenges still arise because many of the jobs created have different and higher skill demands than the jobs lost[38]. This occurs for several reasons: the concentration on higher value-added functions by firms doing the importing/outsourcing; the fact that companies take advantage of output expansion to increase the sophistication of their operations; the increased incentive to adopt best practice and innovate that is imparted to the industry in general by the new international competition. Such structural change is, in fact, much more strongly associated with imports from emerging economies such as China and India than with intra-OECD trade (the latter still accounts for four fifths of Ireland's merchandise imports). This leads the OECD to suggest that a shift in the composition of imports towards lower cost regions, even when the overall degree of import penetration remains the same, can impose significant adjustment costs on OECD workforces.

3. The burden of adjustment falls highly unevenly on OECD workforces. Some workers can be wholly replaced in their current activities by cheaper imports of intermediate and final goods. These are disproportionately lower skilled workers and workers with short job tenures (more recent entrants). The willingness of employers to shield employees, for a period at least, from the implications of

37. 'OECD Workers in the Global Economy: Increasingly Vulnerable?, Chapter 3 in OECD Employment Outlook 2007.

38. The OECD find evidence that the opposite happens with services offshoring, which may actually shift demand away from medium- and high-skill workers and towards low-skill workers (op. cit.: 129). This is, potentially, very significant as, though conventional measures of the scale of offshoring show that it is - currently - on a much more limited scale in services than in manufacturing, a growing range of services activities are becoming internationally tradable (see Chapter Four).

company restructuring (the 'implicit contract') continues longer for workers with firm-specific human capital whom the employer is reluctant to lose but there is evidence it is quickly eroded for lower skilled workers.

These findings are broadly applicable to Ireland. All imports from lower cost regions are not bad for workers in the Irish economy, particularly when, in the form of intermediate inputs (materials or services), they contribute to reducing the prices of final goods or services being exported from Ireland. In this case, higher output (the scale effect) may more than compensate for the lower labour demand caused by the decision to switch sourcing some inputs from Ireland to overseas. Low cost imports also serve to accelerate shifts in Irish industry's production functions, meaning that the least efficient producers are shaken out, the more efficient survive, and the adoption of best practice and recourse to innovation accelerates. However, it is also clear that both these trends, of themselves, do not compensate Irish workers whose earnings and jobs are squeezed because they are engaged in activities which cheaper imports directly replace. Their ability to benefit from improved job prospects elsewhere in the economy, then, hinges on the effectiveness of the training and education they can access, the feasibility of moving to where new jobs are available, and on how well social support encourages and supports their pursuit of new careers.

It is frequently observed that a core feature of economies and societies which cope well with the dislocation of an open economy is that they do not impede but actively support workers in moving from activities and sectors in decline to those that are expanding. A striking example of this is the stance a large Swedish white-collar trade union has adopted on offshoring[39]. Two contextual observations should preface this example. First, Sweden's very different demographics to Ireland (rapid ageing) may contribute to a particularly strong societal acceptance that its economic prosperity and the presence in advanced global markets of its several multinationals (Ericsson, Asta-Zeneca, Skanska, Volvo, etc.) require new approaches and cannot be sustained on the basis of productivity improvements alone when the workforce itself will be older and smaller. Second, Swedish multinational employers play a full part in the consensual approach the social partners have traditionally taken to resolving major labour market issues.

The Swedish trade union, Unionen, advises its local branches to approach companies considering offshoring services jobs in the following way. A first step is to seek involvement at the earlier possible stage in the company's exploration of whether or not to undertake outsourcing. This includes the union in clarifying whether productivity-enhancing measures in the domestic operations offer a surer path to protecting the company's future. A check list of questions (see below) helps ensure that offshoring – if it goes ahead – will be profitable, not endanger the remaining jobs in Sweden but generate additional resources out of which to support the Swedish workers made redundant. Finally, the union itself emerges from the process in a better position to inform, advise and procure alternative employments where necessary for employees affected by the company's final decision.

39. Known as 'SIF, it merged with another union on 1st January 2008 to form Unionen (www.unionen.se).

The Swedish trade union emphasizes the following points to strengthen local branches in their negotiations with companies considering offshoring (adapted from Storrie, 2007):

- clarify that the firm has a well-motivated strategic decision for relocating, and is clear that doing so will be profitable;
- ensure that the comparison between existing domestic activities and relocated activities factors in the potential of productivity improvements in the former;
- include all of the many relocation costs in the economic calculation;
- ensure the economic calculation takes account of how costs will develop in the different locations, i.e., more rapid 'catch-up' may be likely in locations attractive on the basis of current costs;
- undertake a careful risk analysis - many overseas locations do not have the same stability as Sweden;
- be sure that all the tasks currently undertaken in-house are identified and that the contract with an overseas supplier is not underspecified (leading to escalating costs or a deterioration in quality).

Taking up the challenge in Ireland

While the scale and consequences of job losses in Ireland that are attributable to economic restructuring should not be exaggerated, the practical implications for specific individuals, families and communities of company closures can be profound. The economic discourse that workers, for example, should be 'prepared to navigate in labour markets characterized by intensive restructuring, rising skill requirements and employers who are increasingly sensitive to differences in labour costs' (OECD 2007c: 142) is technically correct but, for the individuals concerned, the 'navigation' in question can be hugely demanding. It may entail a prolonged period of job-search, further education or training, moving home, their spouses also having to change jobs and their children their schools, putting new care arrangements in place for older parents, altering their social networks, and so on. There is evidence that the longer people have been in a job, the more damaging redundancy can be (Eliason and Storrie, 2006). This is largely because firm-specific capital they have acquired proves non-marketable on the external marker (seniority rights are also lost). In subsequent jobs, therefore, they earn less and run a heightened risk of being let go again. It is true that, if workers are to benefit from economic integration, business must first seize its opportunities (OECD, 2007c). However, that they will benefit needs to be assured if employees are to support enterprises in becoming agile and flexible and not have grounds for equating restructuring with being jettisoned.

There are instances when a large proportion of a workforce made redundant finds comparable or better employment within a short period of time or embarks on new careers (set up their own companies or return to education). On these few occasions, the attributes of the workers and region in question serve to point up what is only too conspicuously absent in other instances of job-loss arising from company failure or company restructuring. In successful instances, many of the workers made redundant have marketable skills, confidence, live where the regional

economy is buoyant or are able to source accommodation in – or commute to – another region, are given ample advance notice of the company's intentions and expert assistance to prepare for new futures, have knowledge of market openings, income levels adequate to support their job search or entry to further education/ training, and are even able to access capital to start their own businesses.

Throughout advanced countries, the redeployment of workers engaged in relatively routine manufacturing activities – frequently male and older workers – has been problematic. Not infrequently, their early retirement from the workforce or reclassification as disabled on labour market grounds has been considered a more sympathetic and cost-effective option than seeking to continue their lives in employment. A compounding issue is the perception that workers displaced from manufacturing jobs that gave them relatively good wages, working conditions and status will only be offered services jobs that are inferior on each count. The manufacturing activities lost had needed large numbers of workers with good motor skills, discipline and the ability to learn on the job, attributes that – in the main – a completed second level schooling confirmed. These workers typically found themselves in plants with high levels of capital invested per person employed. The high capital/labour ratio, allied with relatively modest international competition and the level of unionisation, underpinned their good wages and regular hours. The most readily available employments for manufacturing operatives made redundant in the post-industrial economy, however, are in services. Many of these are in workplaces with low capital/labour ratios, dispersed across small establishments and where there is direct consumer pressure to keep costs down and opening hours long. The view, therefore, that 'good jobs in manufacturing are being replaced by poor jobs in services' cannot be discounted.

Nor should it be exaggerated. Some routine manufacturing jobs had content not particularly attractive to those who performed them (the rapid build up of a large presence of foreign nationals in meat processing and some other manufacturing sectors partly reflects the growing ability of Irish workers to choose different work). The nature of many services jobs and the skills they require simply do not support the view that they are of lesser quality than the manufacturing jobs being lost. Above all, however, the most important thing about services employment is its sustainability. As has been well observed, 'creating a dynamic services sector more reliably guarantees lifetime employment opportunities for everyone, if not the same job for life' (Farrell *et al.*, 2007: 61).

Box 6.2 An Irish Case Study: from ICT Hardware to ICT Software

Chapter 4 (Figure 4.3) traced the simultaneous resilience and resumption of growth in employment in software and computer services and the major decline in employment in computer hardware over the period 2000 to 2006.

That the loss of nearly 16,000 jobs over a six-year period in the high-profile manufacturing (ICT hardware) sector did not cause major trauma was a new experience for Ireland. Ironically, the fact that PC manufacture in Ireland sourced only a small proportion of its inputs from elsewhere in the economy limited the secondary effects of these plant closures. The direct effects, however, could have been major. Without minimising the social dislocation that individuals undoubtedly experienced, mitigating factors softened it for a significant number of those made redundant. These factors include the relatively young and educated profile of the workforces in question, the retraining and redeployment of staff into customer services that several companies undertook, the general transferability of skills from PC manufacture to PC services of which other companies took advantage, and the buoyant aggregate labour market demand over the period in question. Understanding why this significant shift from manufacturing to services employment was largely benign underscores the difficulty of replicating the process in other instances.

Specific plant closures deservedly attract national attention because of the dislocation they impose on workforces and their families and their potentially significant regional impact. In practice, too little is known about the medium and long-term consequences of plant closures in Ireland for individuals, families and communities as the attention of media and, even, of statutory authorities can quickly shift elsewhere. Quality research in this area is needed to throw more light on the factors in the Irish context that, alternatively, compound or mitigate the effects of plant closures. This would include the significance of early notice and of a company's manner of engaging with the future of its employees while the latter are still in its employment[40].

Data on redundancies notified to the DETE and OECD data on job tenure provide two windows on the extent of employment churn in Ireland.

As Table 6.5 shows, 25,459 people experienced redundancy in 2007. This was more than twice the typical level in the second half of the 1990s and corresponded to 1.2 per cent of the total numbers at work. The much larger number of people at work in 2007 than in 1995 (some two thirds more) are experiencing a significantly higher risk of redundancy than workers in 1995, though the level of the risk still remains low. By international standards (Table 6.6), Ireland appears to have a high level of employment churn; in 2004, 18.4 per cent of people in employment had tenure of less than one year, the sixth highest level in the OECD and a rise of four percentage points on 1995. The average job tenure in years in Ireland, at 8.1 in 2005,

40. US research has established that longer periods of advance notice increased the probability of entering a job immediately after redundancy (Storrie, 2007: 69-70). It is clear, for example, that searching for a job while still in employment has several advantages over searching when unemployed..

was the third shortest in the OECD and similar to that of Denmark, whose labour market model is considered to successfully support its workforce in living with exceptionally high employment churn.

Table 6.5 Redundancies, 1995-2007

	Actual	Per cent of Total at Work
1995	11,057	0.86%
1996	7,973	0.60%
1997	11,031	0.80%
1998	11,986	0.80%
1999	12,249	0.77%
2000	10,799	0.65%
2001	16,085	0.93%
2002	24,432	1.39%
2003	25,769	1.44%
2004	25,041	1.36%
2005	23,156	1.20%
2006	23,684	1.17%
2007	25,459	1.21%

Source DETE

The figures for Ireland, however, are influenced by the country's high level of job creation. Recall, for example, that within three years of the 2004 enlargement of the EU, the share of total employment held by nationals of the new Member States alone rose from 1.5 to 7.8 per cent (Table 1.3). Other factors highlighted in the analysis of the earlier chapters also make it easy to understand why – high job creation apart – average tenure may have been reduced. Outward Direct Investment (ODI) is already seen to entail significant employment churn, with low skilled employments in regional locations particularly likely to disappear even while the numbers of high skilled employees in the domestic operations of these firms increase (Forfás, 2007c). Productivity growth in indigenous industry is likely to display at least some of the characteristics that have been found in the more studied UK manufacturing sector; there, as much as one-half of the improved productivity was the result of the entry of new, high-productivity providers and the exit of old, low-productivity ones. The rest of the productivity growth was traced to competitive pressure on existing firms and changes in their ownership structures coming from the new entrants (Disney, Haskel and Heden, 2003).

Table 6.6 Share of Employed Persons (Aged 15 to 64) with less than one Year of Job Tenure and Average Job Tenure in OECD Countries, 1995 and 2005.

	Panel A. Share of persons with less than one year of job tenure Percentage of total employment		Panel B. Average job tenure Number of years	
	1995	2005	1995	2005
Netherlands	13.3	7.4	8.5	10.5
Greece	8.7	8.0	9.5	10.3
Luxembourg	10.0	9.8	10.2	11.3
Czech Republic	14.2	10.7	8.8	9.6
Italy	6.8	11.1	11.2	10.8
Hungary	13.4	11.4	8.4	9.1
Belgium	10.2	11.7	10.9	11.5
Portugal	11.0	11.8	10.6	10.6
Slovak Republic		12.6		9.7
Poland	16.1	13.4	9.4	9.6
Germany	14.5	13.5	9.6	10.5
France	13.6	13.9	10.4	11.5
Switzerland	15.9	14.5	8.1	8.9
Norway	15.8	15.0	8.9	9.3
Austria	11.0	15.2	9.8	9.7
Sweden	14.3	17.4	10.2	10.4
United Kingdom	18.0	18.3	7.7	7.8
Ireland	14.4	18.4	8.6	8.1
Finland	16.4	20.3	10.0	9.9
Denmark	22.7	21.0	7.8	8.1
Canada	22.8	21.1		
Spain	28.4	21.7	8.5	8.6
Iceland	21.7	21.8	6.9	7.3

Source OECD Employment Outlook, 2007

The Council interprets this data but, particularly, the thrust of the analysis in the preceding chapters on manufacturing and services as making it prudent to expect higher levels of employment churn in the Irish economy over the coming years. In this context, it is urgent to improve support to individuals and regions accordingly. The Council believes that what has been learned from helping regions and individuals adjust in the aftermath of company closures needs more systematic garnering and assessment. In particular, the role of regional actors in activating, co-ordinating, and re-designing and supplementing when necessary, the supports and expertise available from statutory bodies should be highlighted and given a more prominent place. It is clear that regional trades' councils and employers' bodies have a particular potential to contribute to efficient job-search and the matching of individual worker's capabilities and employer's needs; their guidance and counselling can command particular credibility with workers facing redundancy. However, the contribution of trades unions in particular will be stronger the sooner they can be informed of, and involved in, companies' assessments of their trading conditions and exploration of new strategies. It is, also, important that support for workers soon to-be-displaced not 'crowd out' current job-seekers in an area/region but genuinely constitute a net contribution to the area/region's skills and asset base. Consideration could be given to some form of advance profiling of workforces at particular risk and to a pro-active role for other employers in the affected region who are seeking recruits with firm-specific capital and for VECs, Institutes of Technology and other educational providers in offering longer, broader courses that would widen participants' range of employment options.

There are, in fact, few forms of innovation more important to achieving synergy between economic and social policy at the present time than new programmes which successfully engage mature adults, in particular those at risk of redundancy, and give them better and wider options in the world of work. HEI's are rightly encouraged to see the needs of significant swathes in the workforce for re-skilling as a client base to be targeted, not simply to compensate for a temporary decline in the size of the school-leaving cohort, but as an invitation to a fundamental reorientation towards adults and employers generally that is required by the type of economy which Ireland is now developing. There are encouraging examples of this type of innovation and considerable scope for greater communication and adoption of best practice across the HEIs themselves (see Box 6.3)[41].

41. For background on the significance of an example from Donegal, see DETE (2006), Report of Interdepartmental Group on Donegal.

Box 6.3 Innovation in Education: a Donegal example

The Letterkenny Institute of Technology (LYIT) serves a county particularly hard hit by the declines of employment in clothing and textiles, construction and agriculture and with a high level of social welfare dependency. In this context, it has developed a two-year Certificate in Preparatory Studies for Higher Education beamed at adults with little or no formal education and which it brings in an outreach capacity to groups hit by redundancy (e.g., former Hospira employees in Donegal Town, former Fruit of the Loom workers in Buncrana). With a timetable and pedagogies suited to such former workers, the essentials are taught that equip people to enter third level as mature students and go on to reinvent themselves. To date, 80 per cent of participants have availed of the Back to Education Allowance (in effect, switching from means-tested social welfare payments to a type of mature student allowance) and an overall progression rate of 65 per cent has been attained. The programme has expanded by winning funding from the HEA's Strategic Innovation Fund.

6.6 People of Working Age in Receipt of Social Welfare

The proportion of people of working age reliant on means-tested social assistance was not reduced as the economy, and labour market, performed strongly during the 1990s (NESC, 2005a: 53). The level of frictional unemployment – that due to the number of people in transition between jobs at any one time and the average length of time it takes a person to find a new one – understandably rises as the economy absorbs new technology and restructures; it is not easy for people who gave decades of their working lives to one type of work to acquire the competence, skills and confidence for a wholly new type. But what was more challenging to explain at the end of the 1990s was that the proportion of the working age population in receipt of social welfare for a status outside the labour force had increased. This is a revealing window on the challenges facing Ireland's welfare state and, as argued by NESC, needs careful interpretation (*op. cit.*, 177-179).

There is an element of moral hazard, which can become more acute as the standards of social protection improve, i.e., the better looked after people are out of work, the less inclined some will be to prepare for or seek employment. There is, also, an element of social progress; for a variety of reasons, there are people of working age who should not be expected to hold employment and a higher level of social protection for them reflects society's growing resources and rising social standards. Finally, there is a degree to which changes in contemporary lifestyles and in the nature of modern work are introducing new hazards for people as they seek to remain in employment over their working lives (e.g., the labour market consequences of addiction, obesity, family breakdown, later maternal age at birth, workplace stress, etc.) offsetting, at least in part, wider improvements in safety and health.

The Council's 2005 study identified several weaknesses in how income support is currently provided to people of working age in Ireland.

- High benefit withdrawal rates create significant disincentive effects in certain instances. In particular, secondary benefits that provide access to key services (e.g., support with accommodation, the medical card, childcare, etc.) can be withdrawn at levels of earnings too low for people to be able to afford private market alternatives.
- There is no systematic process for monitoring and redressing the erosion over time in the value of the earnings disregards and income eligibility thresholds that are attached to the various social welfare payments and govern people's eligibility for secondary benefits. Yet, without their transparent and automatic adjustment to rising living standards, these forms of social protection risk, in fact, becoming more restrictive.
- Where people on social welfare live on low incomes, they are vulnerable to debt and low self-esteem and less likely to have the motivation and means to progress their lives. The very contingency basis to payments can, paradoxically, encourage a person to concur in seeing an aspect of their current situation as an impediment confirming their inability to be self-reliant (e.g., being a lone parent, having a disability) and yet to cling to it as their guarantee of a secure income.
- There are, in too many instances, no expectations of, nor aspirations for, recipients of social assistance in the administration of their payments other than that they continue to meet the qualifying conditions for their contingency. Yet significant numbers in receipt of welfare payments, paid on the basis of a status 'outside the labour force' (principally the One Parent Family Payment and Disability Allowance) or as Qualified Adults, want to work but face formidable barriers in doing so.
- Increases in the rates of welfare payments alone will not empower people to surmount the real obstacles preventing them from becoming more self-reliant (e.g., inability to find or afford childcare, poor skills, restricted literacy, places of work not wheel-chair friendly, reluctance on the part of employers to consider them as serious candidates for employment because of aspects of their socio-economic circumstances, etc.).

NESC's 2005 study highlighted the need for the future development of Ireland's welfare state to focus in a major way on ensuring that access to a set of core services of high quality (housing, further education and training, childcare, medical attention, etc.) is guaranteed for families and individuals even if on low incomes (whether the income is question comes from social welfare or labour market earnings). It is when such services are accessed by people, in ways tailored to their income circumstances, that mobility – both from welfare to work and from low to higher earnings – is best facilitated, and long durations on welfare are kept for people who really need it.

In this context, the manner in which the Department of Social and Family Affairs currently conceptualises its remit and the National Development Plan embraces the resource consequences of it doing so are extremely encouraging. The objective of the NDP's Activation Sub-Programme (within the wider Social and Economic Participation Programme for people of working age) is described as follows:

> ...to engage with all people of working age in a similar way, whether they are unemployed, lone parents, people with a disability or in some other category. The aim is to facilitate progression regardless of the circumstances that led the person to require income maintenance. This will be a new service, building on the DSFA's existing experience and income maintenance relationship with the people concerned, in co-operation with other relevant service providers such as FÁS, VECs, HSE and other local agencies. The vision is of a single transparent system with a primary focus on the customer and a route map starting at the first point of engagement with the Department. (NDP, 2007-2013: 253).

A particularly important process of consultation is underway in finding a way to subsume the current One Parent Family Payment (OFP) into a wider parental allowance[42]. This has the potential to be a landmark initiative in modernizing Ireland's income support arrangements. Success in overcoming acknowledged weaknesses in the OFP will yield significant learning in how to reform other programmes too. For example. A significant number of lone parents have low educational attainment and, if they are to have prospects other than low paid employment, require innovative and flexible access to further education and training (FET). Their access to FET or employment hinges, more than for any other group, on childcare which, particularly for those not living in disadvantaged urban areas, can be difficult and expensive to access[43]. The manner in which income support and services are targeted can result in benefit withdrawal and new tax liability absorbing most of an increase in earnings; the generally underdeveloped state of in-work social support in Ireland, therefore, is a particularly major issue for lone parents. Finally, rising expenditure on lone parents across a range of programmes (an estimated total cost of €1.35bn in 2005, with some 40 per cent of it incurred on programmes additional to the One Parent Family Payment itself) has not produced commensurate improvements in outcomes; poverty rates continue to be high among them, while their employment rate and average earnings remain low.

The proposed Parental Allowance, the Council believes, offers major potential for redressing each of these weaknesses. In the first place, it reconceptualises the core problem as parenting on a low family income, rather than family structure with the invidious need to then investigate cohabitation. In second place, it seeks to treat all parents on low incomes equally, including those currently receiving Qualified Adult Allowances. In third place, it features engagement on a phased basis with parents as their youngest child gets older so that they are encouraged and supported to consider additional adult roles to that of parent, including employment but not only employment. In fourth place, it comes to a definite end for each individual when either they establish their entitlement to income support in their own right (and not on the basis of parenting a young child) or become self-reliant. The greatest motivation for the high level of trust and collaboration needed across public bodies, and between the public and community and voluntary sectors, to make this reform

42. Government Discussion Paper: Proposals for Supporting Lone Parents. Family Affairs Unit, DSFA: 2006.

43. Lone parents in Ireland, on average earnings or two-thirds of average earnings, faced the highest out-of-pocket costs in the entire OECD if they had to purchase full-time care for two children from a typical childcare centre in 2004 (OECD, 2007a: Figure 4.3).

a success is the weight of evidence that the current system is not in the interests of lone parents, of their children or of society itself. Among lone parents and those in receipt of QAAs there is evidence of significant frustration at the limited prospects current welfare arrangements entail for them.

The Council emphasises that the current downturn in the economy, rise in unemployment and fall in state revenues is not the time to doubt the core objective of the NDP's Social and Economic Participation Programme or withhold the resources necessary for implementing it. If this were to happen, the cyclical rise in Jobseekers' Allowance underway in 2008 will, , once again, lead to the erosion of skills and work habits and higher structural unemployment. It is essential that the DSFA has the resources to proceed apace with its long-term restructuring and re-tooling. Subsuming the current One Parent Family Payment into a new Parental Allowance, for example, will need larger numbers of Job Facilitators, more staff training, continuing progress in the localisation of services, the introduction of new administrative procedures and ICT redesign. It will also be important that the purchasing power of social welfare payments is protected so that its clients can co-operate and benefit fully from the profiling, personal attention and tailored pathways to which the Department is committed. The DSFA cannot foster the confidence and expectations of its clients and provide income support that is integrated with access to services in the context of progression pathways without the wholehearted engagement of the principal service providers (FÁS, HSE, local authorities, VECs, HEIs, etc). This requires, not only that the same positive vision and objective for social welfare recipients permeate all organisations, but, also, clear and effective procedures for their collaboration and positive incentives for the personnel who are critical to making it happen.

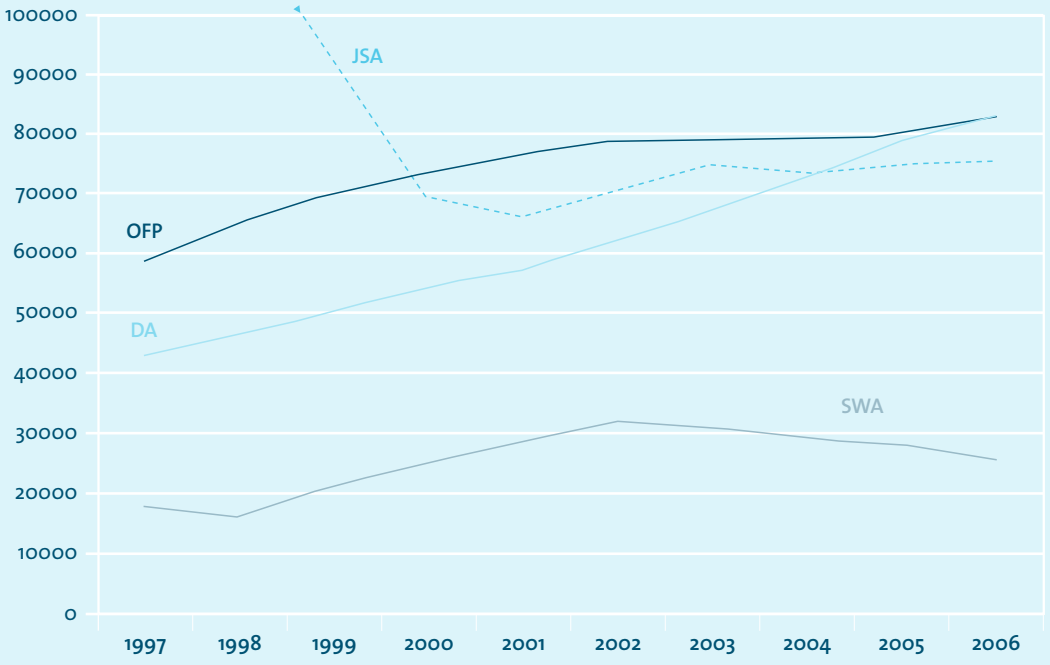
Recent evidence suggests that rising numbers in receipt of Disability Allowance will be the most difficult, in the first place, to understand and, in second place, to reduce. This situation already pertains in several other countries. In the UK, for example, the proportion of incapacity benefit claimants whose primary medical condition was a mental or behavioural problem rose to 41 per cent in 2006 from 26 per cent in 1996, and a significant number of the new claimants were young[44]. In Ireland, the number of under 25-year olds in receipt of Disability Allowance increased by 15 per cent over the period 1999-2006 to number 10,575[45].

The proportion of the population living with a disability overlaps with but is much larger than the numbers in receipt of a Disability Allowance. It is clear that Ireland still has considerable ground to make up in raising employment rates among people with a disability and ensuring that no automatic assumption is made on foot of having a disability or illness about an individual's capacity for, and interest in, employment.

44. Department of Work and Pensions (2008), Working for a Healthier Tomorrow. London: TSO.

45. Communication from the DSFA.

Figure 6.5 Recipients of Main Social Assistance Payments, 1997-2006



Source DSFA (2007).

Note JSA (Job Seekers Allowance); OFP (One Parent Family Payment); DA (Disability Allowance); SWA (Supplementary Welfare Allowance).

The high level of interest shown by workers from Central and Eastern Europe in employment opportunities in the Irish economy since May 2004 has been a further major change in the context facing people of working age in Ireland who are outside the labour force. The availability to employers of relatively well educated EU citizens from the new Member States has increased the competition for entry-level jobs. The benefits to the national economy, employers, consumers, service users and the migrants themselves must be balanced with increased attention, resources and improved design being brought to programmes for overcoming the barriers facing people currently outside the workforce.

In conclusion, it is a key question as to whether and how many of the people currently non-employed and distant from the workforce will benefit from the unfolding of Ireland's plans for its economy. It has become more difficult for the labour market acting on its own to function as an engine of social improvement. Left to itself, it is more likely to pull in educated migrants than offer rewarding opportunities to many of the people currently in receipt of long-term social assistance. At the same time, passive receipt of an income, even at a level sufficient to avoid debt and provide a decent standard of living, in a society where the levels of educational attainment and standards of employment continue to improve is less and less likely to ensure 'participation', lay the foundation for a satisfying life or strengthen the sense of co-responsibility for society on the part of individuals of working age who have never had steady employment.

The ‘low road’ to the learning society and knowledge economy would entail using a combination of passive income transfers and special programmes to divert away from economic participation this section of the population because it would assess their productivity as too difficult and expensive to raise; younger and more capable workers and researchers would be sourced from overseas. The ‘high road’ entails embracing the deep changes to Ireland's welfare state that are needed to stem such social malaises as the intergenerational transmission of educational disadvantage, the ‘brain waste’ of child poverty, the neglect of people with disabilities, the socio-economic disadvantage of Travellers, the underperformance of ethnic minorities, and the discarding of older workers. A fundamental change in purpose and organisational culture, as well as in operating procedures, is implied for the Department of Social and Family Affairs as it seeks to 'place activation on a level with service delivery and control as a central part of (its) core business' (*Towards 2016*: 51). This transformation requires the active collaboration and engagement of a wide variety of actors, in the community and voluntary sector and across the public system, if the DSFA is to be able to deliver tailored and responsive individual support packages in a positive way that genuinely empowers more of its clients to entertain and embrace options that are genuinely better for them.

7

Summary of Analysis and Perspectives

7.1 Introduction

This Chapter summarises the analysis in Chapters 1 to 6. Section 2 begins by revisiting the Council's understanding of Ireland's economic development in its historical and global context, in a way that incorporates and reflects the new perspectives provided in the Report on the future of manufacturing (Chapter 3), the rise of services (Chapter 4), the dynamism of regions (Chapter 5) and the task of supporting people (Chapter 6) . The import of this deeper understanding and its incorporation of the new perspectives for current policy are then reviewed in Sections 3 and 4. Two overarching policy priorities are distinguished: first, the need to fine tune our strategic investments (Section 3); second, the need to manage a difficult transition and uncertain conjuncture (Section 4).

In Section 3, the Council begins by stating its view that the current NDP and National Social Partnership Agreement, *Towards 2016*, provide a medium-term framework within which key strategies for economic and social development and sustainability can be designed, funded and implemented. As all the partners to these frameworks recognise, it is necessary to modify elements of them in the light of new information and understanding. Drawing on the analysis in Chapters 3 to 6, the section identifies a number of the strategic investments which now require particular attention, emphasis or revision. Section 4 discusses the task of managing a difficult transition and the uncertain current conjuncture. The Council emphasises the continuing value of a consistent policy framework and analyses the relationships between the macro-economy, distribution and structural factors in 2008 and the coming years. The analysis reveals a more complex set of relationships between macroeconomic, distributional and supply-side policies than have existed since the late 1980s. This creates a number of temptations that, if followed, would yield a deeply inconsistent policy approach. Several of them would involve the repetition of policy mistakes made in past decades. The Chapter closes by proposing an analysis that can help Irish policy actors to steer a course through these risks.

7.2 Our Evolving Understanding

7.2.1 Ireland's Economic Development in Historical and Global Context

Ireland's Economic Development in Historical Context

In Chapter 2 we summarized the Council's long-standing perspective on Irish economic development. In earlier decades, the Council identified major *structural constraints* deriving from falling population, specialization in commodity agricultural products, lack of industrial development and the associated balance of payments constraint, a weak national system of innovation, peripheral location, and limited effective sovereignty in monetary policy and international economic relations. Ireland's economic development strategy, European policy and major domestic programmes – particularly educational investment – have overcome most of these constraints in the past three decades.

Consequently, the Council focused on *developmental constraints*. These feature a range of less structural or inhibiting but more complex constraints on business and economic development. They reflect the sophisticated information needs, externalities, inter-dependencies, capabilities and new kinds of public goods, including international regulatory regimes, that characterise business networks in the emerging global economy. Identification of this new type of constraint combined with recognition that, because of Ireland's deep integration in the EU and the global economy, Ireland now bears many of the characteristics of a regional, rather than a national, economy. In particular, it is open not only to trade in goods and investment flows but also to movement of people. One important implication is that Ireland can experience not only *intensive* growth, but also *extensive* growth or – given the possibility of capital and labour movements outward as well as inward - extensive decline.

Nevertheless, this perspective suggests that Ireland's regional economy of the early 21st century has more effective sovereignty than its failing national economy of the mid-20th century, provided attention is focused on the national policy areas that remain potent despite globalisation. Indeed, this perspective is reinforced by, and can learn from, the fact that – even in the face of globalization and the emergence of new economic giants in Asia – some of the most successful economies in the world are small European countries. They achieve this because they have developed sets of policies, institutions and norms that combine business innovation and acumen with high levels of education, skills, participation and social protection.

In *NESC Strategy 2006,* the Council argued that we need to find a new shared understanding of the Irish economy, on a number of dimensions. Such an account needs, first, to escape from the idea that Irish prosperity is virtually all created in the exporting, mostly foreign-owned, enterprise sector, with the rest of economic activity merely a recycling of that value. Second, this new understanding must include the growing role of services. It should encompass the increasing role of internationally traded services, but not be confined to those services. Third, recognition of the increasing role of domestically-sold services and domestic demand must not involve slipping back into the closed-economy view that competitiveness does not matter. Indeed, the new understanding must build on our current grasp

of the critical role of the export base in a regional economy, but develop a more sophisticated view of the sources and dynamics of regional competitive advantage. The new shared understanding, therefore, needs to include a clear view of the role of knowledge and skills in sustaining economic prosperity in a world with new global competitors, and of the role of public policy in strengthening innovation. Finally, the understanding must include an awareness of how inward migration in all its forms – returning Irish, attraction of EU citizens and arrival of non-EEA nationals – influences economic welfare.

This report goes some way to providing a revised understanding of the Irish economy and, in particular, of the transitions it is currently experiencing.

Ireland's Economic Development in a Global Context

Though the European Union is the world's largest trading block, and has become larger and more deeply integrated, even its scale and developed internal governance do not protect it from the need to make major adjustments in response to the challenges and opportunities of contemporary globalisation.

> The dramatic intensification of the globalisation process over the last 15-20 years is transforming the economic structures of the developed and developing worlds, with India emerging as a global power in services, China consolidating its position in manufacturing and with the developed world as a whole searching for an appropriate response. The combination of these global trends allied to important domestic EU developments, such as the internal market, single currency and enlargement processes, have the potential to generate the largest structural upheaval in EU economies since the industrial revolution (Koszerek *et al*., 2007).

Long after the restoration of health to international credit markets and the ending of the 2007/08 crisis, the EU economy as a whole and the Irish economy will continue to be engaged in seeing through deep restructurings that, in the final analysis, are because the global economy is having to 'make room' for the large populations of China, India, Brazil and Russia (the BRIC countries) and elsewhere that have productive capabilities and new purchasing power. Major improvements in education and learning in those countries are vastly increasing the labour supply available to Western companies, not just of dexterous and willing plant operatives and clerical workers, but of technicians, professional staff and researchers. The achievement of higher living standards by these populations is a significant cause of higher prices for food and commodities and is accelerating the need to address the environmental and climatic profligacy of current technologies. At the same time, their burgeoning middle classes and the rising aspirations of their public authorities are creating enormous opportunities for the private and public sectors of EU member states to export goods and services.

Every significant actor in the Irish economy – multinational and indigenous companies, service providers and public bodies – can be considered to be at an early stage and still exploring the consequences for them of:

- how global supply chains can be decomposed and reconstituted;
- irreversibly higher relative prices for oil and other non-renewables;

- higher profiles for the quality and security of supplies of cereals, food, water, wood and other renewables;
- treating the environment as a major national and global asset;
- the interests and preferences of peoples whose first language is Mandarin, Hindi, Russian, Spanish, Portugese, etc., but not English; and
- the restructuring of multilateral and international bodies and forums to reflect the rising stakes in the global economy of the BRIC and other nations.

Global Technological and Economic Prospects

The Council's view of Ireland's economic and social development and future is reinforced by research on the role of innovation in long-run economic development and the cyclical nature of technological progress. This analysis suggests that the world economy is currently at the turning point in the ICT age (Perez, 2002). After several decades of 'installation', from the 1970s to the turn of this century, the full 'deployment' of ICT could occur over the coming two or three decades. This deployment phase can see the opening of many economic opportunities, not only in ICT, but also in a wide range of manufacturing and service activities enabled by ICT. In this phase, products and services will be highly differentiated and markets will be highly segmented. For a country to fully participate in this probable long phase of economic progress requires that its citizens and consumers are capable of using these products and services and its entrepreneurs and workers are capable of creating them. But achievement of full deployment is dependent on the adjustment of public institutions, industrial organisation and social arrangements (Van Ark & Inklaar, 2005). Where this occurs, there can be synergy between technology, economy and society – reflected in a phase of progressive development in which inequalities are reduced, in contrast to the disruption, increasing inequality and financial frenzy of the earlier installation phase.

As early as 1989, the Council identified this analytical approach as providing reasons to believe that a technological revolution can provide a window of opportunity for peripheral and lagging countries to radically improve their position (NESC, 1989). It can be argued that Ireland has – in the past two decades -used the installation phase of the ICT revolution to reposition its economy. A further implication of the analysis – independently supported by other research – is that, far from Ireland's economic success coming to an end, an even more profound period of economic progress may lie ahead. Furthermore, if the necessary policy and institutional steps are taken, at international and national level, the next phase can be one in which economic and social progress are more in balance.

The Relation Between Economy and Society in a Global Context

In *NESC Strategy 2006,* the Council argued that economic and social progress in Ireland is now more broadly based and has deeper roots than in the past, or than is sometimes recognised. At the same time, it argued that this more broadly and deeply based economic progress continues to be uneven in certain respects and is vulnerable in a number of ways, some of which are new. In past decades, and even in the past decade and a half, there was a real sense that the economic reality set limits to the social possibilities and ambitions for environmental quality. In the next

decades, the medium and long term strength of the economy will depend not only on investment in infrastructure and scientific research, but also on a deepening of capabilities across a wide spectrum, greater participation, an infrastructure of care that improves both the quality of life and the ability to participate, internal as well as external connectivity, social inclusion, more social mobility, the successful handling of diversity including immigration, and high environmental standards not only in large manufacturing enterprises but also in a range of arenas influenced by the behaviour of thousands of households, farms and businesses. In short, there is a real sense in which aspects of our social reality and environmental quality now set limits to Ireland's economic possibilities (NESC, 2005b: 115).

The Council does not believe that globalisation must or should undermine the prosperity and social cohesion of advanced European countries. It takes confidence from the evidence that several of the European countries with the strongest competitive advantage in the world are countries with high levels of participation and effective systems of social protection, and whose populations are confident about globalisation. At the same time, NESC does not believe that globalisation automatically produces economic and social benefits. It can damage countries, social groups, individuals and the environment and can, ultimately, fuel conflict. It is mainly public governance (at national and international level), institutions and capabilities that determine whether the current globalisation will have positive or negative effects.

The Environmental and Energy Dimension of the Next Phase of Global Development

Environmental concerns also need to feature more prominently in the next phase of global development. A shift away from fossil fuels as the primary energy source of the economy towards renewable energy and the more efficient use of energy will be a key characteristic of development in future decades. It has become increasingly clear from the scientific evidence synthesised in the reports of the Intergovernmental Panel on Climate Change that the current path of global development poses unacceptable risks. According to the Stern report on climate change: 'The scientific evidence is now overwhelming: climate change presents very serious global risks and it demands an urgent global response' (Stern, 2006: vi). The trends in the supply and demand of oil reinforce the need for a shift away from this fuel source. The International Energy Agency (IEA) has warned of a 'supply crunch' in respect of oil within seven or eight years if current trends continue.

7.3 Fine Tuning our Strategic Investments

In the light of the understanding outlined above and of the analyses in the preceding chapters, the Council sees two overarching policy priorities in the current conjuncture (2008). These are:

1. Fine tuning our strategic investments; and
2. Managing a difficult transition and uncertain conjuncture.

These are discussed in this and the following section respectively.

7.3.1 Current Strategic Investment Frameworks

As noted above, NESC sees the National Development Plan, 2007-2013, and *Towards 2016* as providing a medium-term framework within which key strategies for economic and social development and sustainability can be designed, funded and implemented. As all the partners to these frameworks recognise, it is necessary to modify elements of them in the light of new information and understanding. The analysis in Chapters 3 to 6 of this report suggests that a number of the strategic investments set out in the NDP and *Towards 2016* require particular attention, emphasis or revision. This section identifies some of these and, where possible, indicates the direction in which policy should move.

7.3.2 Childcare and Early Child Development

Recent policy on childcare can, alternatively, be viewed as *ad hoc* and piecemeal or confirmation that a coherent and comprehensive national system of early education and childcare is unfolding. Consequently, the terms of reference of the review of the NCIP 2006-2010 (*Towards 2016*: 42; *National Action Plan for Social Inclusion 2007-2016:* 33) should encompass all the concerns articulated in Section 6.3.1 above. It is urgent to renew and restate Ireland's vision for early education and childcare services as a whole so as to ensure the coherence of the new and old measures being taken and how they interact with one another. Several countries with child outcomes that Ireland rightly seeks to emulate accord publicly-provided childcare services a key default role around which parents exercise choice. It would be valuable to include in the review of the NCIP the potential for some part of the public system to become proactive in applying the standards, training the staff, drawing down the grants and providing a clearly recognizable quality service on which parents could rely. This could include giving consideration to creating a country-wide network of franchised operators that, in a short space of time, would guarantee parents the quality service for 3-year olds recommended by the NESF (NESF, 2005). The need to supplement rather than substitute for existing quality providers would be an important consideration but should not be allowed to veto a critical next step in building Ireland's infrastructure for child development and childcare. The Council is aware that, in constructing a national system of early childhood education and care, policy has, so far, not displayed anything like the boldness with which Ireland remedied deficits in the provision of secondary education in the late 1960s and in third level in the 1970s.

7.3.3 Primary Education

The urgency of further improvements to the primary school system in several respects is widely acknowledged. As identified in Section 6.3.2, further significant challenges include: there is significant scope to improve joint planning between the DES and Local Authorities in bringing new schools on stream in response to population growth; even achieving the current targets set for class size will still leave the average Irish primary school class large by OECD standards; old and new school buildings are frequently unsuited to and unavailable for additional community uses (e.g., out of school childcare) that would be consistent with their educational mission; the pedagogy in infant classes is insufficiently tailored around the developing child and their limited hours pose problems for a growing number of parents (DES, 2004); the access to broadband of primary schools and

their ICT capabilities generally are poor by EU standards; a successful and popular pilot programme that introduces primary school children to a foreign language is currently constrained for lack of an overall policy on languages in schools (Council on Europe, 2008).

It is too early to assess the effectiveness of new strategies to address educational disadvantage; DEIS is to bring a multi-faceted and sustained approach – following children from age 3 to 18 – to ensuring additional supports for schools serving areas designated as disadvantaged because of the socio-economic composition of their pupil intakes. However, the limited impact of previous measures that have channeled additional resources to schools identified in this way suggests that the measures adopted within schools needs to be integrated much more closely with measures taken by, and on behalf of, families and local communities.

7.3.4 Secondary Education

The effectiveness of the additional resources being given to schools needs to be assured and research and evaluation strategies speedily put in place. Priority should be given to learning, from the different experiences of schools and from international best practice work (e.g., Finland), as to where and how the work of Special Needs Assistants, learning support teachers and others who promote school attendance and 'catch up' learning is integrated most effectively by schools and classroom teachers. Particular attention should be paid to ensuring that identifying particular schools with disadvantage does not send signals to parents, teachers and others that, perversely, make the task of the schools in question more difficult even as additional resources are supplied to them

The intake to the Youthreach Programme, in particular, should be carefully monitored so as to learn more about what schools can, and cannot, achieve through further organisational, professional and curricular developments. The contribution of changes in curriculum design, pedagogy and classroom management at the junior cycle to improving retention rates to the Leaving Certificate and enabling students who take alternative routes to succeed should be maximised. At the same time, the status of Youthreach itself, along with apprenticeships, Community Training Workshops, Senior Traveller Training Centres and the educational work of youth organizations, should be enhanced. They should become more 'normal', quality and less problematised alternatives to mainstream schooling that are acknowledging the diversity of young people's needs and preferences at a key stage in their lives.

The mathematical achievements of all students continues to be a major cause of concern. The Government's recent decision to introduce significant reform of the second level mathematics curriculum ('Project Maths') is welcome. This issue is so critical, however, it may need to be reinforced by additional measures: for example, innovative professional development supports and incentives for maths teachers, and the consideration of bonus points for honours mathematics to encourage students to take the subject at a higher level. The decline in the numbers of students taking a foreign language in the Junior and Leaving Certificate and their generally negative perceptions of foreign language teaching need to be reversed. Schools cannot work in a vacuum in this regard and a National Languages Policy is urgently needed which would place specific policies on teaching languages in schools in their wider context, including their place at the primary level.

7.3.5 Third and Fourth Level Education

Chapter 6 identified a number of significant developments –positive in themselves – that are creating pressures and demands on third and fourth level education. How these tensions are resolved will determine the long-term quality of Irish third and fourth level education and their contribution to Irish economic and social life.

One of the tensions noted was that between research and the quality of undergraduate teaching and learning. Concerns have been raised that the implementation of the new research strategy is leading to an undermining of the strength of undergraduate education in Irish universities (Barrett,2006). The Council is of the view that it is possible to combine enhanced research activity with strong undergraduate education. A decline in the quality of undergraduate education would be contrary to the goals of the innovation strategy: in fact, the quality of undergraduate teaching helps to produce success at fourth level and contributes directly to the skills of the labour force that are and will continue to be the single most important basis for Ireland's prosperity and social progress.

A second anxiety noted concerned the relation between fundamental academic research and applied research which more directly helps forms innovation and product development. The Strategy for Science, Technology and Innovation is a significant part of the response to the challenge of upgrading the economy. This strategy needs to be monitored and adapted over time to ensure that the substantial investment in research is yielding benefits and that there is increased innovation and new product development in enterprises. It will take several years, perhaps decades, for the benefits of this investment to be realized, and maintenance of a significant level of fundamental research may be an important element in achieving an innovative economy in the long-term.

Furthermore, it is important to note that, despite the major enhancement of research funding in recent years, there remains a wide gap between the facilities available to researchers in this country – in the humanities and social sciences as much as in natural sciences and technology – and what their counterparts in best practice countries can access.

Indeed, in the light of the comparisons with other leading small EU countries discussed in Chapter 6, the Council believes that Irish society and public policy have not fully confronted and explored the resource implications of the ambitions now held for third and fourth level education. The major increases in capital and current spending over the last decade have registered Ireland's serious intent to develop a learning society and a knowledge-based economy and rapid progress is being recorded. Comparison with countries on a similar scale but with more developed learning societies and knowledge-based economies suggests that achievement of Ireland's ambitious goals will, over time, require higher levels of investment. Achieving and sustaining these objectives also requires significant complementary investments at prior levels of the educational system and in social policy to ensure that wide participation in third level is based on an equally widely dispersed ability, desire and opportunity to benefit so that third level participation loses all traces of social selectivity.

7.3.6 Life Long Learning

The research report of the Expert Group on Future Skill Needs (EGFSN, 2007b) is an important indication of the scale of the mobilization required if the current workforce is to have a secure future in Ireland's new economy. In particular, it serves to underline how the increase in numbers advancing to honours degrees and to fourth level is only part of a much broader up-skilling that embraces people at every level.

The Council wholly endorses the view of the EGFSN that 'the success of many policy initiatives resides with the implementing body' (2007b: 60). It is important to move from its valuable research report to a clearly articulated National Skills Strategy in consultation with all the relevant stakeholders. The Department of Enterprise, Trade and Employment and Department of Education and Science must lead in coordinating and supporting the large number of actors – employers, training and education providers, trades unions, professional associations, regional bodies, the community and voluntary sector, etc. – without whose active and expert participation the required mobilization of the adult population, in particular of those with the lowest starting qualifications, is unlikely to take place.

As discussed in Chapter 6, there are encouraging examples of how a workforce can be supported to continually renew the competences that enable it to experience security in employment despite repeated exposure to job changes. This evidence, that training can be designed and delivered which upgrades the skills of people in employment – and spares them, their employers and society the costs of long-term unemployment and early retirement for labour market reasons – should inspire Ireland's labour market authorities and social partners to be ambitious and innovative in adopting and implementing Ireland’s first National Skills Strategy. It should focus on people in employment just at a time when enterprises in the exposed sector are under increasing pressure to reposition themselves within global production networks.

There are a number of specific areas in which urgent progress is needed if the breadth of the up-skilling required across the workforce is to be achieved.:

- More innovative measures are needed to increase participation in lifelong learning. These measures should tackle the principle barriers which prevent increased engagement in lifelong learning, namely the motivation, cost and time constraints. They could also be used to increase individuals' and employers' awareness of the benefits to them of education and training.
- Given the significant motivational issue, resolving individuals' reservations about the feasibility and effectiveness of further education and training (FET) for them is an area in which trades unions and the community and voluntary sector should be welcomed to play a major role along with employers, education and training providers, and statutory bodies.;
- The Inter-Departmental Committee on the Implementation of the National Skills Strategy will have to address the level of investment in FET that is required if Ireland is to deliver on its aspirations to develop more economic activity that is knowledge-intensive and innovative.;

- As the number of education and training providers grow and the courses and programmes they offer become more diverse and modularised, people need expert and timely advice to identify the courses most suited to them.;
- The financial costs of training should not be a barrier for people in the workforce with less than an upper secondary education;There may be a case that, where State support for training and education is to adults with good initial education and who face good options from which they can choose, the support should go directly to the individuals concerned. The Council welcomes the intention of the Department of Enterprise, Trade and Employment and Department of Education and Science to explore the potential of different forms of individual learning accounts.;
- The potential for employers with significant in-house skills and in-depth knowledge of an industry or sector to apply for and receive HETAC or FETAC accreditation should be pro-actively developed. Currently hardly any of Ireland's large multinational and indigenous private sector employers are registered with either.;

More generally, it is of particular concern to the Council that the inclusive and feasible nature of the up-skilling challenge should be communicated effectively and any perception of the knowledge economy as exclusive or elitist be vigorously challenged. There is considerable room to learn more about *which* specific skills make the key difference to employability and productivity in the modern economy and *how* they are acquired. Several studies suggest that, even for graduates, the ability to grasp and appreciate the core insights and operating principles of disciplines other than one's own may be more important, and better rewarded, than in-depth specialization. The breadth of an individual's knowledge can facilitate the innovation process much more than its depth, particularly in managers, project leaders and the heads of specific corporate functions (research, marketing, IT, financial control, etc.)

7.3.7 Regional Development

The Greater Dublin Area

There is considerable potential for Dublin to have a larger population with a higher quality of life if the benefits of higher density are carefully brought on stream and replace the costs of urban sprawl. A larger and more compact population will, in turn, make it easier to further develop knowledge-intensive services and manufacturing and a greener regional economy. This poses major interrelated challenges – to increase housing densities, produce step changes in the quality of public transport, bring Dublin airport's new terminal and road improvements on-stream adroitly, address water services infrastructure requirements, make a success of integration and social inclusion policies, and much else.

Arguably, the single most important challenge in protecting the GDA's dynamism and attractiveness will be a step-improvement in the integration of transport planning and land use. The new Dublin Transport Authority must achieve this and effectively lead the seven local authorities to deliver new standards in urban planning and development that minimise car use and maximise shared amenities. It will need to be supported by efficient follow-through on the public transport investment front, particularly on signature items such as the Heuston-Docklands Interconnector and Metro North, and by firm action in containing any promoted developments that lie outside the public transport mesh for the city outlined in Transport 21. Failure to surmount the challenges of urban sprawl in the GDA in the medium-term would not see benefits displaced to other regions within Ireland but to metro-regions elsewhere in Europe to which the businesses, young professionals and migrant workers currently attracted to Dublin are more likely to move.

The Gateways

Assessment of what constitutes development and satisfactory dynamism at the regional level should now be based more on regional assets, capabilities and strategies and hinge less on national averages. Differences between the gateways outside Dublin, particularly since the addition of the four identified in the NSS, are as significant as their shared trait of being impacted by Dublin's growth.

The development of governance frameworks that will allow key actors in the gateways to take co-ordinated and effective action together is, probably, the greatest and most urgent challenge facing the implementation of the NSS. It is clear that a major – if not the lead – role lies with the local authorities making up each gateway in the first instance. They must have the internal structures - supported, as advocated in Chapter 5, by refashioned regional structures - that allow the specific challenges and opportunities of 'their' gateway's development to be distinguished from their other responsibilities and to receive the requisite attention. This may entail resourcing a unit or vehicle within each local authority and giving it a specific gateway remit to participate in a meaningful way with the other local authorities, government departments, other public agencies, the private sector, HEIs, NGOs and others who share the responsibility for promoting the gateway.

To allow local enterprises to link with the metro-regions of other countries, gateways must be able to guarantee not just inward investors but all SMEs access to high capacity broadband so that participation in global supply chains from within the gateway is on a secure footing. The option must extend to individual households also if skilled knowledge workers are to experience living in a region attractive, including by being able to seize opportunities for work-life balance and self-employment. As argued in Chapters 4 and 5, high capacity broadband is increasingly acquiring the status of a core household utility (similar to water, electricity, etc.). Gateways, hubs and county towns stand to gain particularly from a step-improvement in Ireland's currently very low average broadband speed. National policy must ensure that the Metropolitan Area Networks (MANs) in place are fully connected to the main national and international nodes so that there is every reason for potential service providers to connect to their MAN. It should also ensure that, wherever possible, every piece of relevant infrastructure paid for by or requiring sanction from the state (roads, railway lines, gas pipelines, housing) has

telecommunications ducting on an open basis (small access routes through which fibre optic lines can be passed).

A strong case can be made that an assessment of the implementation of the NSS itself, and of measures to strengthen its implementation, is needed. This should include some capacity to adapt it. This need not endanger the fundamental insight that the fruits of spatial planning can only be delivered if there is policy consistency and adherence over a long period of time.

Rural Development

In the case of rural life, the challenge is to maximise the advantages of access to the natural environment and independence while minimising risks associated with distance from service centres and a high proportion of solitary housing. The economy of rural Ireland need not be considered as endangered by the trends outlined in this report, for two principal reasons. First, there are multiple ways in which larger and more affluent urban populations generate additional demand for rural goods and services, such as more health-conscious food consumers, visitors, holiday-makers, investors and new residents. Second, ICT technologies mean that micro-enterprises and self-employed activities can be viable from rural locations where the quality of internet access enables rural service providers to interface as effectively with service users as any urban-based provider.

Underlying this conditionally positive appraisal of the prospects for Ireland's rural economy is a fundamental assumption: that rural residency is not a disadvantage either in accessing education and training and or attaining ICT literacy and access. The National Broadband Service which seeks to bring broadband to remoter households where commercial provision is least likely must ensure its clients access at speeds similar to urban residents so that the growing sophistication of services on-line are available to them too.

7.3.8 Employees Displaced by Economic Restructuring

The effectiveness of the educational and training systems and the design and implementation of the National Skills Strategy face a particularly exacting test in the need to address the on-going attrition of jobs in manufacturing, the current downturn in construction employment and the growing vulnerability of employment in internationally-traded services.

The burden of adjustment falls disproportionately on low skilled workers, older workers and those with short job tenures. Their ability to benefit from improved job prospects elsewhere in the economy hinges on the effectiveness of the training and education they can access, the feasibility of moving to where new jobs are available, and on how well social protection encourages and supports their pursuit of new careers.

Specific plant closures deservedly attract national attention because of the dislocation they impose on workforces and their families and their potentially significant regional impact. It is argued in Chapter 6 that, in practice, too little is known about the medium and long-term consequences of plant closures in Ireland for individuals, families and communities as the attention of media and, even, of statutory authorities can quickly shift elsewhere. Quality research in this area is

needed to throw more light on the factors in the Irish context that, alternatively, compound or mitigate the effects of plant closures. This would include the significance of early notice and of a company's manner of engaging with the future of its employees while the latter are still in its employment.

The Council believes that what has been learned from helping regions and individuals adjust in the aftermath of company closures needs more systematic garnering and assessment. In particular, the role of regional actors in activating, co-ordinating, and re-designing and supplementing when necessary, the supports and expertise available from statutory bodies should be highlighted and given a more prominent place. It is clear that regional trades' councils and employers' bodies have a particular potential to contribute to efficient job-search and the matching of individual worker's capabilities and employer's needs; their guidance and counselling can command particular credibility with workers facing redundancy. Consideration could be given to some form of advance profiling of workforces at particular risk and to a pro-active role for other employers in the region seeking recruits with firm-specific capital or for VECs, Institutes of Technology and other educational providers in offering longer, broader courses that would widen participants' range of employment options.

7.3.9 People of Working Age Outside the Workforce

The extent to which the Department of Social and Family Affairs is reconceptualising its remit, and the approach outlined in the National Development Plan's Activation Sub-Programme (within its wider Social and Economic Participation Programme for people of working age) is extremely encouraging (cited in Chapter 6: 257).

A particularly important process of consultation is underway in finding a way to subsume the current One Parent Family Payment into a wider parental allowance. This has the potential to be a landmark initiative in modernizing Ireland's income support arrangements as success in overcoming acknowledged weaknesses in the OFP will yield significant learning in how to reform other programmes too.

The Council emphasises that the current downturn in the economy, rise in unemployment and fall in state revenues is not the time to doubt the core objective of the NDP's Social and Economic Participation Programme or withhold the resources necessary for implementing it. If this were to happen, the cyclical rise in Jobseeker's Allowance underway in 2008 will, , once again lead to the erosion of skills and work habits and higher structural unemployment It is essential that the DSFA has the resources to proceed apace with its long-term restructuring and re-tooling and that the purchasing power of social welfare payments is protected so that its clients can co-operate and benefit fully from the profiling, personal attention and tailored pathways which the Department is committed to undertake on their behalf.

It is a key question as to whether and how many of the people currently non-employed and distant from the workforce will benefit from the unfolding of Ireland’s economy. It has become more difficult for the labour market acting on its own to function as an engine of social improvement. Left to itself, it is more likely to pull in educated migrants than offer rewarding opportunities to many of the people currently in receipt of long-term social assistance. At the same time,

passive receipt of an income, even at a level sufficient to avoid debt and provide a decent standard of living, in a society where the levels of educational attainment and standards of employment continue to improve, is less and less likely to ensure 'participation', lay the foundation for a satisfying life or strengthen the sense of co-responsibility for society on the part of individuals of working age who have never had steady employment.

The 'low road' to the learning society and knowledge economy would entail using a combination of passive income transfers and special programmes to divert away from economic participation a section of the population whose productivity would be regarded as too difficult and expensive to raise; younger and more capable workers and researchers would be sourced from overseas. The 'high road' entails embracing the deep changes to Ireland's welfare state that are needed to stem such social malaises as the intergenerational transmission of educational disadvantage, the 'brain waste' of child poverty, the neglect of people with disabilities, the socio-economic disadvantages of Travellers, the underperformance of ethnic minorities, and the discarding of older workers.

A fundamental change in purpose and organisational culture, as well as in operating procedures, is implied for the Department of Social and Family Affairs (DSFA) as it seeks to 'place activation on a level with service delivery and control as a central part of (its) core business' (*Towards 2016*: 51). This transformation requires the active collaboration and engagement of a wide variety of actors, in the community and voluntary sector and across the public system, if the DSFA is to be able to deliver tailored and responsive individual support packages in a positive way that genuinely empowers more of its clients to entertain and embrace options that are genuinely better for them.

7.3.10 Climate Change

Climate change is a strategic policy area which requires more than fine tuning, since Ireland is only beginning to come to terms with the scale and nature of the task of moving to a low-carbon economy and society. The Council plans to undertake a separate study on 'Sustainable Energy and Climate Change' as soon as work on this Economic Report is completed. From that work it will bring forward policy recommendations.

7.3.11 Policy Monitoring and Continuous Improvement

A fundamental argument of this report is that it is of great significance that the NDP combines a programme for investment in physical infrastructure with critical investments to underpin enterprise performance, human capital, social infrastructure and social inclusion. The most fundamental proposition in the report is that investment across this spectrum must be maintained, even if economic conditions and revenue buoyancy worsen further. Any other approach would be to ignore the central thrust of the analysis – that skills and capabilities are the most important assets in an advanced modern economy. But these arguments have important implications for the way in which various elements in the NDP are monitored and evaluated. In particular it demands that new systems for designing programmes, monitoring outcomes and evaluating actions and agencies be developed, equally rigorous – but not necessarily the same – as those now in place

for physical capital investments. If a high priority is put on investments in human capital, social infrastructure and social inclusion, it essential to ensure that genuine outcomes are being achieved in these areas. In this regard, the Council reiterates its argument that these should include, but distinguish between, systemic indicators, diagnostic indicators and performance indicators (NESC, 2005b; 301).

7.4 Managing a Difficult Transition and an Uncertain Conjuncture

7.4.1 The Value of a Consistent Policy Framework

In its 1990 report *A Strategy for the Nineties* and subsequent Strategy reports (1993, 1996, 1999, 2003 and 2005), the Council set out a framework that informed its contribution to social partnership and policy. It argued that there are three requirements for a consistent policy framework in a small, open, European democracy:

(i) Macroeconomic: the economy must have a macroeconomic policy approach that underpins low inflation and steady growth of aggregate output;

(ii) Distributional: there must be an evolution of incomes which ensures continued improvement in competitiveness, handles distributional conflict in a way that does not disrupt the functioning of the economy, and is fair; and

(iii) Structural: there must be a set of complementary policies which facilitate and promote structural change in order to maintain competitiveness, eliminate barriers to participation and achieve social cohesion in an ever-changing environment.

Consideration of how various countries, with different structures and political traditions, operate economic and social policy suggests that the system must be internally consistent, and suitable for the economy and society to which it is applied.

The analytical framework was further developed in the 1996 Strategy report. It emphasized that, in the context of globalisation, most of the policies which affect Ireland's prosperity and social cohesion are *supply-side* policies – i.e. those that improve the quality, quantity and allocation of resources and capabilities – and these policies depend on the high level social cohesion and co-operation that the state can both call upon and develop.

The value of this consistent policy framework is that it takes issues and pressures arising in the macroeconomy, distribution and economic structure seriously, and draws attention to the less visible relationships between them. Some of these relationships are immediate and some operate in the medium and long-term. Consequently, awareness of the need for a consistent policy approach helps to ensure that immediate problems are not addressed in ways that undermine long-term economic and social development.

7.4.2 Recasting Ireland's Consistent Policy Framework

The Council believes that that the consistent policy framework outlined above continues to provide a useful guide to the formulation of a strategic approach that can command agreement at the current time. However, as noted in its 2003 Strategy report, the relationship between the three categories of policy changes over time. Consequently, it is necessary to periodically recast the relationship between macroeconomic policy, distributional policies, and structural or supply-side measures and to review the content of policy within each of the three areas.

In the difficult economic period from the late 1970s to the late 1980s, the three existed in a vicious circle (NESC, 2003: 173). During much of the subsequent period from 1987 to 2000, the three managed to constitute more of a virtuous circle: aspects of macroeconomic, distributional and structural developments supported and reinforced one another. The long period of rapid growth from 1994 to 2000, however, brought the three elements into greater tension with one another. Structural and supply-side bottlenecks and problems in service delivery impacted on inflation, the public finances, wage bargaining and the value of fixed incomes. At the same time, macroeconomic developments, particularly the weakness of the euro and pro-cyclical policy, impacted on distribution, competitiveness and supply-side bottlenecks.

In its 2003 Strategy report the Council noted the temptation to achieve a minimal consistency between macroeconomic and distributional approaches. 'Maybe structural and supply-side improvements are too hard to agree, too dear or too difficult. Maybe they can wait' (NESC, 2003: 174). The Council rejected that approach. It argued that a minimal consistency between macroeconomic and distributional approaches will not work for the following reasons:

- because social exclusion cannot be further reduced if the quality of services is not greatly improved;
- because competitiveness cannot be sustained for long if infrastructure, R&D, utilities and a skilled flexible workforce are not available; and
- because wage earners who continue to face high prices, poor services, expensive housing and long commuting times will challenge the distributional settlement.

Consequently, the Council argued that 'a consistent policy approach must include a vigorous programme to improve structural and supply-side factors...Partnership involves not only consensus, but also recognition of necessary change' (NESC, 2003: 175).

The Council reiterated this view in *NESC Strategy 2006,* arguing that 'structural/supply-side issues are now of central importance'. Given the wide range of urgent structural/supply-side needs, the Council identified the common elements that arose in all of them. Its work suggested that there were three common elements:

- The need to ensure scope for the necessary investment to take place in these areas, while respecting the Council's budgetary strategy;

- The need to ensure a high quality or standard of service and value-for-money in infrastructure, public services and regulation and to make effective use of existing infrastructure; and
- The need to make the organisational and institutional changes necessary to achieve co-ordination of a range of cross-cutting policies and organisations.

7.4.3 The Relationship Between the Macroeconomy, Distribution and Supply-side Issues in 2008 and the Coming Years

It seems clear that the relationship between the macro-economy, distribution and structural issues is again changing significantly. A combination of factors is now creating a more difficult policy context than has been experienced for many years.

In the Macro-economy

On the positive side, the Irish economy demonstrated an ability to recover quickly from the downturn at the start of this decade and to achieve strong growth of both output and employment, maintain a relatively high savings rate with limited consumption out of increased asset values and, in stark contrast to earlier decades, now faces any forthcoming difficulties with a low debt-to-GNP ratio. More fundamentally, more dynamic economic development in Asia and elsewhere suggests that – once the current financial market crisis has passed and finance is regulated to serve better the real economy – a dynamic period of international economic growth is possible, with greatly increased demand for Irish goods and services.

On the other hand, the current international slowdown is combined with a strong euro, a global credit market contraction, greatly increased energy and commodity prices, a sharp contraction of the construction sector and, given Ireland's above average share of stamp duty and other transactions taxes in total tax revenue, a definite weakening of current tax revenue. These trends reflect, and are reflected, in a smaller gap between GNP growth and employment growth – or, put another way – slower economy-wide productivity growth.

The Irish economy has experienced a loss of cost competitiveness in recent years, substantially exacerbated by the strength of the euro in recent months. It is clear from the material produced by the National Competitiveness Council that many general business costs are now relatively high in Ireland. Ireland's wage costs (including social security costs) are comparable to some of the other advanced European countries; Irish labour costs are relatively low in manufacturing. Some loss of cost competitiveness is not in itself a problem for the economy, assuming commensurate productivity improvements. Relatively strong wage growth in Ireland has increased living standards and underpinned growth in domestic demand and employment in the services sector. However, future growth will need to have a stronger component of net exports than in recent years so further losses of cost competitiveness are likely to have more effects on the economy than the experience to date.

In the Distributional Arena

On the one hand, Ireland has had an extended period in which the labour market has been strong, real living standards have increased, social spending has risen strongly and key social welfare rates have been raised in successive budgets. In addition, Ireland's employers' associations and trade unions have developed significant skills in conducting national wage negotiations, in the context of social partnership programmes, over a twenty-year period. Furthermore, the analysis which suggests that the full 'deployment' of the ICT age still lies ahead, and can sustain several decades of global economic progress, also suggests that this can be a progressive period in which inequalities, at both national and global levels, can be reduced and in which there is a synergy between economic and social progress (see Section 7.2.1 above).

On the other hand, a number of short – and, possibly, medium-term – factors are bringing distributional tensions to the surface. Ireland is now experiencing slower earnings growth, higher than anticipated inflation, high childcare costs, increasing eldercare costs, rising unemployment, unequal access to healthcare, poor pensions prospects for many, anxieties about employment, significant job losses in its more vulnerable regions, and a perception of a widening gap between the earnings of many and the very high incomes achieved by those at the top of the professions and some enterprises.

Indeed, recent inflation has particular causes and consequences which create distributional pressures. Increased oil and commodity prices, while they have a relatively large impact on prices in a highly oil-dependent economy like Ireland, unavoidably imply a transfer from Irish economic actors, in aggregate, to producing countries. In addition, an increased ECB interest rate raises the cost-of-living for many Irish employees but, unlike 'normal' inflation, is not accompanied by increases in the value of firms' output. Indeed, it tends to bear down on product price inflation. Furthermore, one approach to easing distributional tensions, used heavily in Ireland in the past decade and half, reducing taxes, is definitely not available at present. Indeed, despite the positive medium and long-term prospects for both the international and Irish economy, the conditions which made distributional tensions relatively minor in the 1990s – reflected in the ability to simultaneously reduce taxes, increase public spending and lower the debt/GNP ratio – may not recur. That phase was facilitated, in part, by a significant increase in participation and falling dependency rate, which is less likely in the years ahead. Nevertheless, if economy-wide productivity was to increase, it can yield increasing real incomes and improved public services without particular distributional tensions, provided there will be sufficient shared understanding across social, economic and policy actors.

In the Structural Area

On the one hand, sustained investment in physical and social infrastructure is beginning to ease bottlenecks in transport and housing, and further benefits can be expected from ongoing investments in Transport 21 and energy. Major steps have been taken to increase Ireland's output of graduates, enhance its research infrastructure, research environment, waste management system, broadband connectivity and public services. These improvements are important because there

is reason to believe that, after several decades of 'installation', the full 'deployment' of the ICT revolution lies ahead, in which an enormous range of market opportunities will emerge in both services and manufacturing.

On the other hand, many of the supply-side challenges listed above remain serious – including energy, broadband charges, childcare, transport, education, training and skill development, and the provision of quality tailored services. In addition, economy-wide productivity growth has weakened, certain manufacturing sectors are experiencing off-shoring and associated job losses, and vulnerable regions are experiencing particular problems.

Temptations That Would Yield an Inconsistent Policy Approach

This combination creates a more complex set of relationships between macroeconomic, distributional and supply-side factors than has existed since the late 1980s. This creates a number of temptations that, if followed, would yield a deeply inconsistent policy approach. Several of these would involve the repetition of policy mistakes made in past decades. The temptations created by the changed combination of macroeconomic, distributional and supply-side conditions include:

- Abandonment of fiscal discipline by recourse to excessive borrowing, used to fund current consumption;
- Cutting back on strategic investments in ways that would ease immediate budgetary pressures but damage long-term prosperity;
- Maintaining only investments in physical infrastructure, ignoring the analysis which underlines the critical importance of investment in skills, capabilities and services;
- Rejecting budgetary options that can support a consistent policy approach in current circumstances;
- Managing the public finances in a way that magnifies the economic cycle. The Council has earlier argued that the emergence of a 'political business cycle' is not desirable either in terms of long-term planning or cyclical balance (NESC, 2005b: 252);
- Losing sight of the need to respond to the changing requirements of international competitiveness, understood as the necessary condition of continuing economic success;
- Adopting an approach to distributional issues, including wages, that seems to address immediate pressures but in ways that ignore underlying cause-effect relationships and, consequently, both fails to achieve distributional goals and weakens long-term performance;
- Ignoring underlying distributional issues – concerning poverty, healthcare, pensions, eldercare and other public services – in ways that reinforce the tensions between the three elements of a consistent policy approach and thereby increases the likelihood of an inconsistent approach in the coming years and in the long term.

- Adopting a combination of budgetary and distributional policy that deepened the economic downturn, ignoring the degree to which non-traded employment is related to the performance of the traded sector (see Chapter 4).

Each of these might provide a minimal and short-term consistency between two spheres of policy, but will not work in the medium or long term. Each neglects aspects of the interdependence underlined by the Council over recent decades – between the public and the private sectors, between the indigenous economy and the international economy, between the economy and society, and between the economic and the political (NESC, 1996a: 4; 2005a and b; 2006). The Council believes that a shared strategic analysis can assist Irish policy actors in steering a prudent course through these risks.

7.4.4 Labour Market Policy and Wages

From the Council's recent studies there emerges a picture of how people have fared as the Irish economy has gone through major changes, including an unprecedented period of economic growth, a profound deepening of the European internal market, transition to the euro, globalisation and very substantial immigration. There also emerge important elements of a shared understanding of how people's future participation and prosperity in the Irish economy should be secured and of the major changes in policy necessary to achieve that.

Labour Market Trends

The picture emerging from the analysis in this report is inevitably complex and incomplete, since the labour market is highly differentiated and is undergoing changes not yet reflected, or not easily captured, in official statistics.

- Up to 2007, the economy experienced continued strong employment growth, with annual employment growth of 3.3 per cent between 2000 and 2007. In 2008 there will be little net employment growth, and a slight contraction is in prospect for 2009.
- Unemployment has increased, by a percentage point in the year to April 2008 to 5.5 per cent and is expected to rise by a further point in the next 12 months. Redundancies in recent years are higher than in the second half of the 1990s.
- Over the past two decades there was a significant increase in the profit share (of GNP) and a fall in the aggregate wage share. This trend began to reverse itself in 2002.
- The growth rate of real earnings peaked in 2001. In that year, real take-home pay for a single person on average industrial earnings increased by over 7 per cent. Subsequent years were characterised by continuing real earnings growth at a more moderate level.
- The presence of a large migrant labour force has been consistent with real earnings growth, at least up to 2006. Median hourly earnings in the overall economy grew by 17.7 per cent in nominal terms and 10 per cent in real terms over the three year period between 2003 and 2006, somewhat ahead of estimated productivity growth.

- The past two years have seen limited real earnings growth, due to high inflation, though further tax cuts and improved mortgage interest relief have served to enhance disposable income. Nominal earnings growth in Ireland in this period was higher than in other European countries.
- The slower real earnings growth in recent years is linked to the more extensive pattern of economic growth, and the concentration of employment growth in construction and domestically traded services. In the last few years, growth in real GNP has been virtually matched by growth of employment which, by definition, means lower economy-wide productivity growth.
- There has been considerable variation in earnings growth across sectors. Earnings growth did not keep pace with the rise in the cost of living in some sectors; in other sectors, growth was ahead of inflation.
- The share of employees on low pay (below €10 per hour) declined between 2003 and 2006 but is still substantial at 18 per cent. Around one half of employees earn between €10 and €20 per hour.
- Ireland's minimum wage, one of the highest in the EU and OECD, represents a significant safeguard of minimum standards in the labour market, one which the Council continues to endorse1.
- Notwithstanding the minimum wage, in 2006, 6.5 per cent of people in employment were at risk of poverty. This because, in Ireland as in other countries, the composition of households (and, crucially, the number of earners) has a greater impact on poverty than the level of individual earnings. A distinctive feature of Ireland's labour market is the low taxation of those on average earnings. For a one-earner couple on average earnings it was estimated by a Deloitte survey that income tax and employee social security contributions represented 7 per cent of earnings, which was the lowest in the EU in 2007.

These officially recorded trends in employment, earnings and wages provide an indispensable, but incomplete picture of labour market developments. For a full picture, they need to be complemented by information on working conditions, the organisation of workplaces, employment relations and compliance with labour law and labour standards.

Important changes continue in employment relations, reflecting diverse trends. These drivers include evolving approaches to human resource management, more individual employment rights, new approaches to dispute resolution, changes in labour law and the enforcement of labour standards, the changing sectoral structure of the economy and the impact of migration. While some of these changes are positive for both enterprises and employees, the Council believes that collective bargaining remains appropriate, given the dynamics of wage setting and the open nature of the Irish economy. Indeed, experience shows that the positive changes in employment relations can be combined with collective bargaining. The Council's analysis of the additional advantages delivered by coordinated bargaining – in

1. €8.65 per hour as of 1st July 2007. It was the EU's 2nd highest in nominal terms (after Luxembourg) and 6th highest in PPS terms in January 2007. As a percentage of average earnings, it is the OECD' and EU's highest (2005 data, OECD; 2007 data. EU).

which there is a degree of focus on the long term and on the common good – is set out in successive Strategy reports and summarised in Chapter 2 (NESC, 1990, 1996, 2003, 2005b).

7.4.5 Public finance

In NESC Strategy 2006, the Council considered the public finances in some detail. This included agreement on the principles which should guide policy, a summary of existing evidence on the implications of population ageing and discussion of some projections for the years 2006 to 2016.

- **Sustainability:** The Council is strongly committed to the principle that public finances must be managed on a sustainable basis. Sustainability requires that the public finances are in a position to absorb the normal budgetary pressures that arise. From a longer term perspective, sustainability requires that the public finances are managed on a basis such that the longer-term costs associated with the population ageing can be met without recourse to excessive levels of taxation. Another requirement for sustainability is that borrowing should only by undertaken if invested in productive ways that generate a real return.
- **Stabilisation:** The management of the public finances needs to take account of the stage of the economic cycle. At a minimum, it is desirable that the public finances should not add to cyclical fluctuations in the economy. This implies that when the economy is performing well, flexibility should be maintained in order to provide scope for some relaxation of fiscal policy in economic downturns.

The Stability and Growth Pact (SGP): The SGP requires a 3 per cent limit on deficits and a 60 per cent ceiling on the debt to GDP ratio. In addition, Member States are required to establish Medium Terms Objectives (MTOs)[2] in a range of between minus 1 per cent of GDP and balance or surplus[3] and these are a key indicator for the assessment of fiscal policy under the Pact. Ireland's MTO is for the public finances to be close to balance.

The Council has emphasised that a strong statement and understanding of all three principles is necessary for a useful discussion of the public finances. Otherwise, the discussion can be dominated by concerns that one of these principles is about to be violated (NESC, 2005b: 252). This is particularly relevant in current circumstances, when a sharply changed economic climate calls for some adjustment of policy, but adjustments that are consistent with the principles outlined above, properly understood. Experience shows that a rational and stability-oriented fiscal policy has a significant impact on confidence and growth.

Ireland's public finances are characterised by low public debt and a substantial current budget surplus. In an opinion of February 2008, the European Commission, nevertheless, places Ireland in the group of countries at medium risk, having

2. Following discussions in the Economic and Financial Committee, MTOs are presented by Member States in Stability Programmes. The European Council may require that the MTO be strengthened. The European Commission is proposing revised MTOs with effect from December 2009 to take account of ageing related expenditures. This will result in more challenging MTOs for various Member States including Ireland.

3. Treaty Article 104(2) provides that a deficit can exceed 3 per cent somewhat in 'exceptional and temporary' circumstances. Article 104(3) sets out factors to be taken into consideration in judging whether a Member State has breached the 'excessive deficit' rules.

regard to the long term sustainability of the public finances. This is because of the expected growth in expenditure due to the ageing of the population. Ireland's relatively young population at present implies projections of above average future growth in ageing-related expenditure.

The Council's recommendations are informed by the integrated view of economic and social strategy articulated in the National Development Plan and *Towards 2016*. The Council proposes the following approach to the public finances in the next few years:

- Capital investment should be maintained at the level of at least 5 per cent of GNP;
- Overall taxation should be set at a level that is consistent with a dynamic economy and to maintain a level of expenditure adequate to support economic and social development; and
- The management of the public finances should provide scope for current expenditure to invest in the services required in critical areas identified in *Towards 2016*, including making progress towards the services envisioned in the Developmental Welfare State and the delivery of the National Disability Strategy.

In proposing this approach, a critical concern is the efficiency, effectiveness and flexibility of the public sector. The Council places the highest priority on the task of ensuring that increased investment and current expenditure yield returns to both the economy and society. It sees a profound connection between the effectiveness of public service organizations and the funding made available to them:

> The core challenge to public sector providers is to replace a vicious circle – characterised by slow change, unsatisfactory service standards, declining public support and inadequate new investment – with a virtuous circle, in which high standards, continuous improvement, and openness to scrutiny underpin strong public support and high investment (NESC, 2005a: 299).

This means that quality and accountability in public services becomes a key policy issue. Indeed, it can be seen as central not only to maintaining a strategic direction in the medium term, but also to managing the current difficult transition and uncertain current conjuncture.

Current pressures on revenue, and several long-term economic and social considerations, suggest that thought be given to reforms of the tax system that would make it more supportive of Ireland's goals. In particular, the Commission on Taxation should examine the possibility of replacing stamp duties with a more sustainable and equitable form of property tax. It may be possible to design a system of property tax which yields a less volatile revenue stream than stamp duties, which better supports an active housing market and high-quality physical planning and which is more consistent with Ireland's goal of relying on creation of high-value goods and services in high-participation society.

7.4.6 Developing and Implementing *Towards 2016*

Collective bargaining remains appropriate and there remain significant advantages to coordinated wage bargaining, in which there is an element of cooperation and a focus on long-term interests.

As noted in Chapter 2, a central theme in the Council's policy advice over the past two decades has been the importance of seeing interdependence between the economy and society. In developing the partnership perspective, it has always sought to place wage bargaining not only in the wider economic and policy context, but also in the context of the analysis and understandings that the partners bring to the wage bargaining process. Analysis of wage bargaining systems suggests that these understandings are as important as the degree of centralisation or decentralisation (NESC, 1996, 2003, 2005b). In addressing current public policy and wage bargaining issues, government and the social partners need to be able to rely on, and take into account, a set of inter-related developments and understandings. These should include:

- Clarity on the fact that a set of investments are being made, or currently designed – in physical infrastructure, education, research, training, health and social services – that will underpin Ireland's long-term prosperity, based on a high level of employment;
- An understanding that recent increases in welfare rates are part of a wider, medium-term, project of building a developmental welfare state that will improve social protection, enhance the social wage and address the historical legacy of social exclusion and poverty;
- Clarity on the critical role of the labour market in both economic and social success and an understanding that the dramatic changes in the labour market brought about by migration – and ongoing revision of labour market institutions and labour law – should be informed by a shared commitment to high-quality workplaces and opportunities;
- Clarity on the importance of competitiveness in an economy as open as Ireland's and the close interdependence between the traded and non-traded sectors of the economy;
- Clarity on the willingness of policy makers, public managers, trade unions and professional bodies to deliver on modernisation of the public sector and agreement that this needs new, tailor-made systems of monitoring and evaluation in areas of social and human capital investment as rigorous as those now in place for public investments in physical capital; and
- Clarity on the commitment of government and all social partners to working within the ten-year social partnership framework of *Towards 2016*, reflecting an understanding that government and the partners share the journey of Irish economic and social development without knowing the destination.

The Council believes that these inter-related developments and commitments are grounded in sound analysis, increasing understanding of the economy and the practical experience of government, the social partners and those whom they represent.

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