

Foreword



Anne Heraty

Recognising that a skilled all-island workforce will be a key resource for a more competitive and prosperous economy, both Governments have agreed to work together to ensure that sufficient and appropriate skills are in place to encourage sustained growth. As a key step, the two skills expert groups, established North and South, have been working together to ensure that the evidence is available to underpin policies to help deliver the necessary workforce skills across the island.



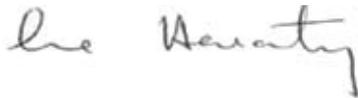
Catherine Bell

The key added value of this study is that it provides, for the first time, a comprehensive analysis of skills demand across the island of Ireland. It demonstrates that the improvement in the skills base over the last decade has made a major contribution to economic and employment growth. Improvements in skills have had a significant positive impact on productivity, competitiveness, innovation and investment. Going forward the study highlights that skills development will become even more important to all-island economic development. This is against a background of an increasingly competitive global environment where other economies are also rapidly upskilling their workforces.

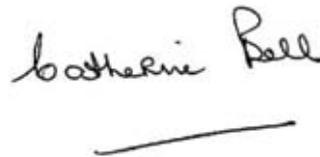
The study recognises the short-term impact of the current economic difficulties but also points to more positive future growth and employment opportunities that lie ahead in many sectors. These include areas such as high value Manufacturing, Financial and Business Services, Life Sciences and Information and Communication Technology. The extent to which these opportunities can be realised will be determined by our collective efforts to increase the skills profile of our workforce to fully utilise the available skills pool on the island.

Both the Northern Ireland “Success through Skills” strategy and the “Tomorrow’s Skills” national skills strategy in the South establish challenging ambitions for skills development. There is a clear recognition of the importance of achieving these ambitions if Ireland, North and South, is to share fully in future global economic growth and prosperity. There are many common threads in the strategic directions that have been set. In particular, there is the focus on developing a clear picture of the current and future demand for skills, and tailoring education and training provision to help meet that demand effectively.

Both skills expert groups look forward to building upon the relationship that already exists and continuing collaboration aimed at enhancing the skills profile of both our labour forces. This will include building up further the evidence base on skill demand; sharing examples of good practice in the fields of education, training and employment; and building up knowledge of the skill demands in high growth sectors across the island so that their needs can be met effectively. This work, we believe, will contribute to upgrading the skills profile of our labour force which, in turn, will help sustain the future competitiveness of the enterprise base and maximise the employment opportunities available for individuals.



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Executive Summary

Introduction

A Comprehensive Study on the All-Island Economy commissioned by the British-Irish Intergovernmental Conference was published in 2006. The Study recognised that a skilled workforce will be a key resource for a globally competitive all-island economy. It emphasised the benefits of working together in a co-ordinated way to ensure that sufficient and appropriate skills are in place across the Island to encourage sustained growth. The two skills expert groups established North and South – the NI Skills Expert Group and the Expert Group on Future Skills Needs, agreed to work together on this All-Island Skills Study to provide the evidence to underpin policies for delivering the necessary workforce skills across the Island. The purpose of this Study is to:

- extend the understanding of skills demand across the Island of Ireland (drawing attention to key synergies and differentials where appropriate); and
- provide a robust evidence base for future partnership and effective working between the two skills expert groups by providing a comprehensive picture of skills demand on an all-island basis.

Importance of Skills

Skills are widely accepted as the key 'raw material' in the modern knowledge-based economy. The continuing move from traditional agriculture/manufacturing to higher value manufacturing and services across the Island economy ensures that there will be a change in the range and mix of skills needed. These ongoing changes will pose a significant challenge for employees, employers and policy-makers – centred upon the need to ensure that the growing demand for skilled labour can be met and that the labour force is sufficiently equipped to adapt to future business needs.

Meeting these future skill demand needs will contribute to the achievement of a range of social and economic objectives including increased competitiveness and productivity. The importance of formal qualifications and the requirement for these is a main aspect of changing skills needs. The role of core and generic skills is another increasingly important aspect. These skills facilitate flexibility and responsiveness and cover a broad range of transferable attributes ranging from numeracy and literacy to the development of soft skills such as effective communication.

The importance of skills in driving economic growth and the vision for a well-educated highly skilled population is clearly articulated by both the Expert Group on Future Skills Needs (EGFSN) in the South and the Skills Expert Group in NI. Indeed, Governments North and South, in their respective skills strategies, clearly articulate similar visions of where the respective economies wish to go – and how they intend to get there.

The Expert Group on Future Skills Needs vision for Ireland in 2020 is for a well-educated and highly skilled population which contributes optimally to a competitive, knowledge-based and inclusive economy. Delivering on the skills vision will require an additional half a million people to progress to the next level of educational attainment above their current attainment level.

In NI, delivering upon the skills agenda is the Department for Employment and Learning's (DEL) key priority. 'Success through Skills' represents the Department's vision to improve the skills levels of the population. In a wider context the recent Programme for Government's focus on growing a dynamic and innovative economy over the next 10 years has clear implications for skills. The Programme highlights key skills targets that it aims to reach by 2015 including 80 per cent of the working-age population qualified to level 2 or above (broadly equivalent to 5 GCSEs at grades A-C/ NVQ Level 2) and 60 per cent of the working-age population qualified to level 3 or above (broadly equivalent to 2 A Levels/NVQ Level 3).

This report provides an evidence base for future partnership and effective working between the two skills expert groups by providing a comprehensive picture of skills demand on an all-island basis. This is done through wide ranging data analysis and consultation to 'set the scene' in terms of the all-island economy's economic structure, performance and prospects. The report assesses the broad trends in the current and future demand for skills across industries and occupations.

Skills Demand: Trends and Prospects

Economic growth and sectoral and occupational structures all have a significant influence on skills demand trends. The openness of the all-island economy, particularly in the South which depends significantly on US foreign direct investment (FDI), also means that the demand for skills will be shaped by wider global factors – which impact on incoming FDI and exporting sectors. The crux of this study – the demand for skills – is thus assessed through a review of recent skills demand developments (economic growth, sectoral and occupational structures), current skills demand, (vacancies, skills shortages and gaps) and future skills needs (general economic prospects and employment forecasts for sectors and occupations).

Recent Trends and Factors Influencing Skills Demand

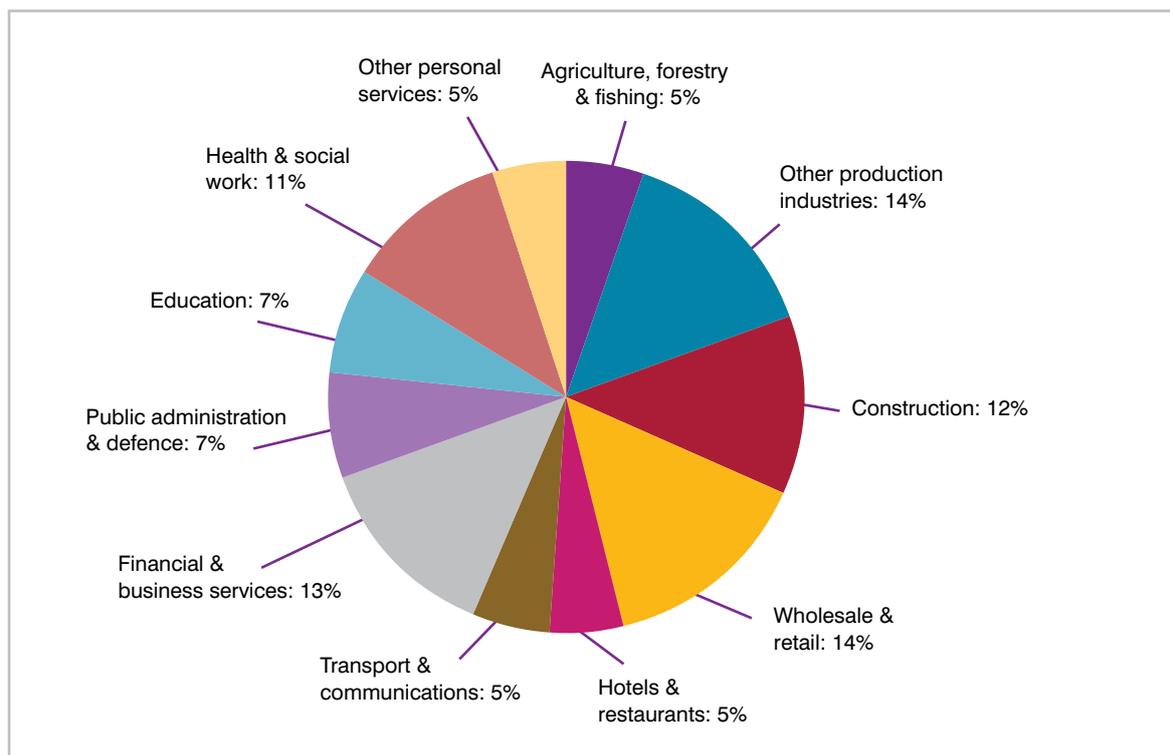
Economic Growth: The phenomenal success of the 'Celtic Tiger' years is well documented and resulted in the all-island economy achieving GDP growth of up to 9 per cent per annum in the late 1990's before moderating post 2001 to around 5 per cent per annum.

Labour Market Trends: Both economies have registered impressive rates of employment growth over the last decade. Overall total all-island employment increased from 2.0m in 1996 to 2.9m in 2007. Even with strong expansion in the size of the Island's working-age population, the working-age employment rate has risen, almost reaching the Lisbon Agenda goal of 70 per cent before the 2010 target date. With strong employment growth, the all-island unemployment rate has halved from 8.0 per cent in 1996 to 4.3 per cent in 2007. Rising education attainment has contributed to the increase in

employment rates, as rates of participation are positively correlated with attainment. Hence, improving skill levels not only plays an important role in boosting demand via channels such as inward investment, it also has a supply side effect by increasing individuals' likelihood of participating in the labour market. Migrant workers have also helped improve the skill profile of the Island.

The employment structure of the all-Island economy (Figure E.1) is relatively well-diversified with no one sector dominating and several large sectors of roughly equal importance, e.g. other production industries (which is dominated by manufacturing), construction, wholesale & retail, financial business services and health & social work, all of which have employment shares of over 10 per cent. A comparison of the structure of both economies North and South highlights the relatively greater importance of public administration, education, health & social services in NI, while the South's economy is more dependent on financial and business services and construction. In terms of occupational structure, key points to note are that almost 2 in 5 occupations are managerial and professional with less than 1 in 5 in elementary and plant & machine operator occupations.

Figure E.1: All-Island employment structure (2007)



Source: CSO QNHS, DETI LFS and Oxford Economics.

Sectoral Trends: In terms of recent trends across sectors (see Table E.1), the following key developments, which are important factors influencing skills demand, have been identified.

- The transformation of both economies from traditional agriculture/manufacturing to services is evident from the rapid expansion of financial and business services. This sector currently employs around 380,000 people on an all-island basis, and has added 209,000 jobs over the last decade. At all-island level the professional services sector has created more new jobs on a net basis than any other individual sector. Recent trends North and South in professional services employment are remarkably similar with the sector in both jurisdictions roughly doubling in size in employment terms in the last decade.
- Construction which currently employs around 325,000 people on an all-island basis, has added a large number of jobs over the last decade (just under 200,000 across the Island). The sector increased by 8 per cent per annum as both the non-residential sector expanded (due to strong economic growth) and the residential sector grew exponentially with the booming housing market fuelled by rising wealth and demand from a growing population.
- Wholesale & Retail employment, which currently employs around 400,000 people on an all-island basis, has grown consistently over the last decade (adding some 122,000 jobs). In the South, the sector increased by over 50 per cent. Despite NI's retail 'catch up' with the arrival of multinational and national retailers, its rate of growth has lagged behind the South. This is partly explained by the South's faster rate of population growth and wealth creation.
- Public administration, education, health and social services, which currently employs around 725,000 people on an all-island basis, has increased rapidly, adding 216,000 employees. In NI, growth coincided with the public sector expansion initiated by the Labour government in 1999, having held to the previous administration's spending plans for the first two years of its term. Population growth has also been a factor as many services are demand driven.

Table E.1: All-Island recent change in employment by sector

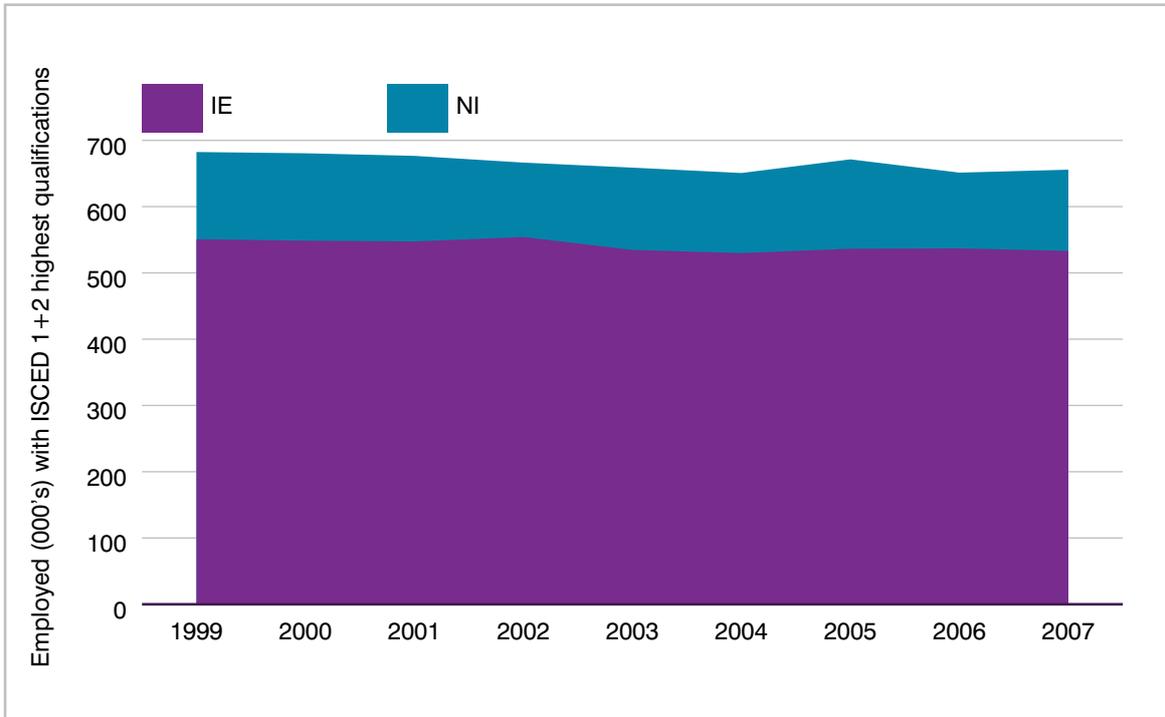
	Change 1996-2007 (000's)			Change 1996-2007 (annual average %)		
	Ireland	Northern Ireland	All-Island	Ireland	Northern Ireland	All-Island
Agriculture, forestry & fishing	-27	2	-25	-2%	1%	-1%
Other production industries	25	-3	22	1%	0%	1%
Construction	180	19	199	10%	3%	8%
Wholesale & retail	110	12	122	4%	1%	3%
Hotels & restaurants	51	-2	49	5%	-1%	4%
Transport & communications	61	6	67	7%	2%	5%
Financial & business services	152	57	209	7%	10%	8%
Public administration & defence	29	-18	11	3%	-2%	1%
Education	47	7	54	4%	1%	3%
Health & social services	98	53	151	6%	6%	6%
Other personal services	41	13	54	4%	4%	4%

Source: CSO QNHS and DETI LFS.

Occupational trends: The historical data available shows the growth in professional occupations and craft & related trade occupations and the decline in plant & machine operative occupations. Service and retail occupations have also risen steadily – these include, among other occupations, personal care workers, chefs and waiters/waitresses. The South has a higher share of managers and professionals and a lower share of elementary occupations compared to the North.

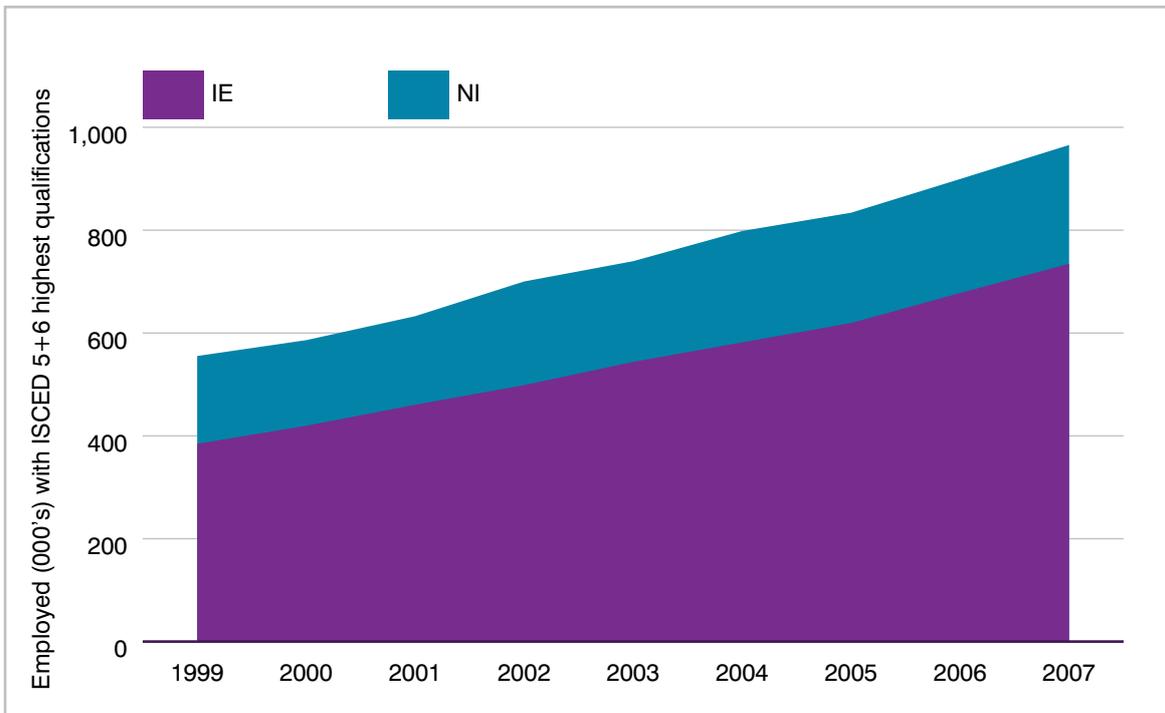
Stock of skills: The number of employed persons with below lower secondary (ISCED 1+2) qualifications, while not falling significantly in absolute numbers, currently account for fewer than one in four jobs, down from nearly a third at the beginning of this decade. This is in line with the decline in employment in traditionally low skilled sectors such as agriculture and certain manufacturing sub-sectors such as textiles, and the fall in the number of working-age persons with low attainment levels.

Figure E.2: All-Island employed persons skills trends – low qualifications (absolute numbers)



Source: CSO QNHS, DETI LFS and Oxford Economics.

Figure E.3: All-Island employed persons skills trends – high qualifications (absolute numbers)



Source: CSO QNHS, DETI LFS and Oxford Economics.

The most marked trend in employment by skill level is the rapid growth in employed persons with higher third-level graduate qualifications (ISCED level 5+6). Compared to 1999, there are now 340,000 more graduates in employment in the all-island economy. Employed persons with third-level qualifications now account for one third of the total.

Current Skills Demand Issues

Vacancy levels and skills gaps provide a useful (if incomplete) insight into the demand for skills. The South's data for 2006 generally show a broad spread of vacancies across occupations, although there was also a skewing of vacancies towards higher grade occupations. In NI, half of vacancies notified to DEL in 2006 were in two occupational groups – sales & customer service and elementary occupations.

Comparing North-South hard-to-fill vacancies, using the latest year for which comparable data are available (2005), reveals a divergent pattern. The South is skewed more towards professional and managerial occupations and NI towards elementary and personal service occupations.

Notwithstanding differences in occupational classification, these patterns could be indicative of a number of trends. Reasons could include higher demand, in relative terms, for managers and professionals in the South due to sectoral patterns in growth and the quality of jobs being created; high leaving rates in NI for lower grade occupations and difficulty attracting the local non-employed and migrants to enter employment in these occupations. Alternatively hard-to-fill vacancies in the South may be more related to skill shortages and in NI to labour shortages.

Skills Demand in Specific Key Industry Sectors

In addition to the preceding data analysis, a number of key sectors important for both economies North and South were selected for more detailed analysis. The sectors chosen were tourism and hospitality, construction, engineering, Information and Communication Technology (ICT) and financial services. Common themes from both jurisdictions can be summarised as follows:

- **Tourism and Hospitality:** The Tourism and Hospitality sector makes a significant contribution to the all-island economy and provides employment to around 290,000 people across a diverse range of occupations with a mix of skilled and semi-skilled employees. A recurrent theme emerging relates to the high proportion of hard-to-fill vacancies – specifically with regard to chefs – and the problems posed by high staff turnover. The sector has tended to be reliant upon migrant workers in recent years. Generic skills play an important role in the tourism and hospitality sector, both North and South. Specifically, the delivery of a high-quality product to those visiting either jurisdiction requires that staff display a range of key skills including English language competency and a focus on customer service.

- **Construction:** Around 325,000 people are employed on an all-island basis. Both jurisdictions are now experiencing a contraction in the residential property market leading to a reduction in demand for both skilled workers and labourers. There is however a demand for highly-skilled personnel with qualifications and skill-sets relating to emerging construction techniques and technologies in addition to competencies such as project management, ICT, public sector procurement and sustainable development.
- **Engineering:** The Engineering Sector accounts for a diverse range of occupations across a number of disciplines and provides approximately 110,000 jobs on an all-island basis. There is a continuing strong demand for engineers especially with regard to sourcing certain types with the qualifications required for disciplines such as the manufacture of medical devices, design and mechanical engineering. Moreover, it is important to note that there is a requirement for engineering graduates with higher qualification profiles (i.e. PhD).
- **ICT:** The Information and Communication Technology sector is a key component within the export-orientated focus of both jurisdictions. The sector provides employment across a diverse range of occupations – software engineers, analysts, systems managers, etc. and contributes in excess of 100,000 jobs to the all-island economy. Moreover, the outlook for this sector, both North and South is positive, with a continuing strong demand for high-level ICT skills. To meet this demand, there is a need to both promote the upskilling of the existing workforce and to boost the domestic supply of third-level computing and electronic engineering graduates.
- **Financial Services:** The Financial Services Sector has made a significant contribution to economic growth, both North and South in recent years. Moreover, this sector contributes approximately 170,000 jobs to the all-island economy and is an important source of high-quality job creation. It is evident from the analysis, that the sector is at different stages of 'maturity' North and South, with the North more skewed towards call centres as opposed to the well-developed international financial services in the South. This suggests different skill needs and all-island skills demand issues with demand in the South expected to focus on the recruitment of highly skilled graduates (i.e. to Masters and PhD level) with specific skill-sets such as mathematics, economics and risk management while demand in the North is likely to centre on technical staff, managers and senior officials. Of course, if the sector in the North matures into higher value added areas, skills demand issues North and South are likely to harmonise.

Future Skills Demand

Wider economic issues

Two recent global developments are acting as the main sources of the all-island economy's current economic challenges. The credit crunch has led to a re-pricing of risk and reduction in available financing to businesses, home borrowers and consumers. Secondly, continued rapid economic growth in 'commodity hungry' emerging economies such as China and India is pushing up world commodity prices, particularly oil. This has put upward pressure on production costs and inflation, thereby reducing corporate profits and increasing the cost of living for households. These factors are beginning to cool world demand and dent consumer confidence with slower growth reducing tax returns.

In the coming decade, following challenging conditions in 2008 and 2009, growth across the Island is expected to be around 3 per cent on average per annum. While this growth rate would be lower than the previous decade it would be above an expected Eurozone average of nearly 2 per cent. In the South, the Economic and Social Research Institute (ESRI), in looking at the decade ahead, suggests that the economy should recover and return to growth rates above the EU average. The prospects for Northern Ireland are not dissimilar and the extent of the short-term downturn is not expected to be as severe. The medium-term NI growth is also predicted to be above the EU average. Therefore, notwithstanding potential short-term shifts in skills demand, the broad long-term forecast for skills demand, towards higher end skills, is likely to remain unchanged.

Sectoral and occupation prospects

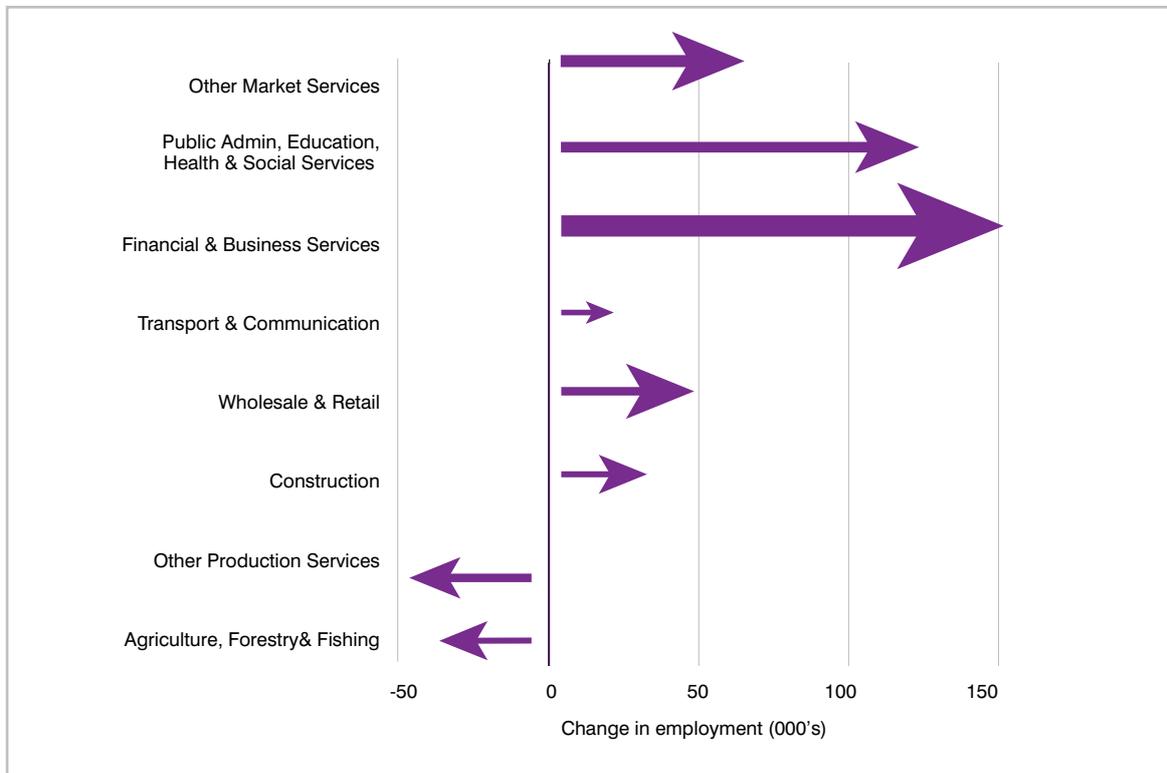
It is important to note that sectoral and occupation forecasts presented in this research are baseline forecasts. Baseline forecasts are essentially 'policy neutral' and do not build in the step change in skills provision and attainment that both the South and North are aspiring to (i.e. they are not the 'stretching' North-South targets presented in each jurisdiction's skills strategy).

Over the next decade, the economic transformation on the Island from agriculture/traditional industry towards services is forecast to continue apace. The main sectors of employment growth are expected to be financial & business services, public services, other market services and wholesale & retail. The public administration, education, health & social services sector is projected to expand by 100,000 persons as population continues to grow strongly (although this is a slower expansion than the past decade). Construction is forecast to slow down significantly (even before the emergence of recent difficulties) and then recover over the medium term.

Employment growth in NI is also forecast to remain positive, although somewhat slower than in recent times, due to factors such as an end in retail 'catch up', slowdown in public spending and shakeout in construction. Employment growth in NI will continue to be led by financial and business services.

Figure E.4 below provides indicative All-Island employment forecasts by sector over the next ten years.

Figure E 4: All-Island indicative employment forecasts by sector (next ten years)



Source: Oxford Economics.

Note: Other market services include hotel & restaurants and other personal services.

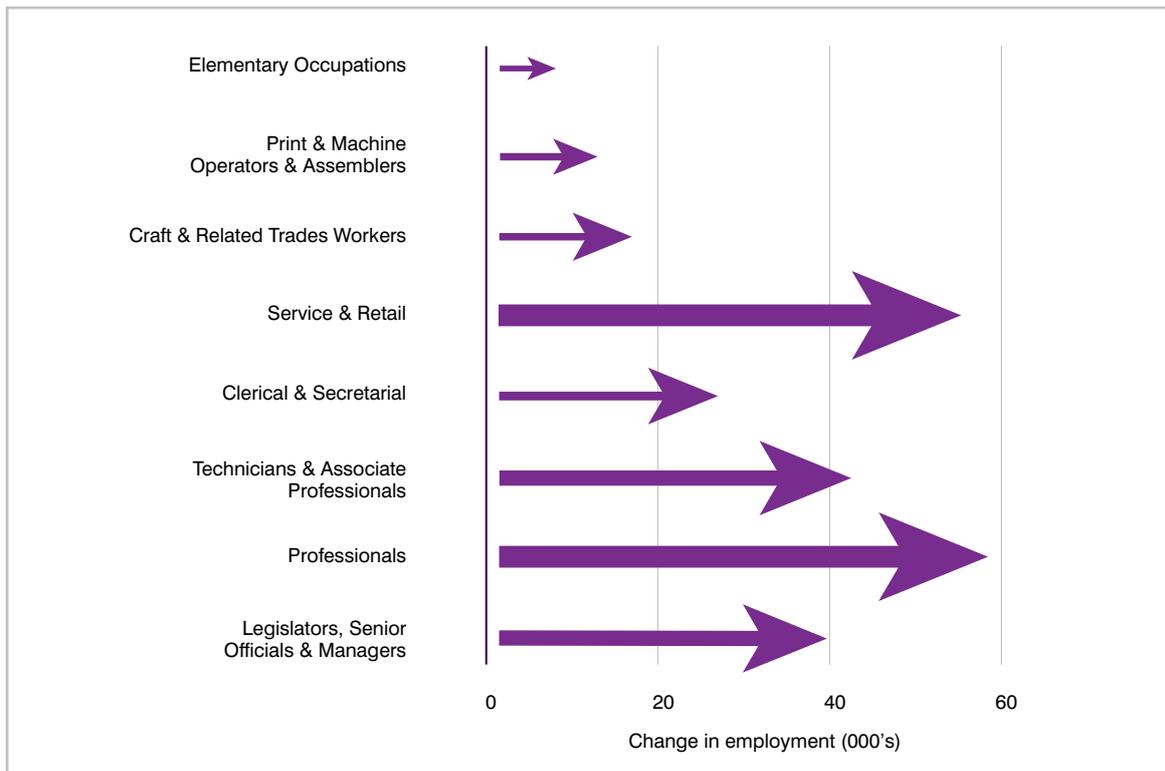
The sectoral pattern of employment growth described above will result in all-island employment growth largely concentrated in professional and managerial occupations and also in service workers and retail workers.

In terms of demand for occupations in the South, professional and managerial occupations are forecast to grow most strongly with more moderate growth in demand for lower skilled occupations. This means that there is a strong skills gradient in employment growth – that is, employment growth is forecast to be stronger in more highly skilled occupations such as professional occupations. According to the ESRI 2006 publication *'Current Trends in Occupational Employment and Forecasts for 2010 and 2020'*, this difference between growth for higher and lower skilled occupations is forecast to be greater than in the past.

In NI employment growth is forecast across most occupations, except occupations associated with the declining agriculture and manufacturing sectors. Professional occupations are expected to grow most rapidly. Personal service occupations are also expected to show large increases as recent growth in child care and residential care for the elderly continues.

Figure E.5 below provides indicative all-island employment forecasts by occupation over the next five years.

Figure E 5: All-Island indicative employment forecasts by occupation (next five years)



Source: Oxford Economics.

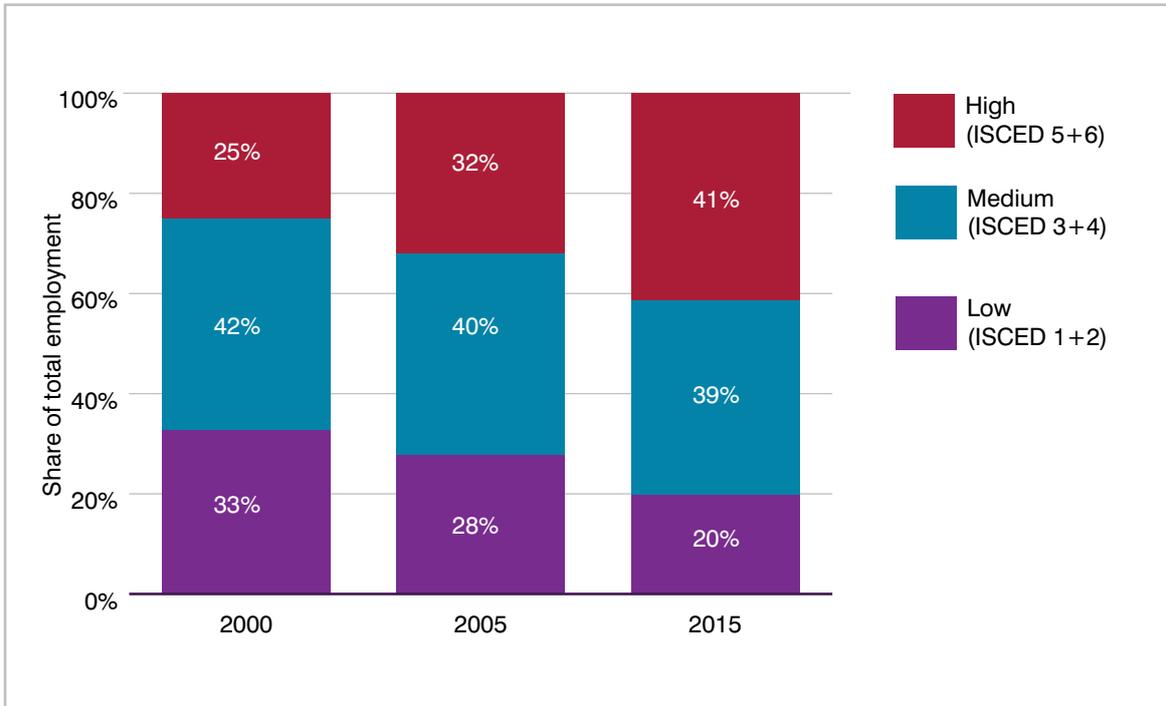
Note: Based on ISCO 88 occupation classification.

These trends are likely to have the following impact on skills demand:

- In the South, the share of employees educated to the highest skill level (ISCED 5+6) is forecast to rise from 32 per cent currently to 41 per cent by 2015;
- The share of employees with lower educational attainment is consequently forecast to decline – this decline being most marked for persons with lower qualifications; and
- A similar pattern is forecast for NI, though the increase in the share of employed persons with third level qualifications is not expected to be as large as in the South.

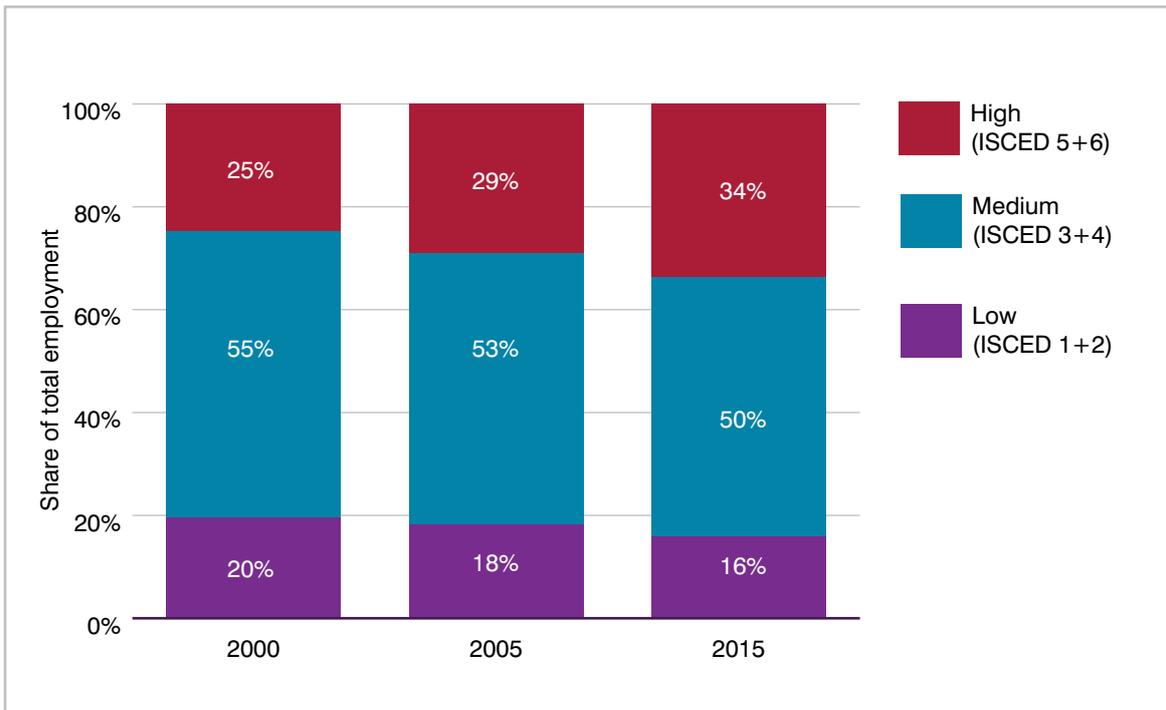
The future all-island pattern of sectoral and occupational growth as outlined above indicates a continuing increase in the proportion of jobs requiring a high skill level, and a relative decrease in those jobs requiring low qualifications. This trend can be seen in the forecasts for the South and likewise the North as presented in Figure E.6 and Figure E.7 below.

Figure E.6: Ireland recent trends and forecasts by stock of skills



Source: CSO QHNS and ESRI.

Figure E.7: Northern Ireland recent trends and forecasts by stock of skills

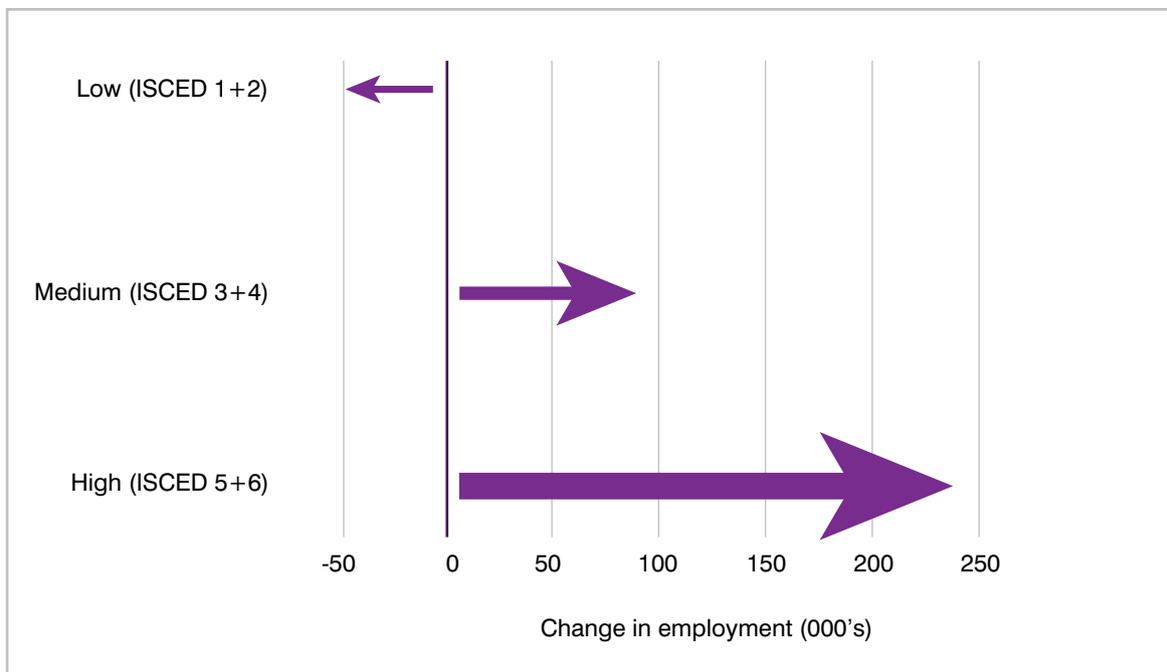


Source: LFS and Regional Forecasts/Oxford Economics.

A further determinant of the demand for skills is the extent to which people leaving jobs due to retirement or other economic inactivity, or moving to a different job, need to be replaced. This ‘Replacement Demand’ estimates the number of people required in each occupation and skill category to replace leavers and fill new positions created. Replacement Demand is a significant component of overall demand for occupations and skills across the Island, and will create a net positive need for lower level occupations beyond what sectoral or occupational growth analysis would suggest.

However, setting aside the issue of replacement demand, Figure E.8 below provides an indicative all-island employment forecast by skill level over the next five years.

Figure E.8: All-Island indicative employment forecasts by skill level (next five years)



Source: CSO QHNS and ESRI.

Conclusion

The analysis undertaken in this report has shown that the links between skills and economic performance are clear. Going forward, skills development will become even more important to economic performance. The importance of skills to economic performance and the capacity to attract FDI is rooted in the positive effects of a highly skilled labour force in terms of productivity, competitiveness and innovation. This Study also highlights the centrality of skills to economic development and the importance that both jurisdictions attach to ensuring improvements in the stock of skills.

It is clear from the data analysis that, across a range of factors that could impact on skills demand, a number of key similarities and differences North and South are evident. These can be summarised as follows:

Theme	Similarities	Differences
Policy Direction	Policy direction of both skill targets and aspirations are closely aligned.	
Economic Growth and Productivity	Forecast GDP/GVA growth over the next decade is expected to become more similar in both jurisdictions at 3.0 per cent per annum in the South and 2.7 per cent in the North.	Annual GDP growth in the South over the past decade was more than twice the rate of growth in the North.
		Productivity (GDP per head) has recorded notably stronger growth in the South (having been at a similar level in the mid-1990s). Productivity in the South is now 60 per cent higher than in NI (this however does not adjust for repatriated profits or differences in purchasing power which otherwise would be important adjustments).
Economic Activity	Both economies have experienced impressive rates of employment growth.	The South's inactivity rate has fallen sharply but little improvement in the North's economic inactivity rate despite impressive employment growth (the South's inactivity rate however is still slightly higher).
	North-South employment rates are converging towards 70 per cent (Lisbon Agenda 2010 target).	The South has a particularly high share of working-age population with lower secondary attainment (ISCED 1+2) or below.
	Unemployment rates have converged though unemployment has risen in 2008.	
Employment	Both economies have undergone the transformation typical of most developed economies with remarkably similar growth in business and financial services.	In terms of economic structure, the public administration, education, health and social services sector is relatively more important in the North, while the economy in the South is more dependent on business and financial services and construction.
	Both economies have experienced broadly similar occupational trends with faster growth in managerial and professional occupations.	In the South, the growth in construction and retail employment has significantly outpaced growth in the North.

Theme	Similarities	Differences
Current Skills	Broadly similar trends in skill levels of employed persons with a declining share of those with lower qualifications and a rising share with third level qualifications.	The share of higher skilled employed persons in the South has risen faster than in NI.
	Similar shares of hard-to-fill vacancies at selected periods.	Some differences in the nature of skill shortages.
	Similar trends in skill levels of the working-age population – falling proportion with low-level qualifications (ISCED 1+2) and rising proportion with high-level qualifications (ISCED 5+6) attainment.	
Future Skills	Future employment growth North and South is expected to be led by business and financial services with continued demand therefore for professional occupations and a similar future skills stock trend.	
	Replacement demand is an important component of skills demand across both jurisdictions, with important implications for lower level qualifications.	

In considering skills demand issues, it is important to take a long-term view. It is clear that 2008 and 2009 will be difficult years economically for the global and all-island economy. The openness of both economies, North and South, means that the demand for skills will be influenced by both internal economic factors such as the respective downturns in construction and wider global concerns which impact on incoming FDI and exporters.

Looking beyond immediate economic difficulties, the medium-term economic outlook suggests that both economies North and South, should recover and return to growth rates above the EU average though not the 'Celtic tiger' growth rates of recent years. This long-term view is underpinned by an increasing labour supply, favourable trends in productivity and flexible labour markets and strong global growth on the assumption that oil prices will fall and the credit crunch will end.

The broad outlook for the structure of skills demand on the Island points towards a continuing movement towards a higher skill profile of the workforce to serve the all-island economy's shift towards higher value service sector and hi-tech manufacturing activities. This is against the background that other economies competing on the world market are also rapidly upskilling their workforces. Meeting this challenge will help sustain the future competitiveness of the all-island enterprise base and maximise the employment opportunities available for individuals.

This is a challenge that both skills expert groups, North and South, can contribute towards meeting, by working together in a co-ordinated way to help ensure that sufficient and appropriate skills are in place across the Island.