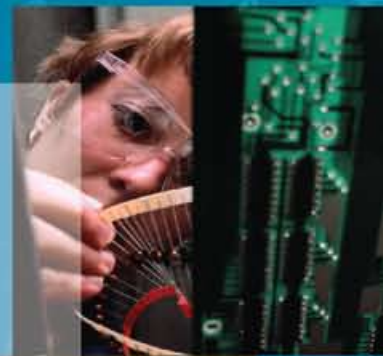


# National Skills Bulletin 2008





# National Skills Bulletin 2008

A Study by the Skills and Labour Market Research Unit (SLMRU)  
in FÁS for the Expert Group on Future Skills Needs

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# Executive Summary

The National Skills Bulletin 2008 is the fourth annual report by the Expert Group on Future Skills Needs (EGFSN) examining skills and occupational trends in Ireland. The Bulletin outlines key labour market trends in order to assist policy formulation in the areas of employment, education and training, and immigration. It also aims to provide information relating to developments in the Irish labour market for students, career guidance advisors, and other interested parties.

The statistical analysis covers the period 2002-2007, which is the most recent detailed quantitative occupational information available. However, the sharp slow-down in the Irish economy since the latter part of 2007 means that past trends are often not an accurate indicator of the current situation. At the time of writing the world economy is extremely uncertain because of volatility in the financial markets. Data for Ireland for the first half of 2008 indicates a severe slowdown in economic growth and employment. Clearly, these developments have important implications for the demand and supply of skills and they have been fully taken into consideration when commenting on skill shortages.

For each occupation covered in the Bulletin, key statistics relating to the supply and demand of skills are examined, including its employment profile (based on the data from the Quarterly National Household Survey by the Central Statistics Office (CSO)) and recent employment trends. Where available, other supply/demand indicators are provided, including the number of employment permits issued to non-EU nationals by the Department of Enterprise, Trade and Employment; an indication of the difficulty in filling positions from the monthly FÁS/ESRI Vacancy Survey and the six-monthly survey of recruitment agencies (FÁS, Skills and Labour Market Research Unit (SLMRU)); movements in the number of vacancies advertised through FÁS, the Irish Times and IrishJobs.ie; an estimation of the supply emerging from the Irish education and training system derived from data supplied by the Higher Education Authority, Higher Education and Training Awarding Council (HETAC), Further Education and Training Awarding Council (FETAC), Department of Education and Science, State Examinations Commission and various private providers; any other relevant findings from the EGFSN's sectoral studies.

The Bulletin presents data on the above indicators for 130 occupations covering the whole Irish workforce. In addition, taking into consideration all of the above

information, the balance between the demand and supply for each occupation is assessed. In some cases shortages are identified and where this is the case key characteristics of the shortages are also presented including the nature of the shortage (skill shortage or labour shortage), its expected duration and significance. The report highlights recent and current shortages and does not provide forecasts of skill shortages, unless it is implicit from the existing data.

The term 'shortage' in this report refers only to the situation where the supply of skills or labour from within the Irish workforce is insufficient to meet demand. It is possible that a sufficient supply of skills or labour for the occupation in question may be found within the EU. Consequently there may not be a shortage from an EU perspective.

The Bulletin has two main purposes; to provide a statistical record of the employment data for all main occupations in the economy and to draw on this data, and other qualitative information, to identify any shortages. In the case of shortages the aim is to identify occupations where shortages are occurring. Further research is necessary to identify the cause of these shortages and the appropriate (if any) policy response.

The National Skills Bulletin is set out as follows:

- Section 1 provides an overview of general labour market trends; this includes economic and employment growth, participation rates, employment by age and education, and migration.
- Section 2 discusses sectoral employment trends, including recent and expected future employment trends. Given its importance to the overall economy, the manufacturing sector is examined in more detail.
- Section 3 examines employment by broad occupation.
- Section 4 focuses on the supply of skills from education and training providers, both public and private.
- Section 5 provides an overview of the inflow of labour from non-EU countries through the employment permit schemes.
- Section 6 examines vacancies by broad occupational group from a number of sources.
- Section 7 provides an analysis of 130 occupations categorised into 17 occupational groups and highlights areas of shortage.
- Section 8 outlines the profile of the immigrant workforce in Ireland.

## Key findings

Since the beginning of 2008, the events in the Irish labour market have taken a dramatic turn: with the sharp contraction of the construction sector and the slowing of the overall economy, unemployment has risen from 4.5% in 2007 to 6.1% at the time of writing and employment growth has stalled (0.3%). While the detailed data underpinning this Bulletin does not capture these developments (the latest detailed occupational data from the CSO QNHS refers to quarter 2 2007 and there is a several-month lag in availability of most other data), they could not have been ignored and have been taken into consideration when commenting on skill and labour shortages.

The loosening of the labour market was already evident in 2007 data: while the overall rate of employment growth in 2007 was of the same magnitude as the previous year, growth actually slowed in the last quarter of the year. Similarly, although still above the average annual growth for the overall economy, employment growth in the construction sector slowed markedly in 2007 bringing the annual average growth rate for the period 2006-2007 to a rate that was less than a half that recorded for the five-year period to 2007.

Table A.1 Summarises the supply of skills emerging from the Irish education and training system expressed as the number of awards issued by provider and NFQ level for 2007<sup>1</sup>.

**Table A.1** Summary of Education and Training Awards by NFQ Level, 2007

	Not Placed	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9/10
Junior Certificate		57,400						
Leaving Certificate			54,000					
FETAC		45,450	48,000	113,500	16,700			
Institutes of Technology					13,400		8,600	1,500
Universities					2,600		16,900	12,100
Private Colleges	350				1,050		1,700	200
Professional Institutes	8,000							
<b>Total</b>	<b>8,350</b>	<b>102,850</b>	<b>215,500</b>		<b>33,750</b>		<b>27,200</b>	<b>13,800</b>

*Source: State Examination Commission, FETAC, HEA, HETAC, IoTs, Professional Institutes, individual contact with private colleges*

The majority of further education awards were in tourism and services, general programmes and social sciences and law. The highest number of higher education awards (spanning levels 6-10) was in social sciences, business and law.

In 2007, over 9,000 employment permits were issued to non-EU workers. This is broadly in line with the combined number of new work permits and work visa/authorisations (two schemes run prior to the Employment Permits Act) issued in 2006. In terms of individual occupations, more than a third of all new green cards were issued to nurses, followed by those issued to accounting (qualified accountants and accounting technicians) and IT staff (system analysts, programmers, software engineers). Occupations most

frequently sourced through the employment permit scheme included chefs, medical practitioners, nurses, food processors (butchers/meat cutters), care assistants and labourers in farming (primarily work riders for the equestrian sector).

In 2007, as in preceding years, it was most difficult to source labour for high skilled jobs: managerial, professional and associate professional. The occupations most difficult to source remained broadly unchanged over the last number of years. At the higher end of the skills scale, in 2007, it was most difficult to source accountants, fund accountants, software and civil engineers, nurses, marketing managers and quantity surveyors, while at the lower end of the scale, sales assistants, fitters and tool operatives proved difficult to source.

1. Graduation data for universities and Institutes of Technology is based on 2006 data as this is the latest available. All data in Table A.1 has been rounded. Awards granted to Irish students who undertook studies outside of the Republic of Ireland are not included.

Based on the data used in the analysis and taking into account developments in the labour market in the first half of 2008, no labour market shortages are reported in this year's bulletin. This contrasts with the bulletin in previous years where labour shortages were significant. There is also a much lower incidence of skill shortages. Nonetheless, skill shortages, although not as acute as in previous years, persist for a number of occupations requiring specialist knowledge, skills or experience and these are discussed in detail below.

A skill shortage refers to a situation where there is an insufficient number of trained/qualified individuals in the domestic market to meet the demand for an occupation. This is different from a labour shortage which refers to a situation where there is an insufficient number of individuals willing to take up employment opportunities in a particular occupation.

### Skill shortages

Brought about by the decline in demand and the associated loosening of the labour market, skill shortages have disappeared for a number of occupations. Most noticeably, the shortages of construction skills, which had been acute in recent times, have been reversed and are now in excess supply.

Despite the economic slowdown, and although in many areas less severe, there is still excess demand for the following skills:

### Information Technology

The IT sector is expected to continue to perform strongly: business dependence on IT has become economy-wide; the importance of system and network security is growing and new wireless technologies continue to create new business opportunities. This is expected to drive the demand for computer systems managers, software engineers and computer analysts/programmers. Employers continue to source high-level IT skills from abroad. Recent, modest increases in intake to higher education computing courses at honours degree level are not sufficient to balance out the sharp declines that occurred in preceding years. Furthermore, increased funding through Science Foundation Ireland for research teams developing leading edge technologies means that there are increased PhD student places in research. As a result, current shortages of high level IT skills (software, IT services/systems integration, electronics/IC Design, automation and process control) are expected to persist<sup>2</sup>.

### Scientists

Government investment in initiatives such as the Strategy for Science, Technology and Innovation and Science Foundation Ireland has led to increased demand for academic researchers and research teams. The declining intake of students to undergraduate level science programmes will result in a smaller pool of graduates with the competencies to undertake innovative and internationally competitive scientific research; this is expected to lead to future shortages in this area.

The strong employment growth observed for scientific and other technicians combined with difficult-to-fill vacancy and employment permit data indicates that there continues to be a large volume of activity at technician level and that shortages persist, albeit not as acute as previously, in the area of quality control and trouble-shooting, particularly in the pharmaceutical sector.

### Health and Social Care

There is a shortage of medical practitioners in Ireland, particularly general practitioners and specialist doctors. There is a shortage of nurses: supply from the education system is insufficient to meet estimated replacement demand and preserve the existing employment stock. International comparisons on density (the number of each type of therapist to the population) suggest that there could be shortages of all healthcare therapists in Ireland; however, there are limited employment opportunities in the public health service at present. Demographic changes (particularly the aging of the population) and the reconfiguration of cancer services in Ireland are fostering a continued demand for radiographers, which are already in short supply. Increased demand for oral healthcare and demographic changes has resulted in shortages in this area, particularly since the number of training places for dentists has remained unchanged for 15 years. The number of places for training in orthodontics is also limited and intermittent. Data on vets indicates that future shortages may arise, particularly in the food-animal sector in rural areas, given the shift towards domestic animal care (source: the Competition Authority) and the older age profile of current employment. Within the broad group of psychologists and other social behavioural scientists, there are some indications of a shortage of specialist skills (educational and clinical psychologists). The evidence for social workers is inconclusive. The education provision for social workers has expanded in recent years and this has helped to reduce shortages that had

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2. A detailed analysis of the future demand for ICT skills is provided in the EGFSN's 2008 publication *Future Requirement for High Level ICT Skills in the ICT Sector*.



previously been alleviated by recruitment from abroad. Currently, while there could still be a strong demand for social worker services driven by demographic and social changes, employment opportunities within the HSE are limited. Those employed in social care work occupations (matrons, houseparents, welfare, community and youth workers) do not currently require third level qualifications (outside of the HSE) but regulations to be implemented in the future require social care workers to hold a relevant degree. Such changes in regulation may reduce the supply of qualified social care workers.

## Financial

The demand for financial skills, currently shaken by the on-going credit crunch, is expected to recover and be strong in the medium term. The globalisation in financial services provision and rapid advances in technology, coupled with developments in the domestic and international regulatory environment, are driving a global demand for professionals who can quantify, assess, price and forecast increasingly complex financial outcomes. Employers are continuing to experience difficulty in sourcing professionals in the area of accounting (compliance, financial reporting), actuarial science, quantitative finance (risk and financial engineering) and underwriting. These skills are usually developed, on top of formal undergraduate qualifications, through specialist work experience over a number of years in leading companies in the sector.

Although there is no shortage of general clerical skills in Ireland, there is still a shortage of clerks with specific financial skills (e.g. fund accounting), primarily at supervisory level. While the challenge to attract and retain candidates for fund accounting and fund administration positions has been decreasing with the loosening of the labour market overall, vacancies in these areas still persist.

## Engineering

The need for further innovation in the information technology (IT) and pharmaceutical sectors will ensure that the demand for most engineering professionals (electrical, chemical, design and development, quality control and other engineers and technologists) will remain strong, especially as there has been a fall-off in intake at third level since 2000 leading to possible future shortages.

## Marketing/Sales

As Ireland continues to grow its exports, there are still employment opportunities for marketing managers. Data from the difficult to fill vacancy survey and the SLMRU recruitment agency survey indicates that employers are experiencing difficulties in sourcing marketing managers. The difficulty here is not recruiting young marketing graduates out of college but rather experienced persons who could take up managerial roles.

Shortage indicators for sales representatives are inconclusive. Many of the recruitment difficulties experienced previously for this occupation appear to have abated but shortages may persist for sales representatives in highly technical areas which require specialised knowledge of the sector or/and product (e.g. software development).

## Catering

Skill shortages persist in relation to chefs. There is still a high demand for new qualifiers and employers continue to experience difficulties in sourcing qualified chefs.

## Construction

The data on civil engineers is inconclusive: infrastructure development under the National Development Plan (NDP) – the Government's blueprint of planned capital investment in infrastructural projects – will create significant employment opportunities for civil engineers. However, any significant delays in the rollout of the NDP would result in recruitment reductions and possibly give rise to excess supply.

In addition, the contraction of the commercial sub-sector of the construction industry observed in recent months will further negatively impact on the demand for civil engineers.

## Labour Shortages

With the increase in unemployment experienced recently, it is considered that labour demand across all sectors can be met domestically. Thus, labour shortages noted in previous years' Bulletins have now ended.

## In Focus

The In focus section of this years' Bulletin examines the immigrant workforce in Ireland using data up to and including 2007. The analysis highlighted the following:

- Since the mid-1990s, immigrants have been an important source of population and labour force growth
- Immigrants account for 12% of the population and 15% of the workforce
- In 2007, the immigrant workforce was estimated at 315,000
- The majority of immigrants to Ireland come from the EU, primarily the 10 accession states
- The immigrant population is clustered around Dublin and the Mid East region
- The age profile of the immigrant population is skewed towards younger cohorts (86% younger than 45)
- The immigrant population has a higher education profile than the indigenous one (43% of the working age immigrants hold a third level qualification)
- Ireland has attracted higher skilled workers than other OECD countries: it has the second highest share of third level graduates and the lowest share of those with less than upper secondary education in its immigrant workforce
- Most immigrants came to Ireland to work: at 74%, the labour force participation rate for immigrants is considerably higher than that for the indigenous population
- The greatest inflow of immigrant labour was observed for the construction sector
- One-in-three workers in the hotel and restaurant sector and one-in-five manufacturing workers are now non-Irish
- Over 60% of immigrants work in lower skilled occupation as labourers, operatives or service workers; one third in high skilled occupations as managers, professionals and associate professionals
- One-in-four labourers and one-in-five service workers are non-Irish
- More than a half of all kitchen porters, a half of all waiters and a third of all chefs and catering assistants in Ireland are non-Irish
- Approximately one half of the employment growth over the period 1999-2007 was filled by immigrant labour
- Immigrant labour played a key role in filling additional low skilled jobs: all of the additional employment for operatives created over the period 1999-2007 was filled exclusively by non-Irish, in addition to the replacement of 14,000 Irish operatives; similarly, almost all labouring jobs (90% of net job creation) were filled by non-Irish.

- A half of the employment growth for craft workers and just under a half of the employment growth for service and sales workers between 1999 and 2007 was filled by immigrant labour
- Immigrants also played a significant role at the higher end of the skills scale by filling 21%, 39% and 62% of employment growth for professionals, associate professionals and managers.

## Comparison with the National Skills Bulletin 2006

The labour market situation in Ireland has transformed over the last twelve months and shortages have largely disappeared. No labour shortages are reported in this issue of the Bulletin. This is due to the loosening of the labour market brought about by the slowdown in economic growth. Demand for most occupations can now be met from domestic labour sources and rising unemployment.

Some skill shortages identified in previous issues of the bulletin have persisted (although less severely), particularly at the higher end of the skill scale in the IT, financial and healthcare sector.

However, skill shortages in the construction sector, which have been a feature of the Bulletin for a number of years, have been eliminated due to the sharp contraction of employment in construction, primarily the new residential sub-sector.

# Section 1 - General Labour Market Trends

This section presents a brief overview of Ireland's labour market in 2007 and offers some insights into developments and issues affecting it.

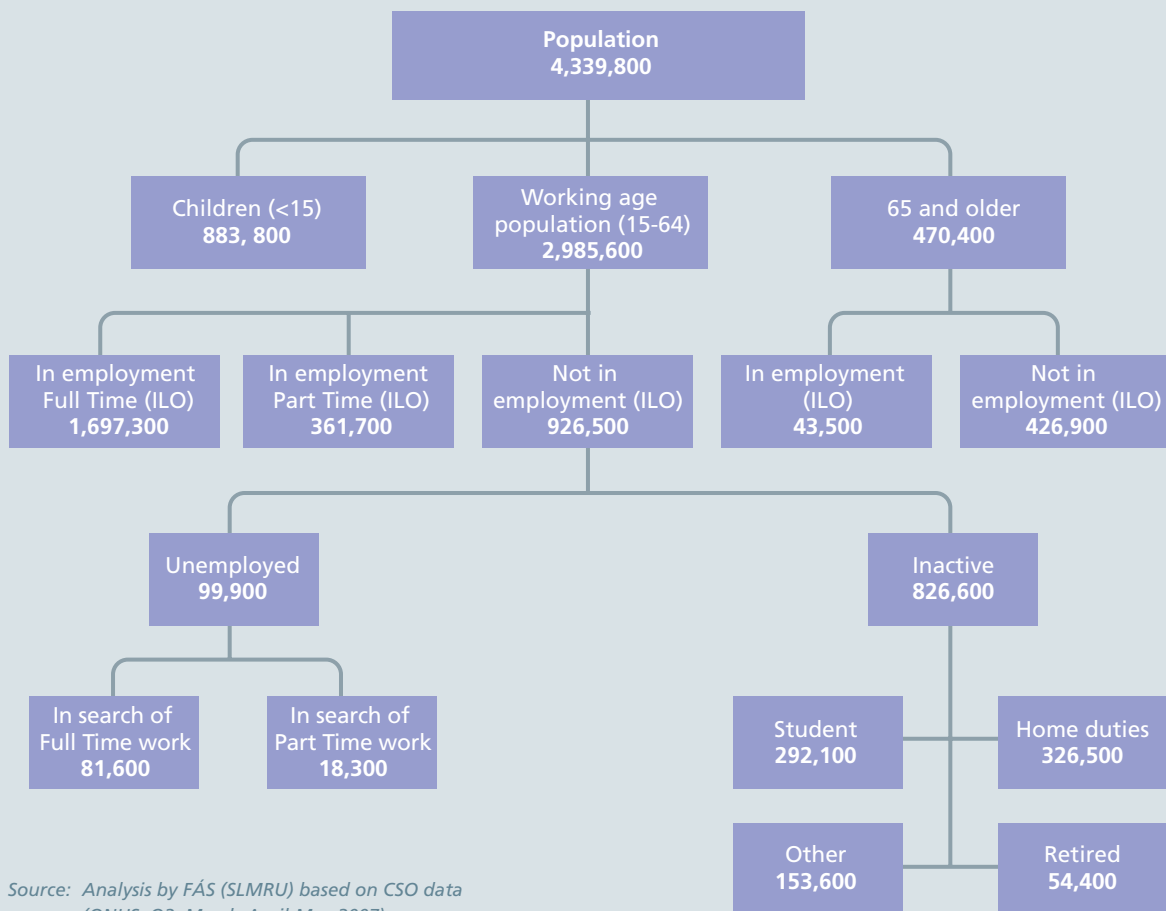
There were about 4.34 million persons residing in the Republic of Ireland in the second quarter of 2007 (Figure 1.1). This figure comprised the conventional working age population (15-64) of almost 3 million; just under 900,000 persons who were younger than 15 and just over 470,000 who were older than 65.

Looking at the labour market status of the working age population, approximately 2 million were in employment, of which over 82% (1.7 million) were in full-time employment.

Approximately 927,000 persons of working age were classified as not in employment, 827,000 of whom were economically inactive, while the number of those seeking work was approximately 100,000.

Almost 44,000 persons aged 65 and older were in employment, which was somewhat higher than last year, and although the majority were in full-time employment, they were considerably more likely to work part-time than the conventional working age population group.

**Figure 1.1** Population by Labour Status in Quarter 2, 2007



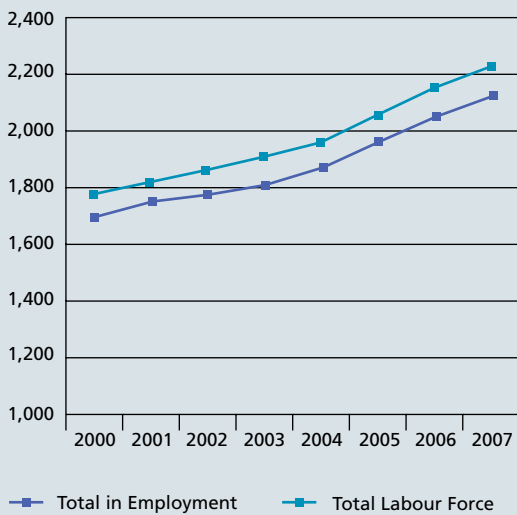
Source: Analysis by FÁS (SLMRU) based on CSO data (QNHS, Q2, March-April-May 2007)

Note: Any discrepancies in summations are due to the rounding of numbers.

Quarter 2 data reveals that the total number of persons in employment (including those over 65) grew from approximately 2.02 million in 2006 to approximately 2.10 million in 2007 – an increase of just over 4%. However, average annual data shows that this rate of employment growth was not sustained in the latter part of 2007<sup>3</sup>.

The early signs of labour market loosening in 2007 were also discernable from developments in relation to part-time employment. While less than one in six workers were in part-time employment in quarter 2 2007, and the share of part-time employment was only marginally higher than that observed in 2006, the rate of increase of part time employment was almost twice that of the increase of employment overall. Furthermore, there was an increase in the share of part-time workers classified as underemployed.

**Figure 1.2** Labour Force in '000s, 2000-2007



Source: Analysis by FÁS (SLMRU) based on CSO data. (Figures represent annual averages)

Over the period 2002-2007, the labour force participation rate increased from 60% to almost 64% (Table 1.1). It is estimated that the increase in participation overall has augmented the labour force by approximately 140,000 persons during this period, or more than one third of the growth in relative terms. Both male and female participation rates showed increases, however, the female participation rate grew faster, accounting for much of the overall increase.

Another important component of labour force growth was inward migration, which is discussed in depth in Section 8.

Over the same period, the unemployment rate remained largely unchanged and in 2007 it was 4.5%.

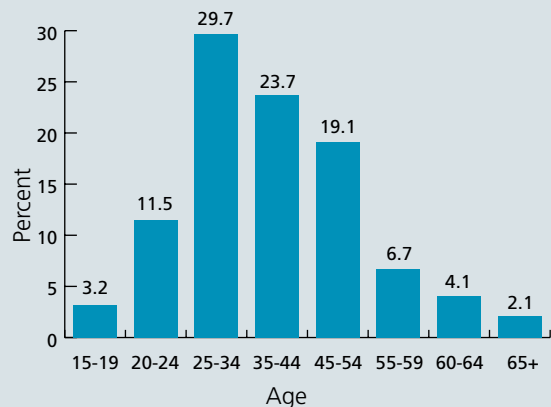
**Table 1.1** Unemployment and Participation Rates, 2002-2007

Year	Unemployment Rate (%)	Participation Rate (%)
2002	4.4	60.0
2003	4.6	60.2
2004	4.5	60.7
2005	4.4	62.0
2006	4.4	63
2007	4.5	63.9

Source: CSO

Figure 1.3 shows the distribution of overall employment by age groups in quarter 2 2007. The overwhelming majority fell into the prime working age group (25-54 years), amounting to almost three quarters of total employment. As in 2006, there was a marginal decrease in the share of those under 25, which is likely to be due to the increased propensity of students to continue their education beyond second level. At the same time, the relative size of more senior segments of employment remained largely unchanged, despite increases in employment of the over 65s in absolute terms. Due to the increase in employment overall, their share remained almost identical to that observed last year.

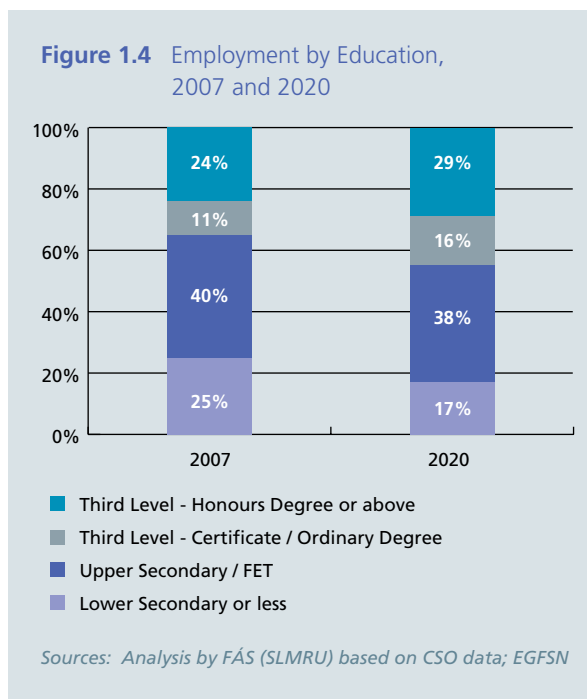
**Figure 1.3** Employment by Age, (%), 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

3. This figure is the average for the four quarters of each year while the data in Figure 1.1 and in the preceding sentence refers to Quarter 2. The CSO has revised QNHS figures to take into account and reflect Census 2006 findings, accompanied by the appropriate methodological alignment – from Q2 2006 onwards a new concept of usual residence is used.

Figure 1.4 shows the distribution of those in employment by the highest level of education achieved. The education profile of those in employment continued to improve in 2007. However, continuous upskilling is required in order to stay the course that has been strategically charted out in the National Skills Strategy<sup>4</sup>. The Strategy estimates that, in order to meet the skills demand of a knowledge-based economy projected for 2020, approximately 45% of the workforce will need to hold third level qualifications. At the other end of the skill spectrum, the demand for low skilled workers is estimated to decline to 17% of the total workforce. Therefore, it is important to take cognisance of the finding that in 2007, one quarter of those employed still only had attained lower secondary education or below.



## Economic issues, outlook and implications

While Ireland's economic performance in 2007 was still strong, with real GNP growth of 4.5% and employment growth of 3.6 %, the short-term outlook is not so optimistic.

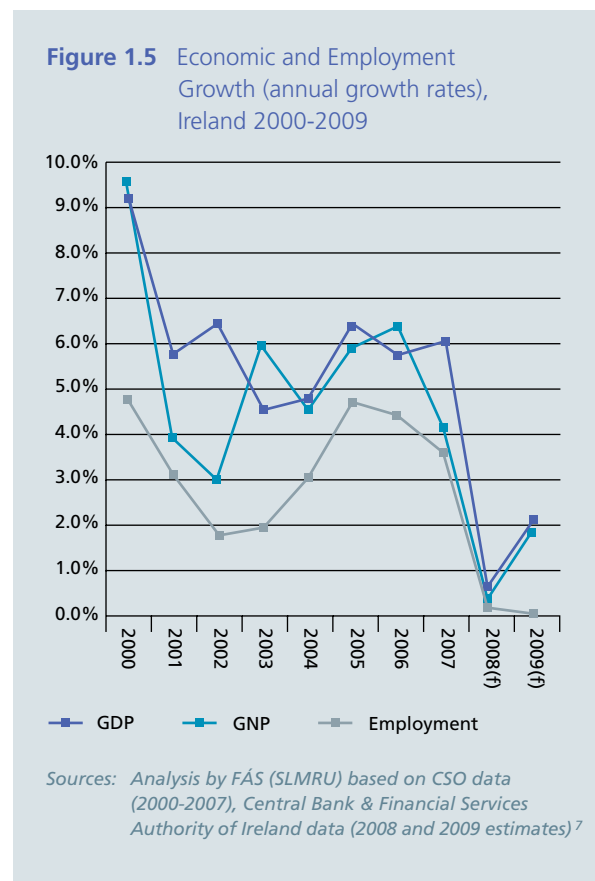
By July 2008, the Central Bank & Financial Services Authority of Ireland (CBFSAI) had revised downwards its economic growth estimate, forecasting that GDP growth will be in the region of 0.6 % in 2008, while recovering to 2% in 2009. The ESRI is even less sanguine regarding

the short term outlook and envisaged the economy actually contracting in real terms by 0.4% in 2008 and reverting to growth of 2% in 2009.

The predictions for the economic slowdown are based on several factors: the increasing cost of oil, turbulence in the financial markets caused by the global credit crunch, tighter monetary policy in the Euro-area, the end of the housing boom, declining consumer confidence and falling exchequer revenues.

Linked to the above, the CBFSAI forecasts an increase in the unemployment rate to 5.9% for 2008 and 6.8% for 2009<sup>5</sup>. This is consistent with the predictions made earlier by both FÁS and the ESRI which estimated an unemployment rate of 7% for 2009<sup>6</sup>.

The medium term outlook is more positive though, with the ESRI predicting an annual average growth rate of 3.8% between 2010 and 2015, with potentially strong positive effects on employment growth. This is based on the assumption that production and export of business and financial services will expand significantly, which would in turn see Ireland reverting to strong employment growth.



4. EGFSN. 2007. *Tomorrow's Skills: Towards a National Skills Strategy*.

5. Central Bank and Financial Services Authority of Ireland, *Quarterly Bulletin 3, 2008*.

6. FÁS *Quarterly Labour Market Commentary, Second Quarter 2008*.

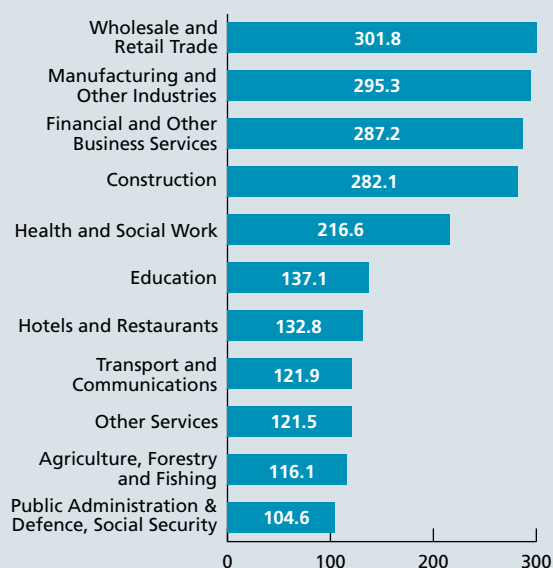
7. Based on *Gross Value Added at Constant Factor Cost by Sector of Origin and Gross National Income at Constant Market Prices, CSO; CBFSAI, Quarterly Bulletin 3, July, 2008*.

# Section 2 - Industry Employment Trends

## 2.1 Employment

This section examines the sectoral employment trends in the Irish economy. The focus is on the changes in employment during the 2002-2007 period, as well as on the year on year change for the period 2006-2007. First we examine employment levels and employment growth across broad sectors. In addition, some specific employment trends in the sub-sectors of each broad sector are considered. We also examine the manufacturing sector in greater depth, given its continuing importance to the overall economy.

**Figure 2.1** Employment by Sector in 000s, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

Total employment in 2007 was 2.12 million, representing an increase of approximately 73,500 in relation to the previous year. In terms of broad economic sectors, it is worth noting that the manufacturing sector, even with other productive industries included, is no longer the largest (Figure 2.1). Indeed, the wholesale and retail sector emerged as the biggest in 2007, employing over 300,000 persons.

Looking at the economy as a whole, the sectoral picture shows that employment is concentrated in the four broad sectors – wholesale and retail, manufacturing and other productive industries, financial and business

services, and construction, each employing close to 300,000 persons. The health and social work sector employs over 200,000 persons, while the rest of employment is relatively evenly spread across the remaining sectors.

## 2.2 Employment Growth

Over the period 2002-2007, employment in Ireland increased by approximately 340,000, expanding, on average, by 3.6% per annum. Employment has therefore increased by one fifth during this period. This medium term pace of employment growth was also maintained during 2007, when employment grew at the same rate overall, albeit slowing down in the second half of the year.

### 2.2.1 Employment Growth by Sector

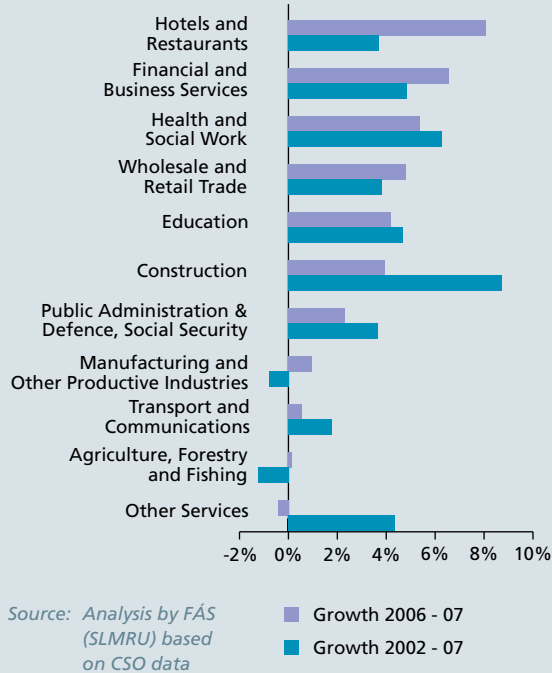
Figure 2.2 depicts employment growth across all broad sectors of economic activity, ordered by the magnitude of change in employment levels observed since last year.

#### Hotels and Restaurants:

The hospitality sector expanded fastest during the 2006-2007 period by 8 %, racing ahead well in excess of its medium term growth rate of 3.7% observed during the 2002-2007 period. The sector expanded by almost 10,000 during the last year, which was almost one half of its total expansion observed during the five year period, and bringing the total number of employed in 2007 to almost 133,000.

The above figures indicate that the sector has benefited from the increased number of overseas tourists, which has been growing continuously during the 2002-2007 period. It also seems that the expansion in hotel beds capacity, that has occurred during the period, spurred by fiscal incentives, has been conducive to job growth.

**Figure 2.2** Employment Growth by Sector, 2006-2007 and Annual Average Growth 2002-2007 (%)



### Financial and Other Business Services:

Employment in the financial and business services sector expanded strongly in 2007 by 6.6%, exceeding the annual average rate of increase that was observed during the 2002-2007 period. At the same time, it grew more strongly than any other sector during this period, expanding by approximately 60,000. The sector added almost 18,000 persons in 2007, thus accounting for almost one in four of the total net jobs created in the economy for the year. In terms of employment growth within the sector, financial intermediation grew strongly in 2007, by 10%, and it remained the second largest sub-sector. This sub-sector is expected to play a key role in exports and job creation in the coming years.

### Health:

During the 2006-2007 period, employment in the health sector grew by 5.3% which was somewhat slower than the five year annual average growth rate of 6.3%. Nevertheless, it expanded by almost 11,000 persons during 2007, representing 15% of total new jobs created in the year. This sector has been expanding strongly since the beginning of the decade – it has grown by 83,000 since 2000, of which 57,000 were added during the 2002-2007 period.

### Wholesale and Retail Trade:

The wholesale and retail trade sector employed just over 300,000 persons in 2007, thus becoming the largest sector in the economy. Employment grew by 4.7% in relation to 2006, accelerating ahead of the annual average growth rate of 3.8% that was observed for the sector over the five year period.

Over the period 2006-2007, the retail sub-sector accounted for the bulk of the employment increase (85% of the overall net job creation in the sector), with an additional 11,500 positions. Conversely, the wholesale sub-sector remained static in the same period, while motor trade expanded by 4.8%, in line with its medium term growth rate.

### Construction:

In quarter 2 2007, employment in the construction sector reached a record high of just over 284,000<sup>8</sup>. Over 10,000 additional jobs were created between 2006 and 2007 and 96,000 between 2002 and 2007. However, the employment growth in the sector slowed to 1% in the third quarter of 2007, which was the first time it dropped below the rate of total employment growth in the rest of the economy over the 2002-2007 period. Employment actually contracted thereafter, the result being that the annual average number of employed in the sector was 282,000. In terms of annual employment growth, it slowed to 3.9% in relation to 2006, which was less than half of the growth rate observed over the five year period.

### Education:

In 2007, a total of 137,000 persons were employed in the education sector. The sector expanded by almost 28,000 since 2002. However, during the period between 2006 and 2007, employment growth slowed slightly in relation to the rate observed during the 2002-2007 period. While the contribution of this sector in terms of additional posts created in the economy has declined, it nonetheless amounted to just under 7.5% of employment growth overall.

### Public Administration and Defence:

A total of 104,600 persons were employed in public administration and defence in 2007. Employment expanded by 2.3% in 2007, which represents a slowdown in relation to medium term growth (3.6%) for the sector.

### Transport and Communication:

The transport and communication sector effectively recorded no expansion during 2007, adding fewer than 1,000 jobs in this period, which brought the

8. CSO seasonally adjusted figures.

total number of employed to approximately 121,500. Looking in more detail, land transport and supporting and auxiliary transport activities accounted for the entire growth during 2007, with the latter sub-sector growing more strongly. At the same time, the air transport and water transport sub-sector actually contracted during the period, while employment in the post and communication sub-sector remained static.

### Agriculture, Forestry and Fishing:

It is estimated that a total of 116, 100 persons were engaged in agricultural, forestry and fishing activities in 2007, which was almost identical to the sectoral employment observed for the previous year. The sector as a whole has been contracting at an annual average rate of 1.3% during the period 2002-2007, shedding a total of 8,000 jobs. While the decline in the agricultural sub-sector appears to be halted – this sub-sector actually expanded by just over 1,000; a fall-off in the numbers engaged in the fishing sub-sector seems to have occurred during the 2006-2007 period, albeit from a small base.

### Other Services:

A total of 121,500 persons were engaged in economic activities classified as other services in 2007. Employment in this sector as a whole has remained static during the 2006-2007 period, in contrast to a fairly strong annual average growth of almost 5% during the 2002-2007 period. Sanitation and refuse disposal activities, one of the sub-sectors characterised by a strong growth of late, remained unchanged. Equally, no growth was recorded in recreational, cultural and sporting activities, which remained the largest sub-sector, employing just fewer than 50,000 persons.

## 2.2.2 Manufacturing and Other Productive Industries

In this section, we provide a more detailed account of the industrial sector given its historical and continuing importance to the economy. Manufacturing contributes to Ireland's exports and employment both directly and indirectly through secondary job creation in the areas of design, research and development, logistics and distribution and sales. The sector, most notably its modern segment, has also been providing employment and upskilling opportunities given that high-value manufacturing activities in Ireland are both knowledge and skill intensive<sup>9</sup>.

## Employment

While no longer employing the largest share of the workforce, the industrial sector still accounted for almost 14% of total employment in 2007.

Figure 2.3 depicts industrial employment broken down into eight sub-sectors, and in addition to this, manufacturing activities have been grouped into two segments – the modern segment, comprising electronic and chemical and pharmaceutical industries and the traditional segment, comprising all other industries<sup>10</sup>.



The office, electrical machinery and precision instruments sub-sector remained the largest with 58,000 persons employed. This sector was closely followed by the chemical and plastics sub-sector and the food, drink and tobacco sub-sector. Conversely, the textiles and clothing sub-sector was smallest in terms of employment.

### Employment Growth in the Industrial Sector

Over the period 2002-2007, the numbers employed in industry declined at an annual average rate of 1%. Although an increase in employment was actually recorded for the sector as a whole for 2006-2007, it meant that the industrial workforce merely reverted to its 2005 level.

9. DETE & FORFÁS. 2008. *The Report of the High Level Group on Manufacturing*.

10. Consistent with the CSO methodology as adopted in the *Statistical Yearbook of Ireland 2007*; Note that the segmentation was based on NACE 2 level only due to data availability; the modern segment should be augmented by NACE 223 (Reproduction of recorded media), which is a subset of the publishing sub-sector.

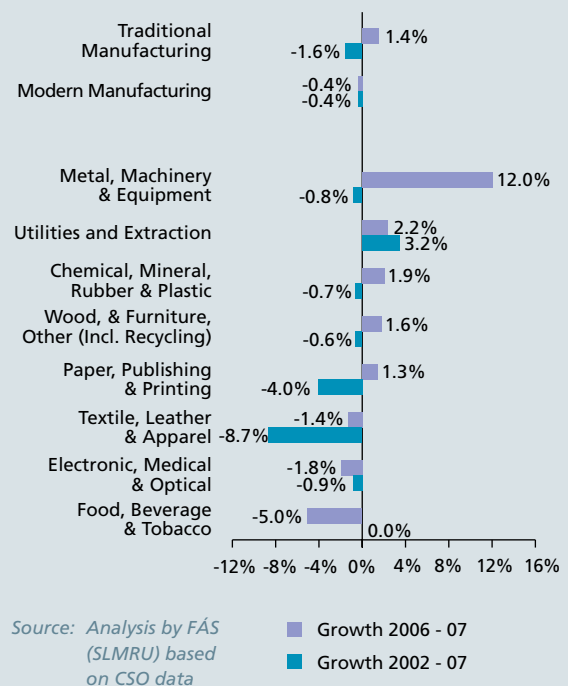


Within the sector, job losses were concentrated in manufacturing – approximately 17,000 fewer people were employed in 2007 than in 2002. At the same time the utilities sub-sector, comprising electricity, gas, steam and water supply has expanded, albeit at a slower pace in comparison to the extraction and mining sub-sector. The latter sub-sector grew by on average 6% per annum during the 2002-2007 period, even though the growth appears to have faltered abruptly last year. The net outcome has been a decline of almost 14,000 persons employed in the industrial sector as a whole at the end of the five year period.

Figure 2.4 shows the growth in employment in the different industrial sub-sectors for the periods 2002-2007 and 2006-2007. Most activities associated with traditional industries have declined in recent years, some quite noticeably. The demise of the textile, clothing and leather sub-sector has been particularly discernable. The only sector to experience growth in employment during the 2002-2007 period was the utilities, extraction and recycling sector, while the tobacco, food and beverage sector remained virtually unchanged.

It is informative to consider manufacturing activities grouped into two segments: the traditional and modern (often referred to as 'high-tech'). The high-tech segment employs approximately 91,000 or one third of the manufacturing workforce and accounts for over a half<sup>11</sup> of the total value of Ireland's manufacturing output. Over the five year period, this segment has also proved somewhat more resilient to employment contraction, and although declining marginally, it has fared better than the traditional one. The traditional segment would have declined more steeply had it not been for a recent revival in the metal, machinery equipment sector, where employment grew for the second year in a row.

**Figure 2.4** Annual Average Employment Growth in Industrial Sectors (%), 2006-2007 and 2002-2007



### Metals and Machinery

This sector, referred to as the traditional engineering sector, has staged a recovery of late, having endured a spell of contraction, which was especially pronounced at the beginning of the 2002-2007 period. Employment grew again in 2007, and having expanded at a rate of 12%, it was the strongest performer in the industry. This translated into approximately 4,500 additional positions compared with the year before.

### Utilities, Extraction and Mining Activities

The utilities, extraction and mining sector has been expanding consistently during the 2002-2007 period, growing by 3.4% on average annually. This meant that employment has reached 23,500. Within mining activities the largest sub-sector was other mining and quarrying, employing 6,000 persons, having expanded strongly during the last two years. Taken together, all mining and extraction activities grew by 6% on average annually during the five year period.

The traditional utilities sub-sector, which comprises electricity, gas and water supply, has remained virtually unchanged, expanding by on average 1% per annum during the five year period. It nevertheless continues to be the largest sub-sector, employing almost 13,000 persons.

11. Refers to 2006. CSO, PRODCOM Product Sales. This share is likely to be higher though since the NACE 223 sub-sector is not included (data not published due to confidentiality issues).

### Chemicals, Plastics, and Non-metallic Materials

Employment in this sector was 56,000 and remained stable during the period 2002-2007. Employment in its largest sub-sector – the manufacture of chemicals and related products (including pharmaceuticals) – grew during the period at a rate of 0.6% on average annually. In contrast, the smallest sub-sector, the manufacture of rubber and plastic products, has declined by almost 5% per annum during the same period.

### Food, Drink and Tobacco

Employment in the food, drink and tobacco sector remained virtually unchanged during the five year period. However, there has been a 5% decline in employment between 2006 and 2007. Within the sector, there has been a marked decline in employment in the tobacco industry, which has all but disappeared, having contracted sharply since the turn of the century.

### Office and Electrical Machinery and Precision Instruments

This sector, employing 58,000 in 2007 is the bedrock of Ireland's high tech industry, and it comprises the manufacture of office machinery and computers and the manufacture of medical, precision and optical instruments, among other activities. The latter sub-sector has become the largest, expanding considerably in 2007 and employing 24,000. It has thus eclipsed the office equipment and computers sub-sector, which in turn provided employment for just fewer than 20,000 in the same year. While the sector as a whole has been contracting during the period between 2002-2007, by just under 1% per annum, on average, the medical and optical industry sub-sector has been expanding, by 6.6% during the same period, having overcome an apparent pause in employment growth during 2005 and 2006.

Finally, employment in the manufacturing of communication equipment and devices has declined by 5% per annum during the period, but there is some evidence that this decline has been brought to an end during the last two years.

### Paper, Print and Publishing

The paper, printing and publishing sector provided employment for approximately 20,000 persons in 2007. However, employment declined by 4% per annum over the five year period and provided 4,000 fewer jobs than in 2002. The industry has been more resilient of late and it has not contracted during the last two years.

### Textiles and Clothing

Employment in this sector has continued to decrease and even though the decline in employment appears to have been arrested of late, the contraction nevertheless amounted to 8.7% per annum, on average, during the 2002-2007 period. This sector proved especially vulnerable to globalisation, with employment being almost halved since the turn of the century. Indeed, the manufacture of leather and leather products has effectively completely disappeared as an economic activity during the period.

### Other Manufacturing (Wood and Furniture, Transport Equipment etc. including recycling)

The sector includes the manufacture of wood and furniture, transport equipment and other manufacturing not elsewhere classified, including recycling. It employed 34,000 persons in 2007, having remained quite stable during the 2002-2007 period, declining by 0.6% per annum, on average.

## 2.3 Expected Employment Trends by Sector

In this section we outline employment expectations by sector, primarily based on the ESRI Medium Term Review<sup>12</sup> of the economy<sup>13</sup>. The approach adopted below is primarily focused on providing a general outlook for relevant sectors, given that more detailed and occupation-specific analysis will be provided in subsequent sections of the report.

### Construction

Following exceptionally strong performance in recent years, construction has started to contract. National Accounts data showed that, in value terms, investment in building and construction overall was 9.2% lower in quarter 4 2007, year on year: residential construction declined by 18.3%, while non-residential (including civil engineering) construction activity grew by 11.6%<sup>14</sup>. A sharp decline in output, in the region of 17% in value terms, for the sector as a whole has been forecast for 2008 in relation to the previous year<sup>15</sup>. Given the labour intensive nature of the sector, the anticipated contraction in output will inevitably translate into job losses in the short term, with a particularly negative impact on its residential sub-sector. While the decline will be somewhat offset by the expected job creation in other

12. ESRI Medium Term Review 2008-2015, May 2008.

13. It should be noted that since publication of the MTR, the world trade talks (the Doha Round negotiations) have collapsed. This may result in missed export opportunities and a less positive outlook for the traded products and services sectors of the economy.

14. CSO, National Accounts, 2007.

15. DKM, Preliminary Forecast for Construction in 2008, April 2008.

construction sub-sectors: mainly civil engineering (driven by the National Development Plan (NDP)), and residential maintenance, repair and improvements, these positive developments will not be sufficient to compensate for the loss of jobs expected in the new residential sub-sector. Hence, construction employment overall is expected to contract in 2008 and to decline further in 2009<sup>16</sup>. While employment contraction is expected to halt by 2010, a return to the levels recorded in 2006 is not anticipated in the medium run<sup>17</sup>.

Employment creation in the sector over the short to medium term will largely depend on its infrastructure sub-sector through continued implementation of the NDP.

### Healthcare

Demand for healthcare will continue to expand due to demographic changes including population increases and ageing, and increased expectations and standards regarding the extent and quality of the health service.

### Manufacturing and Other industry

Regarding employment, the sector has been declining in relative terms, thus accounting for a steadily declining share of employment within the economy overall. This trend is likely to continue in the medium and long run. The sector is set to contract by just over 1% in 2008 and 2009, with this decline accelerating thereafter. The decline is anticipated to be more pronounced in the traditional segment of manufacturing, while the high technology sector, which was the engine of employment growth in late 1990s, should just manage to stave off the decline in the medium term<sup>18</sup>. Job creation in the manufacturing sector will lie in product and particularly process innovation which may offer protection from the relocation of manufacturing activities to lower cost locations.

### Distribution

It is anticipated that the wider distribution sector will slow down, due to the overall economic downturn as well as the technological changes linked to a lower demand for labour in this area (e.g. internet shopping). However, beyond 2010 employment prospects for this sector are expected to be positive.

### Financial and Business Services

While employment in the business and services sector is expected to slow down considerably in 2008, reflecting the international financial situation, the outlook for the medium term for this sector is buoyant, and employment growth forecasts exceed those for all other sectors. This would suggest that the sector will effectively be the most dynamic source of employment growth.

### Hotels and Restaurants

The tourism industry has now enjoyed a decade of strong growth. In the short run, both domestic and foreign demand is likely to weaken due to the global economic downturn and an unfavourable exchange rate. In the medium run, the outlook is more positive as the economy is expected to recover beyond 2009.

### Agriculture

Employment is set to continue to decline, and this decline is likely to accelerate in the medium term. The ESRI anticipates the numbers employed in the sector to shrink to 93,000 by 2015.

16. FÁS, 2008. *Quarterly Labour Market Commentary, Second Quarter*.

17. FÁS/SLMRU *forthcoming construction report 2008*

18. ESRI, *Medium Term Review 2008-2015, May 2008*.

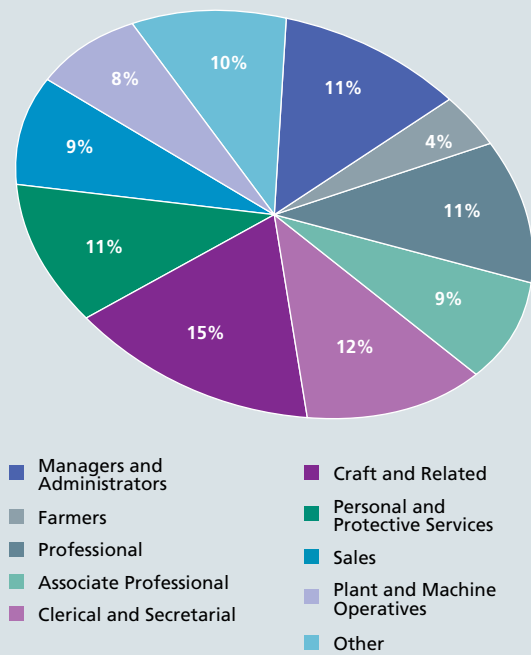
# Section 3 - Employment by Broad Occupation

## 3.1 Employment

Figure 3.1 presents the national employment in 2007 broken down by broad occupation. The distribution of employment by occupation has not changed significantly compared to the previous year. Professional and associate professional occupations continue to account for one fifth of the total employment. There has been a marginal redistribution of employment from professional to craft occupations: the share of employment in craft occupations increased by one percentage point to 15% since 2006, while the share of employment in professional occupations decreased by one percentage point to 11%.

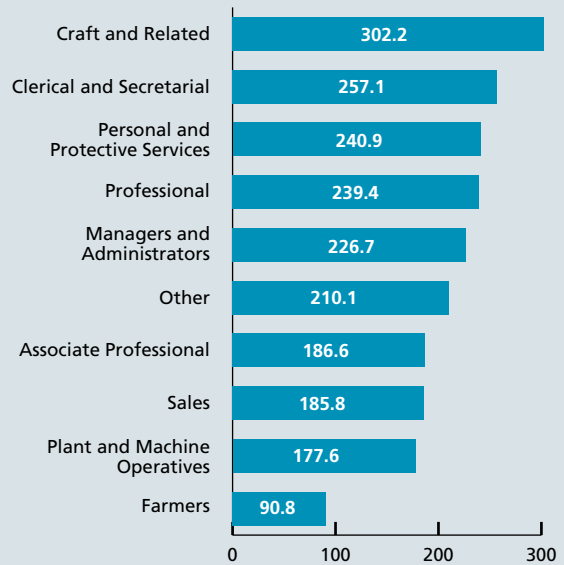
Employment levels by broad occupational group for 2007 are presented in Figure 3.2. Craft occupations continued to account for the greatest share of the workforce with just over 300,000 persons employed. High skilled occupations (professionals, associate professionals and managers) amounted to over 700,000 jobs, while low skilled ones (operatives and labourers which are captured in the *other* category) accounted for less than 400,000 jobs. There were just fewer than 260,000 various clerks employed in Ireland, 240,000 service workers, almost 200,000 sales personnel and 90,000 farmers.

**Figure 3.1** Employment by Broad Occupational Group (%), 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 3.2** Numbers Employed by Broad Occupational Group, 2007 (000s)



Source: Analysis by FÁS (SLMRU) based on CSO data

### 3.2 Employment Growth (2002-2007)

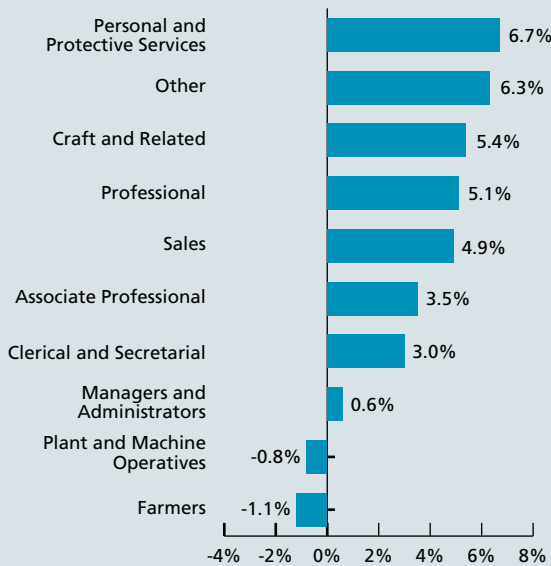
The five-year average annual employment growth rates for broad occupational groups are presented in Figure 3.3

Occupational groups for which the five-year average annual employment growth outpaced the national average included: professionals, labourers, service workers, sales personnel and craftspersons. Employment in associate professional and clerical occupations grew broadly in line with the national employment. Annual average employment growth for farmers and operatives was negative, although the absolute number of farmers actually increased by an estimated 1,500 between 2006 and 2007.

Over the period 2002-2007, the strongest employment growth was in service occupations – 6.3% on average annually. This translated into 67,000 additional jobs over the period. In absolute terms, however, the greatest expansion over the period was in craft related occupations – almost 70,000 additional jobs.

In contrast, the numbers employed as plant and machine operatives and farmers declined by an estimated 13,000; average annual employment growth for these occupations was -0.8% and -1.1% respectively.

**Figure 3.3** Annual Average Employment Growth by Broad Occupational Group (%), 2002-2007

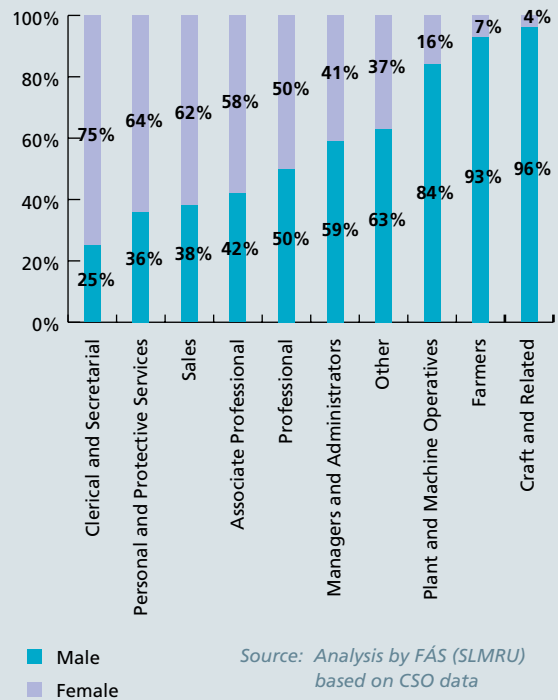


Source: Analysis by FÁS (SLMRU) based on CSO data

### 3.3 Employment by Gender

Figure 3.4 presents the gender distribution of the workforce by broad occupational group. As in previous Bulletin issues, females continue to dominate in clerical, service, sale and associate professional occupations. Machine operatives, craftspersons and farmers are predominantly male. Professionals are now equally distributed between genders, with females gaining an additional percentage point in share compared to the preceding year. Since 2004, the feminisation of employment was most evident in service occupations, where the share of female workers increased by three percentage points to 64% in 2007.

**Figure 3.4** Employment by Gender in Broad Occupational Groups (%), 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

### 3.4 Employment by Age

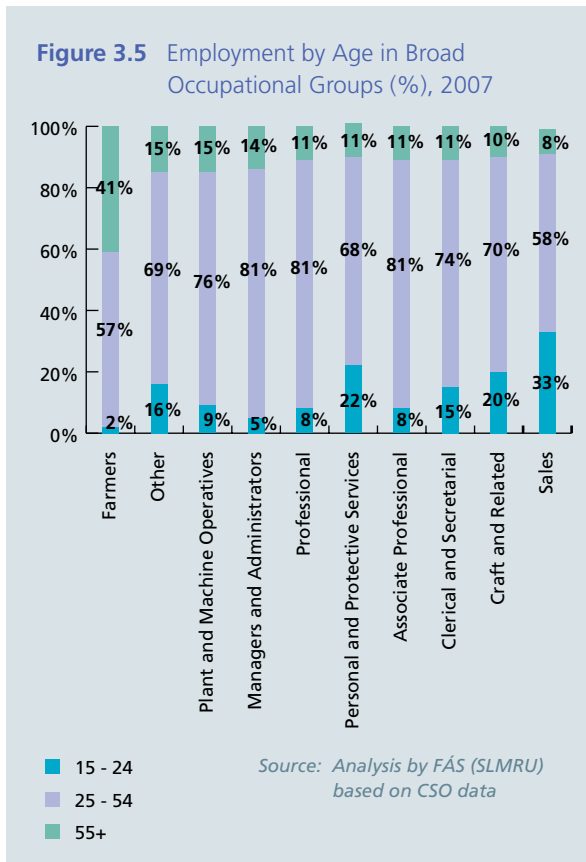
The age distribution of employment in broad occupational groups is presented in Figure 3.5.

One third of all sales workers is younger than 25; the workforce in this occupational group is getting younger with the share of under 25s increasing and the share of over 55s decreasing on the previous year by one percentage point.

One fifth of all craftspersons and all service workers are under 25, however, there are signs of aging in these occupational groups with the share of under 25s declining by one percentage point on the previous year.

Less than 10% of all professionals and associate professionals are younger than 25 which is primarily due to the fact that these positions tend to be associated with longer periods of study before entry. Similarly, only 5% of all managers are younger than 25 given that in most instances experience is a prerequisite for entry to managerial positions.

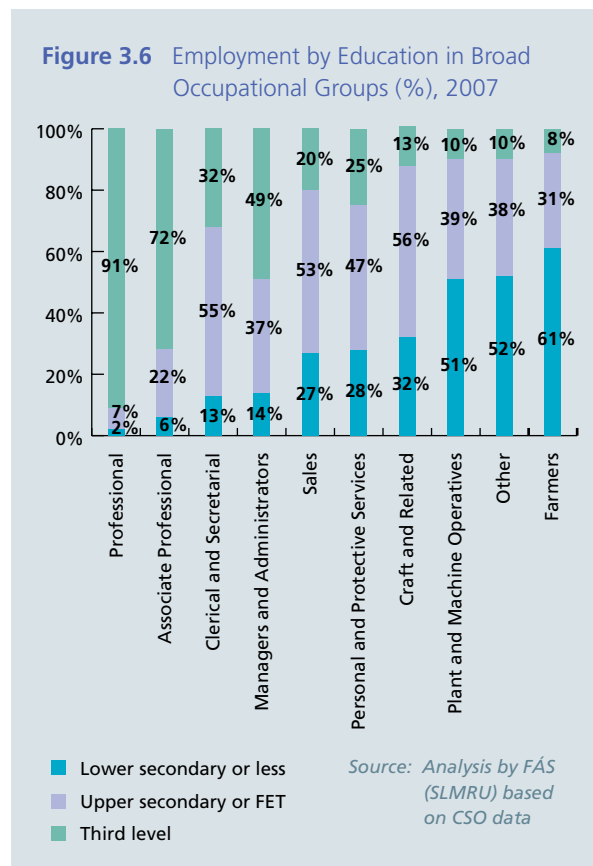
As before, the age distribution of the farming workforce is skewed towards older workers, with 41% farmers aged over 55.



### 3.5 Employment by Education

Figure 3.6 presents the education distribution of employment in broad occupational groups in 2007. As before, the highest proportion of third level graduates is found in professional and associate professional occupations, with in excess of 90% and 70%, respectively. However, the share of graduates amongst professionals and associate professionals has remained unchanged since 2006. In contrast, the share of graduates increased amongst clerks and managers (by three percentage points each), as well as service and craft workers (two percentage points each).

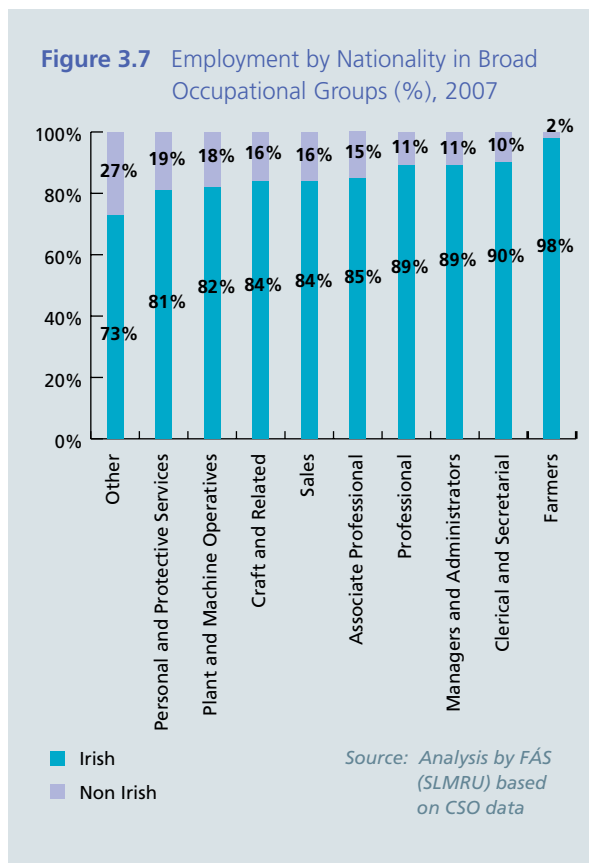
Education attainment is lowest amongst farmers, labourers and machine operatives, where those with lower secondary education or less account for more than a half of the workforce; graduates for 10% or less.



### 3.6 Employment by Nationality

Figure 3.7 presents the employment in broad occupational groups broken down by nationality. In 2007, the CSO revised all QNHS data in line with Census 2006 results. Under this revision, the non-Irish component of the sample, which was underestimated prior to Census 2006, has been adjusted upwards. As a result, the share of non-Irish is significantly higher (in some cases by more than ten percentage points) in 2007 compared to previous years. It is unclear to what extent the difference in figures reflects the increase in the non-Irish component associated with greater sourcing from abroad versus sample adjustment in line with the Census.

Based on the revised figures, non-Irish workers account for at least 10% of the workforce in all occupational groups, with the exception of farmers where the non-Irish component is 2%. While non-Irish workers are found in all occupations, most are sourced for low skilled occupations: more than a quarter of all labourers (classified as other) and almost one fifth of all services workers and operatives are non-Irish.



### 3.7 Employment Status

The employment status of persons in employment by broad occupational group is shown in Figure 3.8. The distribution of employment between employees and the self-employed remained relatively unchanged on the previous year. Most workers in all occupational groups, with the exception of farmers, are employees.

The share of self-employed craftspersons has increased by two percentage points, to 27%, between 2006 and 2007. It is likely that the slowdown in the construction sector has pushed some redundant craftspersons to set-up their own businesses.

One quarter of managers are self-employed a significant majority of whom are proprietors of the businesses they manage e.g. publicans, shop owners.

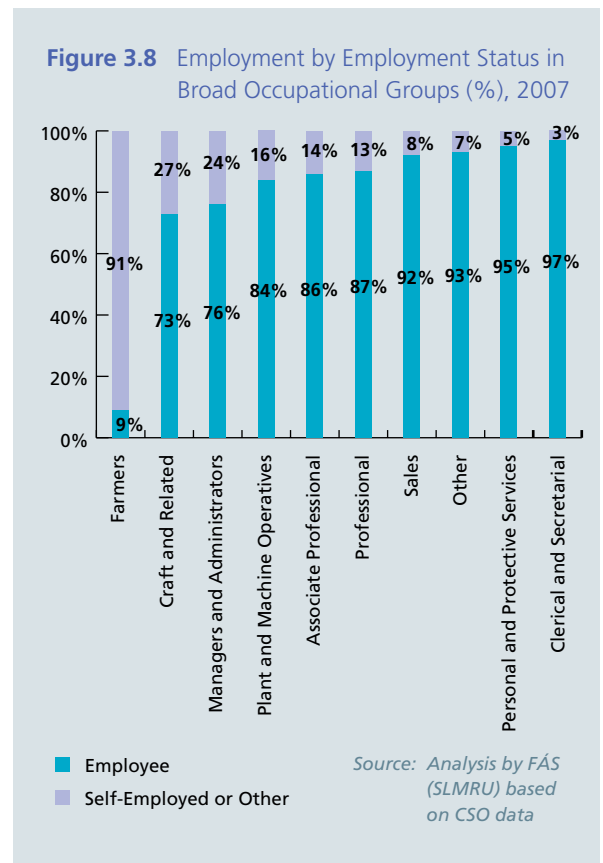
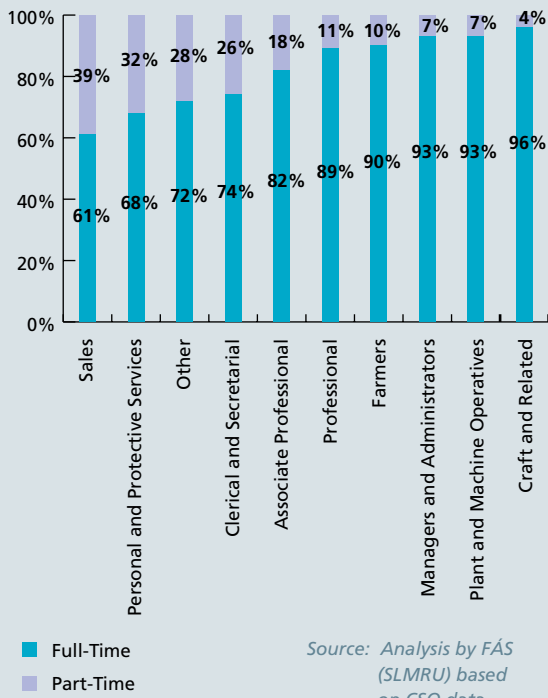


Figure 3.9 presents the distribution of employment in broad occupational groups between full-time and part-time work. As in 2006, employment across all occupational groups is primarily full-time. The highest share of part-time workers is found amongst sales persons, services workers, labourers (due to a large number of part-time cleaners) and clerks, occupations which, incidentally, also have a significant share of female workers.

There is evidence of an increase in part-time employment relative to full-time: the share of part-timers increased amongst professionals, associate professionals, clerks and sales workers by between one and two percentage points since 2006.

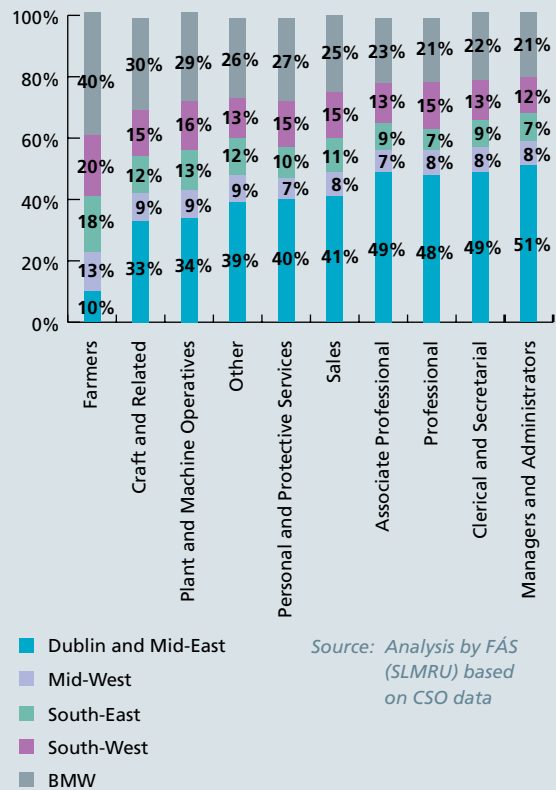
**Figure 3.9** Full-time and Part-time Employment in Broad Occupational Groups (%), 2007



### 3.8 Employment by Region

The regional distribution of employment by broad occupational group is presented in Figure 3.10. With the exception of farmers, at least a third of employment in all occupational groups is located in Dublin and the Mid-East region. Approximately one half of all high skilled jobs (professional, associate professional, managerial and clerical) are based in Dublin and the Mid-East. Craft related and lower skilled work (labouring and machine operating) is more evenly distributed across the country. Farming, as expected, is located outside the urban areas, with 10% of employment in Dublin and the Mid-East region<sup>19</sup>.

**Figure 3.10** Employment by Region in Broad Occupational Groups (%), 2007



19. While regions are defined by NUTS 3, for presentation purposes, the Border, Midlands and West Regions have been grouped together and the Dublin and the Mid East Regions have also been grouped.



# Section 4 - Education and Training

This section presents an overview of the supply of labour from education and training providers in Ireland.

In Ireland, education and training qualifications are classified according to the National Framework of Qualifications (NFQ). The NFQ has ten levels which are described below by award type:

Level 1-2:	Level 1 and 2 Certificate
Level 3:	Level 3 Certificate and Junior Certificate
Level 4:	Level 4 Certificate
Level 4/5:	Leaving Certificate
Level 5:	Level 5 Certificate
Level 6:	Advanced/Higher Certificate
Level 7:	Ordinary Bachelor Degree
Level 8:	Honours Bachelor Degree/Higher Diploma
Level 9:	Masters Degree/Post-graduate Diploma
Level 10:	Doctoral Degree

Table 4.1 shows the estimated number of awards made by public and private education and training providers at various NFQ levels in 2006<sup>20</sup>. Up to end 2007, all awards made were at levels 3-10.

## 4.1 Junior and Leaving Certificate

In 2007, the combined number of Junior Certificate and Leaving Certificate awards totalled 111,300. Of these, 57,400 were Junior Certificate awards, which are placed at level 3 on the NFQ, and 53,900 were for Leaving Certificate awards which span levels 4 and 5 on the

NFQ. The Leaving Certificate awards break down into 36,800 Leaving Certificate Established awards (68% of the total Leaving Certificates); 14,100 Leaving Certificate Vocational Programme awards (26%); 3,100 Applied Leaving Certificate awards (6%).

## 4.2 Further Education and Training

The Further Education and Training Awards Council (FETAC) is the awarding body for further education and training in Ireland. Programmes leading to FETAC awards are offered through: Fáilte Ireland, FÁS, Teagasc, Bord Iascaigh Mhara (BIM), Vocational Education Committees (VECs), adult and community education and training centres, private providers, and the workplace. These range from courses of a short duration (i.e. a number of days) to those of longer duration (i.e. apprenticeships). The FETAC awards shown in Table 4.1 are a combination of certificates (major awards), minor awards, specific purpose awards and supplemental awards.

FETAC awards data for 2007 is presented in Table 4.2. In 2007, a total of 128,624 candidates received 142,648 FETAC awards levels 3 to 6. It is possible for an individual to receive two or more awards.

In 2007, almost 22,700 candidates received certificates (major awards), with the majority of candidates receiving one award. Candidates receiving component awards – obtained by receiving several minor awards – totalled 87,662. Almost 20,300 candidates received specific purpose awards in 2007 and a further 456 candidates received supplemental awards.

**Table 4.1** Summary of Education and Training Awards by NFQ Level, 2007<sup>20</sup>

	Not Placed	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9/10	Total
Junior Certificate		57,400							57,400
Leaving Certificate			54,000						54,000
FETAC		45,450	48,000	113,500	16,700				223,650
Institutes of Technology					13,400		8,600	1,500	23,500
Universities					2,600		16,900	12,100	31,600
Private Colleges	350				1,050		1,700	200	3,300
Professional Institutes	8,000								8,000
<b>Total</b>	<b>8,350</b>	<b>102,850</b>	<b>215,500</b>		<b>33,750</b>		<b>27,200</b>	<b>13,800</b>	<b>401,450</b>

Source: State Examination Commission, FETAC, HEA, HETAC, Professional Institutes, individual contact with private colleges

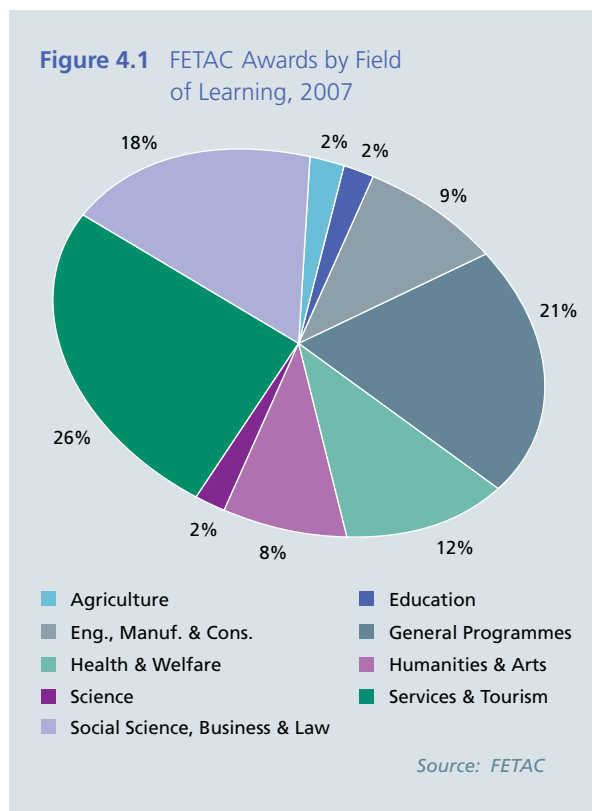
20. Graduation data for universities and Institutes of Technology is based on 2006 data as this is the latest available. All data in Table 4.1 has been rounded. Awards granted to Irish students who undertook studies outside of the Republic of Ireland are not included.

**Table 4.2** FETAC Awards by Award Type and Candidates, 2007

Award Type	No. of Awards	No. of Candidates
Certificates (Major)	22,759	22,689
Components (composite of minor awards)	92,276	87,662
Specific Purpose	24,157	20,290
Supplemental	456	456
<b>Total</b>	<b>142, 648</b>	<b>128,624*</b>

Source: FETAC  
 \* The total number of candidates does not sum up as some candidates gained awards in more than one award type.

Figure 4.1 provides a breakdown of all FETAC awards by field of learning. The highest number of awards was made in services and tourism (58,800), which accounted for 26% of the total. This was followed by awards made for general programmes (46,800, or 21%) and social science, business and law (39,500, or 18%).



FETAC awards by type and level are detailed in Table 4.3. Of the 22,759 certificates, 5% were at level 3, 7% at level 4, 59% at level 5, and 29% at level 6 (Table 4.3). Almost 26% of all certificates were in health and welfare and a further 24% were in engineering, manufacturing and construction.

On average, holders of component awards achieved two minor awards in one year. Therefore, the 95,276 component certificates are comprised of 176,321 minor awards. Of the minor awards, the highest proportion (44%) was at level 5. One quarter of all minor awards was for general programmes (e.g. core skills, communications and job seeking). A further quarter was for courses in the field of services and tourism.

The majority (90%) of specific purpose awards were made at level 5. Almost half of specific purpose awards were made in the services and tourism field of learning.

All supplemental awards were made at level 6 most of which were for gas installation and solar hot water systems courses.

**Table 4.3** FETAC Awards by Award Type and Award Level, 2007

Award Type	Level 3	Level 4	Level 5	Level 6	Total
Certificates	1,051	1,675	13,481	6,552	22,759
Minor	44,394	45,876	78,301	7,750	176,321
Specific Purpose	-	431	21,763	1,963	24,157
Supplemental	-	-	-	456	456
<b>Total</b>	<b>45,445</b>	<b>47,982</b>	<b>113,545</b>	<b>16,721</b>	<b>223,693</b>

Source: FETAC

### 4.3 Universities & Institutes of Technology

#### Level 7/6

In 2006, there were approximately 16,000 level 7/6 graduates from institutes of technology (IoTs) and universities. Graduate output declined by 6.9% when compared to 2005 and now stands at lower than at any time over the period 2002-2006. The number of CAO acceptances for level 7/6 courses has also been declining in recent years and consequently graduate output at this level is set to continue to fall in the medium term.

Figure 4.2 outlines graduates by broad discipline in 2005 and 2006. The decline in the graduate output since 2005 is reflected across several disciplines.

**Computing:** The most significant decline in graduate output over the period 2005-2006 was in computing. The number of graduates in this discipline has fallen by 23% since 2005. A reduced number of computing graduates at this level is expected in the short term given the 11% decline in the number of CAO acceptances for computing courses over the period 2006-2007.

**Health and Welfare:** Health and welfare graduate output declined by over 20% over the period 2005-2006. Although the change in nursing education from a level 7 to a level 8 award had its greatest impact in 2005, the decrease in awards in 2006 is, in part, a residual effect of this change.

**Engineering and Manufacturing:** Graduate output from engineering-related courses declined by 14% over the period 2005-2006. The number of CAO acceptances at level 7/6 for this discipline did not change between 2006 and 2007 thereby suggesting that the declining trend in graduate output may be halted in the short-term.

**Science:** Graduate output has remained relatively unchanged since 2005. However, the declining numbers of students accepting places on science related courses at level 7/6 in recent years will lead to a fall in future graduate output.

**Social Science, Business and Law:** Despite a 12% decline in graduate output from this discipline between 2005 and 2006, social science, business and law courses had the largest number of graduates at this level in 2006.

**Figure 4.2** Graduations in Universities and IoTs at Level 6/7, 2005 and 2006



## Level 8

In 2006, approximately 25,500 level 8 awards were made by universities and IoTs. This represents an increase of 3.5% since 2005. Graduate output at this level is expected to increase into the future, given the continued rise in the numbers of students accepting CAO offers of level 8 courses (+5% since 2005).

Figure 4.3 shows graduates by broad discipline for IoTs and universities for 2006.

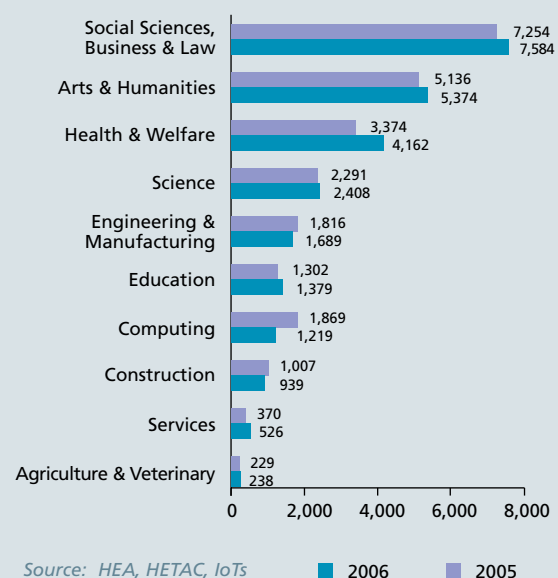
**Computing:** The significant declines in graduate output which occurred between 2004 and 2005 continued into 2006 when graduate output at this level fell by 35%. This trend is expected to continue in the short term due to the 48% drop in the number of CAO acceptances since 2002. More recently, however, the number of CAO acceptances is showing signs of recovery with a 2% increase between 2005 and 2006 and this should have a positive effect on output in the medium term.

**Health and Welfare:** The number of graduates in this discipline increased by 23% over the period 2005-2006, due mainly to changes in nursing education.

**Engineering and Manufacturing:** There was a 7% decline in graduate output from engineering related courses. This decline is expected to continue in the short-medium term due to a 25% decrease in the number of CAO acceptances since 2002. Thereafter, however, the trend may be reversed, albeit modestly, due to the 4% increase in CAO acceptances recorded between 2006 and 2007.

**Science:** Over the period 2005-2006, graduate output in this discipline increased by 5%, but further significant increases are not expected in the medium term due to the overall decline in CAO acceptances for science-related courses.

**Figure 4.3** Graduations in Universities and IoTs at Level 8, 2005 and 2006



## Level 9/10

Level 9/10 refers to graduate diplomas, taught and research master degrees and doctorates. There were 13,550 graduates at levels 9/10 from universities and IoTs in 2006 – an increase of 48% since 2002. Graduate enrolments have increased steadily in recent years which will lead to further growth in graduate output for all award types at levels 9/10.

Over half (55%) of level 9/10 awards in 2006 were for master degrees; postgraduate diploma/certificate awards made up 38%: doctoral awards made up 7% (over 950 awards) of the total in 2006.

Figure 4.4 presents the discipline breakdown of level 9/10 awards for 2005 and 2006. In 2006, social science, business and law accounted for over one third of all awards. This was followed by education (17%) and health and welfare (16%).

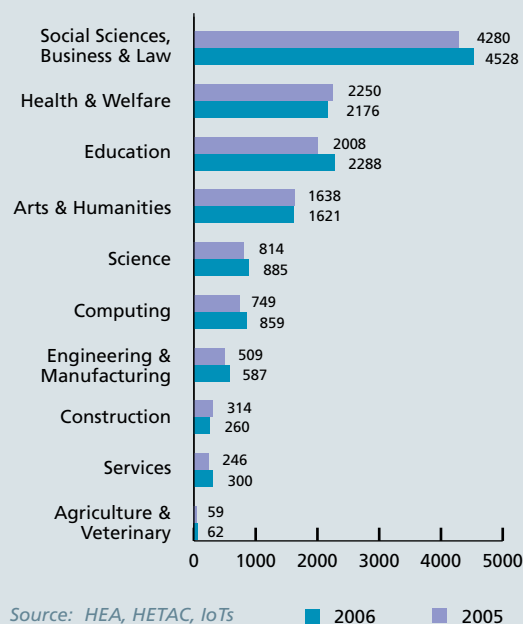
**Health and Welfare:** There were approximately 75 fewer awards (-3%) in health and welfare in 2006 compared to 2005. Almost two thirds of awards were for postgraduate diplomas which were made mostly in the university sector.

**Computing:** Over the period 2005-2006, the number of awards made in this discipline increased by approximately 15%. Master degrees made up more than two thirds of awards at this level in 2006.

**Science:** More than 340 doctoral degrees were awarded in science in 2006, accounting for more than one third (35%) of all doctoral degrees in 2006.

**Engineering and Manufacturing:** Over 14% of all doctoral degrees in 2006 were in this discipline. At 62%, the majority of postgraduate engineering and manufacturing awards were made for master degrees.

**Figure 4.4** Graduations in Universities and IoTs at Level 9/10, 2005 and 2006



## 4.4 Private Education and Training

Education and training in Ireland also includes a small, but significant, private sector. Private education and training includes private colleges and professional institutes. Courses offered in private colleges are accredited by a variety of awarding bodies including the Higher Education and Training Awards Council (HETAC) and the National University of Ireland (NUI). Professional institutes provide training for occupations such as bankers, accountants, insurance brokers, lawyers, managers, etc. In the main, professional institutes act as their own awarding bodies<sup>21</sup>.

### Awards Discipline

Table 4.4 provides a breakdown of the private education awards (private colleges and professional institutions) by discipline. Business, law and administration awards account for most of the awards made in the private education data examined here, totalling over 8,500 in 2007. Almost 6,000 of these awards were made to students registered with professional institutions and the majority are in the specific areas of banking and accountancy. Arts and humanities account for 22% of all awards and include specific subjects such as education and management. The science category is made up predominantly of awards made for computing studies.

21. The data in this section is not directly comparable with that in the National Skills Bulletin 2007 as we were unable to (a) obtain data from the same sources as last year and (b) obtain data in a similar format (i.e. at course level). Only professional institutes that act as education or training providers are included in this analysis in order to avoid any double counting which may arise in cases where students must source their own education via private or public bodies.

**Table 4.4** Private Education Awards by Discipline, 2007

Discipline	Total	%
Arts & Humanities	2493	22%
Business, Law & Administration	8568	76%
Science	256	2%
<b>Grand Total</b>	<b>11,317</b>	<b>100%</b>

Source: HETAC, private colleges, professional institutions

### Awards Level

While all HETAC awards are placed on the NFQ, many of the professional institutes' awards are currently not aligned with the Framework. We therefore look at awards by level in two sections: Table 4.5 gives a breakdown by NFQ level for private colleges and Table 4.6 presents a breakdown by broad level for professional institutes.

More than half of HETAC awards made in the private education sector in 2007 were level 8 awards; almost one third, level 7/6. Awards made at levels 6-8 were mostly in arts and humanities. Post-graduate awards (levels 9 and 10) made up 6% of the total and were mostly in business and administration. The other category is made up of awards made in private colleges that are not awarded by HETAC.

**Table 4.5** Private Awards by Level

Level	Total	%
Level 7/6	1,034	31%
Level 8	1,707	52%
Level 9/10	209	6%
Other	349	11%
<b>Grand Total</b>	<b>3,299</b>	<b>100%</b>

Source: HETAC; individual contact with private colleges

Although there are some exceptions, awards made by professional institutes are not made according to NFQ levels. However, in consultation with the main providers, it was possible to discern three broad levels for the programmes they offer: sub-degree, degree- level and post-graduate level. Table 4.6 shows the awards by level made by professional institutes in 2007. More than 8,000 awards were made by professional institutes in 2007, more than half of which were at sub-degree level (53%), one third at post-graduate level and 13% at degree level.

Overall, awards by professional institutes were made predominantly in the areas of banking, accountancy, insurance, tax and law. Post-graduate awards were made predominantly in the areas of accountancy; degree

awards in banking and taxation; the sub-degree category is in banking and insurance.

**Table 4.6** Professional Institutions Awards by level, 2007

Level	Total	%
Sub-degree	4,218	53%
Degree	1,079	13%
Postgraduate*	2,721	34%
<b>Total</b>	<b>8,018</b>	<b>100%</b>

Source: Individual contact with professional institutes

\* Some data from 2006

## 4.5 Irish Students Abroad

Every year, thousands of Irish students undertake studies at universities abroad, mostly in the UK<sup>22</sup>. The OECD holds data on foreign student enrolments in universities of OECD countries. Data is broken down according to the type of programme: Tertiary Type A programmes are comprised of bachelor, post-graduate diploma and master degree courses; Advanced Research programmes are doctoral programmes.

Table 4.7 presents Irish students' enrolments in foreign universities by type of programme for 2005, the latest year available. There were almost 18,000 Irish students enrolled in foreign universities in 2005. The vast majority of Irish students abroad (98%) were enrolled in English speaking countries, chiefly in the UK, and to a lesser extent, the USA and Australia.

Three quarters of Irish students abroad were enrolled in Tertiary Type A courses.

**Table 4.7** Irish Students' Enrolments in Foreign Universities by Type of Programme, 2005

	Tertiary Type A	Advanced Research	Unspecified	Total
UK	13,058	1,117	2,170	<b>16,345</b>
USA			1,019	<b>1,019</b>
Australia	1	24	156	<b>181</b>
Others	113	4	10	<b>127</b>
Denmark	104	1	11	<b>116</b>
Sweden	68	0	0	<b>68</b>
<b>Total</b>	<b>13,344</b>	<b>1,146</b>	<b>3,366</b>	<b>17,856</b>

Source: OECD Education Online Database

Readers interested in a more detailed account of Education and Training data are referred to a report entitled, Monitoring Ireland's Skills Supply: Trends in Education/Training Outputs (EGFSN, 2008).

22. 'Irish students' refers to students whose permanent address is located in the Republic of Ireland.

# Section 5 - Employment Permits

For the citizens of the EU (with the exception of Romania and Bulgaria) there are no access restrictions to the Irish labour market. On the other hand, non-EU, Bulgarian and Romanian citizens must obtain an employment permit from the Department of Enterprise, Trade and Employment (DETE) prior to entering the Irish labour market. In this section, we provide an overview of the extent to which employers source labour from outside the EU. This is done by looking at the statistics on new employment permits issued since the Employment Permits Act was implemented in Feb 2007 to the end of that year. In theory, this provides an indication of the areas in which employers cannot find a sufficient supply of skills in the EU (excluding Romania and Bulgaria).

Figure 5.1 shows the number of new employment permits issued in each permit category per month. In 2007, 9,148 new employment permits were issued. This is broadly in line with the combined number of new work permits and work visa/authorisations (two schemes run prior to the Employment Permits Act) issued in 2006. However, this is also significantly less than the number of permits issued annually at the turn of the century, when the average for the period 2000-2003 was circa 20,000. After a peak of over 1,300 new permits issued in July 2007, the number of monthly issued new permits has been declining.

## Employment permit scheme

At 3,891, the highest number of permits issued to non-EU workers in 2007 was in the employment permit category. The employment permit scheme covers employment permits for occupations in the salary range €30,000 - €60,000 which are not covered by the green card scheme. Application is subject to a labour market test, whereby a vacancy must be advertised with FÁS, EURES - European job mobility portal - and in the national newspaper as proof that no suitable EU candidates are available. There are some occupations with a salary less than €30,000 which are eligible for an employment permit.

On average, there were approximately 350 employment permits issued monthly. In terms of sectors (Table 5.1), most employment permits were issued in the areas of healthcare, catering, services and agriculture. In terms of occupations (Table 5.2), those most frequently sourced through the employment permit scheme included chefs, medical practitioners, nurses, food processors (butchers/meat cutters), care assistants and labourers in farming (primarily work riders for the equestrian sector).

## Green card scheme

In 2007, just fewer than 3,000 green cards were issued to non-EU workers. A green card is an employment permit issued to an employee which allows employment in a specified occupation. It covers all occupations if the gross annual salary is greater than €60,000 and selected occupations associated with a high level of strategic skills with a salary range of €30,000 - €60,000. These include selected professional and associate professional occupations in the areas of healthcare, construction, engineering, IT, finance and science.

On average, 270 new green cards were issued monthly. Almost one half of all new green cards were issued for the healthcare sector and a fifth for the IT sector. In terms of individual occupations, more than a third of all new green cards were issued to nurses. This was followed by the number of green cards issued to the accounting (qualified accountants and accounting technicians) and IT staff (system analysts, programmers, software engineers).

## Intra-company transfers (ICT)

In 2007, 374 ICT permits were issued to non-EU nationals. The ICT scheme was re-introduced in February 2007 in order to facilitate the transfer of staff from an overseas branch of a multinational company to its Irish branch.

Given that the ICT scheme is primarily designed for senior management and staff with specialist knowledge requiring a high level of qualification, experience or specialist technical knowledge, almost 40% of the permits issued in this category were for managers, particularly in the area of finance, marketing and production.

## Employment permits for spouses and dependants of employment permit holders

In 2007, 1,785 employment permits were issued to spouses and dependants of employment permit holders. This scheme was introduced to allow spouses and dependants of employment permit holders to apply for an employment permit, regardless of the occupation they are in and without a labour market test. During 2007, these permits were primarily issued for the healthcare sector (primarily for care assistants) and the services sectors (for sales assistants, cleaners and catering staff).

## Training

In 2007, 127 employment permits were issued for training purposes. More than 90% of training permits were issued for the manufacturing sector.

Figure 5.1 New Employment Permits by Type, 2007

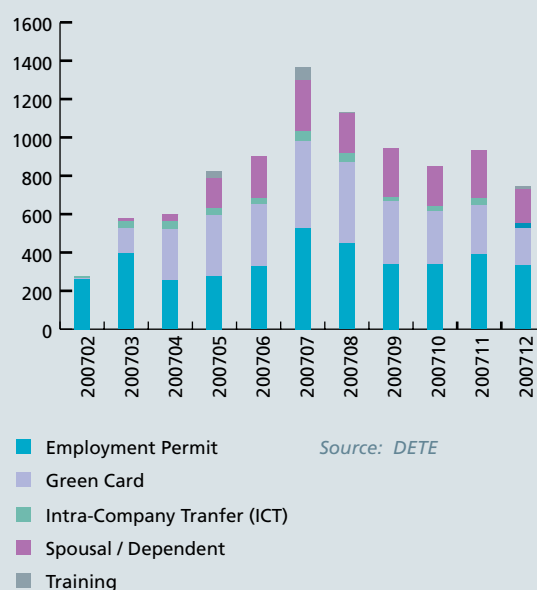


Table 5.1 New Employment Permits by Sector, Feb-Dec 2007

Sector	Employment Permit	Green Card	ICT	Spousal	Training	Total
Agriculture and Fisheries	241	1	2	29	2	275
Catering	438	7	2	138		585
Construction	117	145	11	31		304
Domestic	54			38		92
Education	116	18		41		175
Entertainment	16	2		3		21
Financial Services	135	485	54	75	1	750
Government	5	1		1		7
Healthcare	776	1,359	3	466		2,604
Information Technology	163	570	19	57	1	810
Legal Services	4	16		9		29
Manufacturing	79	64	129	56	120	448
Pre New Legislation Permit	905	12		16		933
Research	167	45	4	4		220
Retail	71	14	5	155		245
Services	360	201	141	638	3	1,343
Sport	81	5		5		91
Tourism	45	3	4	18		70
Transport	118	23		5		146
<b>Total</b>	<b>3,891</b>	<b>2,971</b>	<b>374</b>	<b>1,785</b>	<b>127</b>	<b>9,148</b>

Source: DETE

**Table 5.2** New Employment Permits by Type and Most Frequent Occupations, Feb-Dec 2007

Type of permit/ occupation	New permits	%
<b>Employment permit (of which)</b>	<b>3,891</b>	<b>100%</b>
Chefs	457	12%
Medical practitioners	330	8%
Nurses	192	5%
Butchers / meat cutters	179	5%
Care assistants and attendants	174	4%
Labourers in farming	127	3%
Other	2,432	63%
<b>Green card (of which)</b>	<b>2,971</b>	<b>100%</b>
Nurses	1,147	39%
Accounting staff	236	8%
Software engineers	202	7%
Computer programmers / analysts	171	6%
Other	1,215	41%
<b>ICT (of which)</b>	<b>374</b>	<b>100%</b>
Financial managers	38	10%
Managers (unspecified)	30	8%
Marketing managers	29	8%
Production managers	29	8%
General managers	18	5%
Other	230	61%
<b>Spousal/Dependent (of which)</b>	<b>1,785</b>	<b>100%</b>
Care assistants and attendants	271	15%
Sales assistants	137	8%
Cleaners	87	5%
Catering assistants	83	5%
Clerks	61	3%
Other	1,146	64%

Source: DETE



# Section 6 - Vacancies

## 6.1 Introduction

This section provides an overview of labour demand expressed in terms of the stock of recently notified job vacancies and the related trends.

The Skills and Labour Market Research Unit (SLMRU) collects vacancy data from FÁS, the Irish Times and IrishJobs.ie. FÁS, in conjunction with the ESRI, also carries out a monthly survey of employers on difficult to fill vacancies (ceased since April 2008). In December 2007, the SLMRU initiated a six-monthly survey of recruitment agencies and here we report the results of the first run of this survey.

It is important to note that there are several issues in using advertised job vacancies as an indicator of demand:

- vacancies may be advertised through channels not captured in the analysis leading to an underestimation of the true demand
- vacancies may be advertised simultaneously through several channels leading to an overestimation of the true demand
- the extent to which vacancies are arising due to expansion demand (the creation of a new position by an employer), replacement (a person leaving an already existing position) or other reason is unclear
- difficulty in distinguishing between true vacancies and persistent agency advertisements for profiles which are in demand in general can lead to an overestimation of the true demand
- the difficulty, if any, in filling a vacancy with a suitable candidate is unclear; this prevents the use of vacancies as an indicator of skills shortages
- the length of time it takes to fill the vacancy is unclear; this prevents the use of vacancies as an indicator of skills shortages.

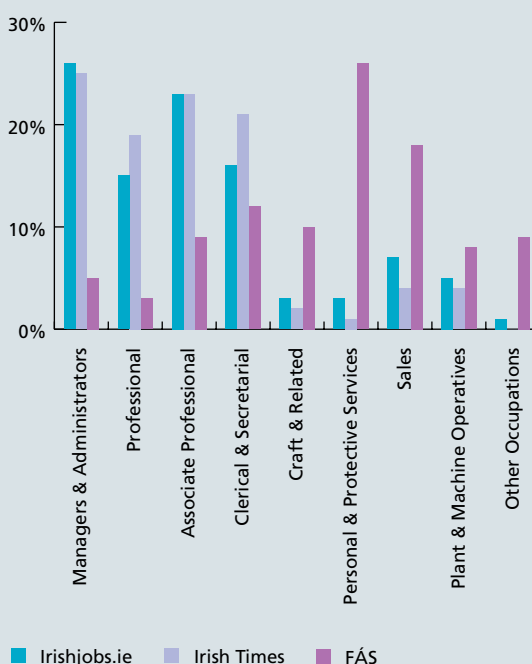
For this reason we express data in relative rather than absolute terms.

The above limitations notwithstanding, an analysis of vacancy data serves as a useful indicator of the areas where the vacancies are and how this changes over time.

## 6.2 Notified vacancies

The occupational distribution of vacancies in 2007 is presented in Figure 6.1. IrishJobs.ie and the Irish Times seem to be favoured for the advertisement of higher skilled (professional, associate professional and managerial) jobs, which account for over 60% of all notified vacancies to these agencies. Lower skilled vacancies (operatives, labourers, service and sales jobs) account for over 60% of all notified vacancies to FÁS. The share of vacancies for clerical positions is broadly comparable across all agencies, while FÁS is favoured over the other two agencies for the advertisement of craft related positions.

**Figure 6.1** Vacancies by Occupational Group (%), 2007



### 6.3 Difficult to Fill Vacancies

Figure 6.2 presents the results of the difficult to fill vacancy survey carried out by FÁS/ESRI.

Since the start of the survey in 2002, the average annual percentage of firms with vacancies experiencing difficulties in filling them has been on an upward trend. A marked increase was recorded in 2007, when the percentage of companies reporting difficult to fill vacancies rose from 73% to 86%. However, the first quarter of 2008 suggests that the trend could be reversing, with the share declining to 83% by April 2008.

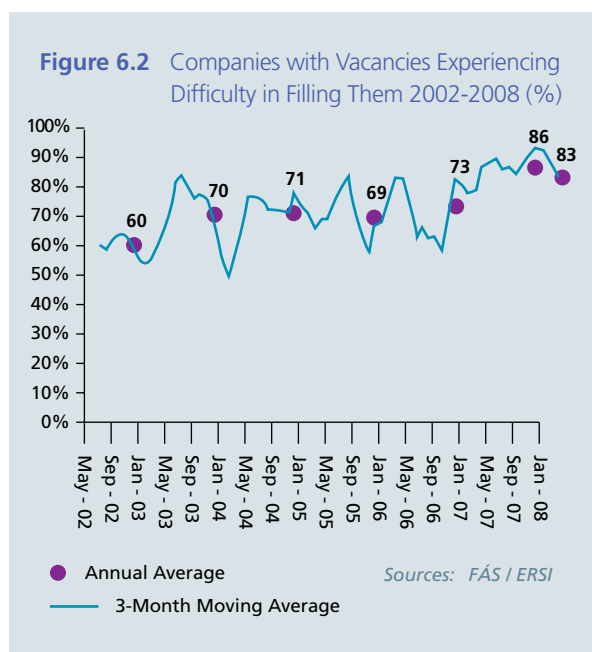


Table 6.1 presents the sectoral distribution of the job titles mentioned as difficult to fill in the FÁS/ESRI vacancy survey. The distribution remains broadly similar to that recorded in 2006. The highest share of mentions in 2007 was in the industrial sector, which is in line with the preceding year.

**Table 6.1** FÁS/ESRI Difficult to Fill Mentions by Sector, 2005-2007 (%)

Level	2005	2006	2007
Construction	20%	15%	16%
Industry	32%	48%	44%
Retail	13%	8%	12%
Services	34%	30%	28%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: FÁS/ESRI

Table 6.2 presents the occupational distribution of the difficult to fill mentions. In 2007, as in preceding years, it was most difficult to source labour for high skilled jobs: managerial, professional and associate professional. Difficult to fill mentions for high skilled

persons accounted for more than a half of the total in all periods observed. In 2007, it was also difficult to source craftsmen and operatives, primarily those employed in the construction sector.

**Table 6.2** FÁS/ESRI Difficult to fill mentions by occupational group, 2005-2007 (%)

Level	2005	2006	2007
Managers and administrators	21%	19%	22%
Professional	15%	16%	13%
Associate professional	18%	15%	18%
Clerical and secretarial	9%	11%	9%
Craft and related	13%	12%	12%
Personal and protective services	3%	4%	3%
Sales	10%	10%	9%
Plant and machine operatives	9%	9%	12%
Other occupations	3%	4%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: FÁS/ESRI

Table 6.3 lists the five occupations which were most frequently mentioned as difficult to source each year since 2005. The occupations most difficult to source have remained broadly unchanged over the last number of years. At the higher end of the skills scale, in 2007, it was most difficult to source marketing managers and quantity surveyors, while at the lower end of the scale it was hard to source sales assistants, fitters and machine tool operatives.

**Table 6.3** Occupations Most Frequently Mentioned as Difficult to Fill (Top 5), 2005-2007

Level	2005	2006	2007
1	Building managers	Marketing managers	Marketing managers
2	Quantity surveyors	Sales assistants	Sales assistants
3	Sales assistants	Production managers	Metal working & maintenance fitters
4	Truck drivers	Building managers	Quantity surveyors
5	Marketing managers	Quantity surveyors	Machine tool operatives

Source: FÁS/ESRI

## 6.4 Recruitment Agency Survey

In December 2007, the SLMRU conducted an electronic survey of all registered recruitment agencies in Ireland on difficult to fill vacancies. The key points from the December 2007 survey can be summarised as follows:

- Job titles most frequently mentioned as difficult to source included:
  - Fund accountant/administrator and other accounts personnel
  - Accountant
  - Software developer
  - Nurse (various types)
  - Civil engineer
  - Marketing manager/business development managers
  - Environmental health/occupational hygienist
  - Technical sales representative
  - Quantity surveyor.
- There was an indication that the labour market was loosening, with some recruitment agencies stating that the business was slowing.

# Section 7 - Occupational Employment Profiles

In this section we examine employment trends by occupation. The statistical analysis covers the period 2002-2007, which is the most recent detailed quantitative occupational information available. However, given their severity, the developments since the beginning of 2008 have also been taken into consideration when commenting on skill shortages.

The section is organised as follows: first, a table containing most of the data used in the analysis is presented (Table 7.1); this is followed by profiles of selected occupations.

Table 7.1 contains demand and shortage indicators for selected occupations and broad occupational groups which were used in the analysis of skills shortages. The contents of the table are as follows:

**Column 1** contains occupation titles. Occupations highlighted in bold are broad occupational groups. Below most broad occupation titles, the key individual occupations comprising that group are detailed.

**Column 2** presents the employment stock for each occupation. Employment is reported as an annual average for 2007. Source: Analysis by FÁS (SLMRU) based on data provided by the Central Statistics Office – Quarterly National Household Survey (QNHS).

**Column 3** shows the percentage of females in the employment stock of an occupation. Source: Quarter 2 2007 QNHS.

**Column 4** shows the percentage of part-time workers in the total employment of an occupation. Source: Quarter 2 2007 QNHS.

**Column 5** gives an indication of the unemployment levels in broad occupational groups. The unemployment rate is calculated by dividing the number of unemployed in an occupational group by the total employment and unemployment of that group. The unemployment rate is indicated as follows:

- 'below average' for unemployment rates less than 3%
- 'average' for unemployment rates in the range 3%-6%
- 'above average' for unemployment rates greater than or equal to 6%.

Only unemployed persons who stated their occupations are captured in this indicator. As a result, the indicator used here could understate the true unemployment level in an occupational group. Source: Quarter 2 2007 QNHS.

**Column 6** shows the percentage of persons older than 55 in the total employment of an occupation. This indicator was used in combination with the replacement rate (Column 11) to estimate the replacement demand for an occupation. An age distribution skewed towards older workers indicates higher retirement rates in the short to medium term. Source: Quarter 2 2007 QNHS.

**Column 7** shows the percentage of non-Irish persons in the total employment in each occupation. A higher than average proportion of non-Irish nationals in an occupation suggests that Irish employers have had to look outside of the Irish labour supply to fill vacancies. Source: Quarter 2 2007 QNHS.

**Column 8** shows the average annual employment growth for the period 2002-2007. This was used to assess current employment growth trends and may be a guide to future trends. Source: QNHS 2002-2007.

**Column 9** presents the number of new employment permits issued for each occupation for the year 2007. This data was used as an indicator of demand for labour that could not be met from domestic or EU sources. Source: Department of Enterprise, Trade and Employment.

**Column 10a** reports the number of employers who mentioned a specific occupation as difficult to fill. A frequent difficult to fill mention was used as an indicator of a shortage. Source: FÁS/ESRI Monthly Employment and Vacancy Survey Report, Jan-Dec 2007.

**Column 10b** reports the results of the SLMRU Recruitment Agency Survey. Occupations which were frequently mentioned as difficult to fill are indicated by 'X'. Source: FÁS/SLMRU Recruitment Agency Survey, December 2007.

**Column 11** contains replacement rates for each occupation. The replacement rate indicates the share of employment in an occupation which is expected to be lost each year as a result of workers moving to other occupations, retirement, illness, emigration or death. In other words, the replacement rate reflects the minimum number of persons required annually to preserve the existing employment stock in each occupation. Source: Current Trends in Occupational Employment and Forecasts for 2010 and 2020: Final Report to the Expert Group on Future Skill Needs. ESRI, 2006.

**Column 12** provides an indication of shortage for each occupation. The indicator was derived by considering all indicators (columns 2-11), as well as by using additional

information on vacancies, education and relevant qualitative information including recent and on-going sectoral studies. The following explains the indicator of shortage:

- 'no shortage' is used for occupations where there are no apparent labour market imbalances
- 'skill shortage' is used for occupations where shortages of skills have been identified
- 'labour shortage' is used for occupations where there is an insufficient number of individuals willing to take up employment opportunities
- 'inconclusive' is used for occupations where available quantitative information is insufficient for the identification of shortages.

For grouped occupations an indication of shortage does not mean that all occupations in the grouping are in short supply.

The term 'shortage' in this report refers only to the situation where the supply of skills or labour from within the Irish workforce is insufficient to meet demand. It may be the case that there is a sufficient supply of skills or labour for the occupation in question within the EU25. Consequently, there may not be a shortage from an EU perspective.

**Column 13** elaborates further on the shortages identified in column 12. So that:

- 'S' stands for significant shortage
- 'C' stands for current shortage
- 'F' stands for possible future shortage.

Using the data from the Table 7.1, individual occupations were examined in detail. The analysis covered 125 occupations, which were grouped into families of skills. These were:

- Scientists
- Engineers
- IT occupations
- Business & Financial occupation
- Healthcare occupations
- Education occupations
- Social and Care occupations
- Legal & Security occupations
- Construction professional occupations
- Construction craft occupations
- Other craft occupations
- Arts, Sports & Tourism occupations
- Transport & Logistic occupations

- Clerical occupations
- Sales occupations
- Operatives
- Labourers

In general, occupations in the same sector or occupations with similar duties are grouped together. First, the level of employment for each occupational group in 2007 is presented. This is followed by an examination of employment growth trends for the period 2002-2007. Small occupations are either excluded or grouped. Subsequently, age profiles are analysed by grouping employment into the following categories: persons aged 15 to 24, 25 to 54 and 55 or older. This is followed by an examination of education profiles by grouping employment into the following categories: persons with lower secondary education or less; upper secondary or further education and training (FET); and third level education<sup>23</sup>.

Each section also contains a summary of the balance between the demand and supply. For each occupation we estimated the recruitment requirement by combining expansion and replacement demand. Expansion demand was based on the most recent employment growth rates. However, in many cases, where recent employment increased rapidly, the growth rates were moderated to reflect the recent slow-down in employment growth. This was done to avoid overestimation of demand.

The supply of skills was approximated using the expected output from the formal education system<sup>24</sup>. The expected output was derived using third level enrolment and graduation data, as well as data from FÁS and other education providers. All of this data is held in the National Skills Database in FÁS at course level.

Supply data at occupational level is not reported due to the complexity of linking course output to specific occupations (e.g. business courses can be a source of supply for numerous occupations). In addition, for the majority of occupations, there are no mandatory qualification requirements, which further complicate the task of determining supply. Thus, the intention is not to provide an exact quantification of supply for each occupation but rather to obtain a general approximation.

By comparing estimates of demand and supply, an indication of potential shortage was derived. In addition, the other shortage indicators (e.g. work permits, difficult to fill vacancies, etc.) were examined to reinforce the findings. The results also drew on conclusions from previous reports produced by the Expert Group on Future Skills Needs and other qualitative information where available. The objective was to identify areas of shortages, without quantifying them.

23. Due to rounding, some percentage figures in relation to the age and education profiles of occupations may not add up to 100%.

24. It should be noted that it is possible that individuals do not work in the occupations for which they are trained.

Identified shortages are classified as skill or labour shortages and an indication of the persistence of shortages is also discussed. Given that the findings are based on current data, future shortages are only indicated in cases where there is clear evidence that the shortages will persist or where current trends in education provision indicate that future shortages will emerge.

A skills shortage may arise for a number of different reasons. For example, the working conditions may be such that relatively few people with the relevant skills are attracted to the occupation in question. The shortage may also reflect a temporary or a sustained increase in the demand for a particular expertise, or a reduction in the number of students who are acquiring the relevant qualifications.

The most effective way to alleviate a shortage will depend on why the shortage has arisen. For example, if the shortage is of a temporary nature, it may be more effective to source the scarce skills from abroad rather than increasing the number of student places in the relevant disciplines. If the shortage reflects poor working conditions it may be more effective to improve those conditions than to encourage an increase in the supply of persons with the relevant skills.

It is outside the scope of this bulletin to provide an analysis of why shortages have arisen in certain occupations. However, it is important for policy makers to appreciate that the existence of shortages does not necessarily require a response from Government, either in terms of increasing education or training provision or in terms of increasing immigration.

The purpose of this bulletin is solely to identify occupations where shortages exist. Identification of the cause of these shortages and the appropriate (if any) policy response requires further research. The EGFSN's research programme includes a number of such studies.

Table 7.1 Demand and Shortage Indicators for Selected Occupations

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
<b>General managers and administrators</b>	20.6	38.1%	7.6%	Below Average	18.8%	5.1%	7.5%	53	1		-1.5%	No shortage	
<b>Production managers in industry</b>	27.2	20.0%	3.3%		16.9%	10.8%	0.6%	120	75		-1.5%	No shortage	
Building managers	6.8	12.0%	3.7%		20.1%	16.4%	0.9%	36	40		-1.5%	No shortage	
<b>Specialist managers</b>	43.2	38.1%	6.3%	Below Average	7.5%	11.2%	3.4%	324	110		-1.5%	Skill Shortage	
Marketing etc. managers	20.2	34.5%	5.9%		8.4%	8.5%	3.0%	146	92	X	-1.5%	Skill Shortage	C
Purchasing managers	1.6	17.1%	0.0%		10.7%	9.1%	3.8%	7	2		-1.5%	No shortage	
Advertising & pr managers	3.5	57.0%	12.3%		4.2%	11.8%	11.0%	20	4		-1.5%	No shortage	
Personnel managers	6.4	72.4%	8.1%		4.3%	11.0%	7.0%	25	3		-1.5%	No shortage	
Computer systems managers	9.3	15.7%	3.3%		6.5%	18.8%	5.6%	55	5		-1.5%	Skill Shortage	C,F
<b>Financial institution and office managers</b>	35.7	62.8%	10.6%	Below Average	7.9%	10.6%	2.0%	155	46		-1.5%	No shortage	
Bank and other financial managers	27.6	62.6%	11.9%		8.2%	11.1%	2.9%	149	46		-1.5%	No shortage	
Credit controllers	3.7	62.4%	5.1%		5.0%	19.2%	3.4%	6	0		-1.5%	No shortage	
<b>Managers in transport and storage</b>	11.6	17.5%	7.2%	Below Average	16.6%	12.1%	0.1%	23	9		-1.5%	No shortage	
Transport managers	4.4	21.2%	6.8%		24.7%	3.7%	-1.1%	4	0		-1.5%	No shortage	
Stores managers	4.0	20.4%	8.9%		7.2%	17.5%	7.1%	14	9		-1.5%	No shortage	
Warehousing managers	3.1	7.3%	4.9%		20.8%	15.0%	-4.7%	5	0		-1.5%	No shortage	
<b>Protective service officers</b>	2.3	2.7%	0.0%	Below Average	24.0%	0.0%	18.4%	1	1		-1.5%	No shortage	

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FAS/ESRI	SLMRU Recruitment Agency Survey			
<b>Managers in farming, horticulture, forestry and fishing</b>													
Farm owners and managers	91.4	7.5%	9.8%		41.1%	1.9%	-1.3%	9	0		3.1%	No shortage	
<b>Managers and proprietors in service industries</b>													
Hotel & accommodation managers	90.8	7.4%	9.8%		41.3%	1.9%	-1.1%	5	0		3.1%	No shortage	
Restaurant & catering managers	70.7	44.2%	8.5%	Average	15.6%	12.0%	-1.8%	102	31		-1.5%	No shortage	
Publicans, innkeepers & club stewards	6.6	60.5%	15.9%		25.8%	17.6%	0.6%	8	7		-1.5%	No shortage	
Entertainment/sports managers	10.1	60.6%	13.1%		5.9%	23.8%	1.3%	48	5		-1.5%	No shortage	
Travel agency managers	5.8	31.5%	10.1%		28.4%	1.9%	-3.7%	0	0		-1.5%	No shortage	
<b>Other managers and administrators</b>													
Natural scientists	2.7	46.6%	10.1%		6.0%	9.1%	5.4%	6	2		-1.5%	No shortage	
Chemists	2.4	78.3%	11.2%		5.7%	20.9%	6.0%	5	1		-1.5%	No shortage	
Biological scientists	15.4	46.8%	5.8%	Below Average	17.5%	8.7%	-3.6%	135	10		-1.5%	No shortage	
Physicists & other natural scientists	10.2	55.9%	8.5%		8.2%	12.8%	8.0%	61	9		2.8%	Skill Shortage	F
<b>Engineers and technologists</b>													
Civil/mining engineers	1.5	57.8%	2.9%		0.0%	4.5%	-3.0%	10	2		2.8%	Skill Shortage	F
Mechanical engineers	5.0	51.9%	11.6%		10.2%	10.3%	10.7%	21	7		2.8%	Skill Shortage	F
Electrical engineers	3.7	59.5%	7.4%		9.6%	19.5%	11.0%	30	0		2.8%	Skill Shortage	F
	43.9	11.6%	2.1%	Below Average	6.0%	16.0%	4.1%	612	73		2.8%	Skill Shortage	C, F
	12.7	10.6%	2.2%		6.8%	14.9%	10.5%	52	13	X	2.8%	Inconclusive	
	4.7	2.2%	0.0%		11.4%	17.7%	4.5%	13	2		2.8%	No shortage	
	4.1	6.7%	0.0%		10.8%	11.3%	6.9%	10	1		2.8%	Skill Shortage	C



Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FAS/ESRI	SLMRU Recruitment Agency Survey			
Electronic engineers	2.8	7.0%	2.2%		8.2%	14.2%	-3.6%	27	1		2.8%	Skill Shortage	C
Software engineers	9.1	16.1%	3.4%		0.0%	24.9%	0.2%	300	11	X	2.8%	Skill Shortage	C,F
Chemical engineers	1.4	19.5%	0.0%		0.0%	7.5%	1.9%	4	2		2.8%	Skill Shortage	C,F
Design & development engineers	1.5	14.3%	0.0%		3.1%	5.0%	-3.0%	57	8		2.8%	Skill Shortage	C
Planning & quality control engineers	2.0	23.5%	8.9%		5.4%	2.5%	2.4%	22	16		2.8%	Skill Shortage	C
Other engineers & technologists n.e.c.	5.7	14.1%	1.2%		6.3%	16.4%	5.6%	127	19		2.8%	Skill Shortage	C
<b>Health professionals</b>	18.6	43.4%	12.0%	Below Average	14.3%	18.5%	5.0%	426	8		2.8%	Skill Shortage	C
Medical practitioners	11.4	40.7%	10.4%		16.5%	21.2%	5.0%	365	0		2.8%	Skill Shortage	C,F
Pharmacists/ pharmacologists etc	3.4	64.2%	18.7%		4.7%	15.2%	4.6%	51	8		2.8%	Skill Shortage	C
Dental practitioners	1.8	36.4%	16.7%		17.8%	10.1%	16.2%	7	0		2.8%	Skill Shortage	C,F
Veterinarians	1.4	11.4%	6.2%		26.5%	12.2%	-1.4%	2	0		2.8%	Inconclusive	
<b>Teaching professionals</b>	87.3	72.8%	17.6%	Below Average	13.7%	8.3%	3.8%	105	0		2.8%	No shortage	
University and IoT lecturers	12.5	45.5%	17.8%		17.7%	23.7%	4.2%	64	0		2.8%	No shortage	
Secondary and vocational education teachers	30.8	70.2%	17.0%		12.6%	6.1%	2.3%	5	0		2.8%	No shortage	
Primary & nursery education teachers	32.5	84.4%	7.5%		12.6%	2.0%	5.0%	10	0		2.8%	No shortage	
Other teaching professionals n.e.c.	11.6	78.9%	41.2%		15.2%	12.5%	4.4%	21	0		2.8%	No shortage	

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
<b>Legal professionals</b>	10.0	44.1%	6.2%	Below Average	9.9%	0.7%	6.3%	36	12	2.8%	No shortage		
Judges, barristers & advocates	1.8	33.3%	0.0%		15.4%	0.0%	4.4%	10	2	2.8%	No shortage		
Solicitors	8.2	46.1%	7.4%		8.9%	0.9%	6.7%	26	10	2.8%	No shortage		
<b>Business and financial professionals</b>	45.0	45.4%	5.9%	Below Average	8.6%	9.8%	7.7%	319	38	2.8%	Skill Shortage		
Accountants & tax experts	38.7	45.5%	5.7%		8.1%	9.2%	7.1%	259	34	2.8%	Skill Shortage	C,F	
Actuaries, economists, statisticians	1.5	36.5%	0.0%		9.2%	10.4%	6.8%	10	8	2.8%	Skill Shortage	C,F	
Business analysts	6.4	49.1%	11.9%		13.0%	12.8%	6.8%	106	1	2.8%	Skill Shortage	C,F	
<b>Architects, town planners and surveyors</b>	9.2	31.9%	6.6%	Below Average	14.3%	18.1%	9.5%	69	28	2.8%	No shortage		
Architects and town planners	7.2	33.7%	7.6%		13.8%	19.7%	11.8%	59	7	2.8%	No shortage		
Building, mining and other surveyors	2.0	26.5%	3.6%		16.0%	13.3%	2.8%	10	21	2.8%	No shortage		
<b>Librarians, archivists &amp; curators</b>	2.0	70.9%	23.7%	Above Average	30.2%	0.0%	0.0%	0	0	2.8%	No shortage		
<b>Other professional occupations</b>	12.2	61.5%	17.3%	Below Average	17.5%	10.2%	6.3%	38	0	2.8%	Skill Shortage		
Psychologists & other social/behavioural scientists	2.4	67.8%	14.5%		7.3%	17.7%	1.1%	12	0	2.8%	Skill Shortage	C	
Social workers, probation officers	6.8	83.6%	25.0%		10.2%	5.9%	16.7%	22	0	2.8%	Inconclusive		
<b>Scientific technicians</b>	21.4	29.8%	5.7%	Below Average	5.6%	9.8%	2.5%	272	51	2.6%	Skill Shortage		
Laboratory technicians	6.6	60.3%	8.2%		5.1%	4.0%	1.0%	63	10	2.6%	No shortage		

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
Engineering technicians	1.3	14.3%	0.0%		13.9%	14.4%	0.8%	19	6		2.6%	No shortage	
Electrical/electronic technicians	1.9	7.2%	0.0%	Below Average	2.3%	15.2%	-7.4%	4	0		2.6%	No shortage	
Architectural and civil engineering technicians	1.1	14.4%	5.2%	Average	3.8%	0.0%	-2.5%	24	9		2.6%	No shortage	
Other scientific technicians n.e.c.	10.5	18.8%	5.9%		5.8%	12.7%	7.3%	162	26		2.6%	Skill Shortage	C
<b>Draughtspersons, quantity and other surveyors</b>	5.8	7.1%	4.7%	Below Average	11.1%	4.5%	5.7%	46	62		2.6%	No shortage	
Draughtspersons	2.0	10.6%	5.3%		10.7%	6.0%	-4.0%	5	7		2.6%	No shortage	
Quantity surveyors	3.8	5.9%	3.7%		9.9%	4.1%	14.3%	40	55	X	2.6%	No shortage	
<b>Computer analyst/programmers</b>	14.7	18.3%	3.0%	Below Average	1.4%	22.4%	-1.3%	273	13		2.6%	Skill Shortage	C, F
<b>Ship/aircraft officers incl. Air traffic controllers</b>	2.4	4.6%	3.9%	Below Average	15.5%	0.0%	2.2%	43	0		2.6%	No shortage	
<b>Health associate professionals</b>	69.6	88.8%	24.9%	Below Average	12.7%	18.1%	4.1%	1641	2		2.6%	Skill Shortage	C, F
Nurses and midwives	55.9	92.0%	25.1%		12.8%	17.9%	3.6%	1392	0	X	2.6%	Skill Shortage	C, F
Medical radiographers	1.0	86.6%	15.2%		10.7%	17.0%	4.8%	59	1		2.6%	Skill Shortage	C, F
Physiotherapists	2.2	87.4%	25.9%		14.4%	16.1%	3.8%	41	0		2.6%	Skill Shortage	C, F
Medical technicians, dental auxiliaries	1.9	59.6%	23.2%		5.0%	14.8%	7.3%	32	1		2.6%	No Shortage	
Occupational & therapists n.e.c.	5.6	81.6%	29.2%		12.3%	25.7%	15.0%	113	0		2.6%	Skill Shortage	C, F
Other health associate professionals n.e.c.	3.7	65.3%	16.4%		11.2%	14.9%	-1.5%	5	0		2.6%	No Shortage	

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
<b>Legal associate professionals</b>	1.0	79.4%	38.5%	Below Average	4.8%	0.0%	-2.3%	8	0	2.6%	No Shortage		
<b>Business and financial associate professionals</b>	14.8	46.0%	8.1%	Below Average	8.6%	15.2%	2.6%	153	63	2.6%	Skill Shortage	C, F	
Underwriters, claims assessors and analysts	10.8	41.7%	6.8%		7.3%	15.1%	4.3%	82	25	2.6%	Skill Shortage	C, F	
Personnel, industrial relations officers	1.9	72.3%	5.7%		6.7%	21.5%	1.1%	9	4	2.6%	No Shortage		
<b>Matrons, houseparents, welfare, community &amp; youth workers</b>	9.3	71.1%	29.9%	Average	15.8%	8.7%	2.2%	45	0	2.6%	No Shortage		
<b>Literary, artistic and sports professionals</b>	31.7	46.1%	18.9%	Average	13.7%	15.6%	6.7%	173	27	2.8%	No Shortage		
<b>Other associate professional and technical occupations</b>	16.0	53.7%	19.9%	Average	15.5%	9.7%	4.2%	246	17	2.8%	No Shortage		
Careers guidance advisors	1.5	69.6%	39.1%		11.9%	6.5%	5.1%	0	0	2.6%	No Shortage		
Vocational, industrial trainers	6.1	51.0%	18.3%		22.1%	6.2%	1.6%	28	6	2.8%	No Shortage		
<b>Administrative/ clerical officers and assistants in civil service</b>	33.4	72.6%	18.1%	Below Average	10.1%	1.0%	2.5%	2	6	3.5%	No Shortage		
<b>Numerical clerks &amp; cashiers</b>	67.5	78.0%	27.5%	Below Average	9.3%	9.7%	3.7%	210	31	3.5%	Skill shortage	C	
<b>Filing &amp; records clerks</b>	9.4	73.2%	30.9%	Average	13.8%	18.6%	0.5%	28	21	3.5%	No shortage		
<b>Other clerks</b>	64.7	79.6%	24.5%	Average	10.8%	9.3%	6.4%	81	19	3.5%	No Shortage		
<b>Warehousemen/ women</b>	21.6	13.9%	12.0%	Average	10.2%	20.3%	2.4%	46	7	3.5%	No Shortage		

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FAS/ESRI	SLMRU Recruitment Agency Survey			
<b>Secretaries, personal assistants etc.</b>	39.4	97.1%	36.8%	Average	13.5%	6.4%	0.3%	20	12		3.5%	No Shortage	
Legal secretaries	5.4	100.0%	25.8%		5.9%	1.8%	9.2%	4	8		3.5%	No Shortage	
Other secretaries	34.0	96.6%	38.6%		14.7%	7.2%	-0.7%	16	4		3.5%	No Shortage	
<b>Receptionists &amp; telephonists</b>	18.0	87.2%	33.4%	Above Average	12.6%	10.7%	2.4%	18	13		3.5%	No Shortage	
<b>Computer &amp; other office machine operators</b>	3.4	41.2%	20.3%	Above Average	5.4%	21.6%	-9.8%	9	5		3.5%	No Shortage	
<b>Construction trades</b>	87.8	2.0%	3.2%	Average	11.1%	17.8%	9.5%	51	15		2.7%	No Shortage	
Bricklayers, masons	16.2	0.6%	2.2%		5.2%	28.3%	10.1%	8	0		2.7%	No Shortage	
Roofers, slaters, tilers, sheeters, cladders	7.7	0.0%	1.6%		3.9%	19.2%	11.3%	10	0		2.7%	No Shortage	
Plasterers	13.8	0.5%	1.5%		6.5%	12.1%	6.9%	16	3		2.7%	No Shortage	
Builders, building contractors	23.0	3.3%	2.8%		19.6%	13.0%	13.7%	4	0		2.7%	No Shortage	
Scaffolders, riggers, steeplejacks	2.7	0.0%	1.9%		2.9%	23.4%	20.4%	3	1		2.7%	No Shortage	
Floors, floor coverers, carpet fitters, tilers	3.0	2.9%	3.1%		8.5%	23.3%	9.3%	2	6		2.7%	No Shortage	
Painters & decorators	13.1	3.7%	5.1%		13.8%	13.1%	4.8%	4	1		2.7%	No Shortage	
<b>Other construction trades n.e.c.</b>	8.3	2.8%	7.5%	Average	14.2%	19.6%	6.9%	4	4		2.7%	No Shortage	
<b>Metal machining, fitting &amp; instrument making trades</b>	28.3	2.8%	2.7%	Below Average	12.6%	10.2%	3.1%	80	65		1.5%	No Shortage	
<b>Electrical/electronic trades</b>	46.2	4.6%	1.6%	Average	5.6%	10.1%	4.9%	89	6		2.1%	No Shortage	

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
<b>Metal forming, welding &amp; related trades</b>	31.5	0.3%	2.3%	Average	8.4%	15.7%	6.3%	18	44	2.2%	No Shortage		
Plumbers, heating & related trades	17.1	0.0%	3.3%		8.2%	8.9%	10.9%	3	11	2.7%	No Shortage		
Other metal forming, welding & related trades	14.4	0.6%	1.0%		8.6%	24.3%	2.0%	15	33	1.5%	No Shortage		
<b>Vehicle trades</b>	19.7	0.5%	4.0%	Average	11.0%	17.9%	3.6%	13	8	2.7%	No Shortage		
<b>Textiles, garments and related trades</b>	4.7	58.0%	24.3%	Above Average	19.8%	19.6%	-5.9%	10	3	2.7%	No Shortage		
<b>Printing and related trades</b>	7.9	23.6%	4.5%	Average	16.8%	19.3%	1.2%	5	5	2.7%	No Shortage		
<b>Woodworking trades</b>	48.4	0.6%	1.8%	Average	5.8%	16.9%	5.8%	21	8	2.7%	No Shortage		
Carpenters & joiners	43.4	0.2%	1.6%		5.7%	17.7%	6.4%	19	7	2.7%	No Shortage		
Wood working trades	5.0	3.9%	2.9%		7.0%	9.2%	1.2%	2	1	2.7%	No Shortage		
<b>Food preparation trades</b>	9.6	16.3%	9.1%	Average	10.5%	34.3%	-0.5%	210	3	1.5%	No Shortage		
<b>Other craft &amp; related occupations</b>	17.7	11.0%	14.2%	Average	14.0%	16.9%	0.9%	26	2	2.7%	No Shortage		
<b>Ncos and other ranks in the armed services</b>	5.6	5.0%	2.0%	Average	8.4%	2.7%	-3.1%	0	0	1.2%	No Shortage		
Ncos and other ranks including senior officers	6.7	4.2%	1.7%		11.2%	2.3%	-1.4%	1	0	1.2%	No Shortage		
<b>Security and protective service occupations</b>	33.9	13.2%	12.1%	Average	11.5%	11.1%	4.4%	49	2	3.9%	No Shortage		
Police officers	12.1	16.3%	0.0%		2.9%	0.7%	2.6%	0	0	3.9%	No Shortage		
Fire service officers	2.6	5.0%	8.6%		6.6%	7.7%	7.2%	0	1	3.9%	No Shortage		

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
Prison service officers	3.5	8.6%	0.0%		4.8%	0.0%	8.4%	0	0	3.9%	No Shortage		
Security guards	16.8	12.5%	22.3%		19.6%	20.6%	5.9%	49	2	3.9%	No Shortage		
<b>Catering occupations</b>	72.5	55.5%	40.1%	Average	6.2%	33.5%	4.9%	674	34	3.9%	Skills Shortage	C	
Chefs, cooks	24.9	45.1%	25.8%		7.7%	35.5%	5.9%	594	23	3.9%	Skills Shortage	C	
Waiters, waitresses	24.2	83.5%	51.4%		3.6%	49.5%	6.9%	65	9	3.9%	No Shortage		
Bar staff	23.4	39.5%	44.0%		7.0%	16.2%	2.2%	15	2	3.9%	No Shortage		
<b>Travel attendants and related occupations</b>	3.2	61.7%	12.0%	Below Average	15.6%	24.5%	-0.9%	7	0	3.9%	No Shortage		
Travel & flight attendants	2.9	68.2%	13.3%		15.5%	24.9%	-2.9%	7	0	3.9%	No Shortage		
<b>Health and related occupations</b>	47.9	84.5%	33.7%	Below Average	17.4%	13.1%	9.4%	498	0	2.6%	No Shortage		
Care assistants etc.	44.6	84.1%	33.6%		18.2%	13.6%	9.7%	494	0	2.6%	No Shortage		
Dental nurses	2.6	98.1%	37.6%		4.7%	6.9%	11.1%	3	0	2.6%	No Shortage		
<b>Childcare and related occupations</b>	34.2	97.8%	36.9%	Below Average	6.4%	14.2%	15.4%	44	0	3.9%	No Shortage		
Nursery nurses and playgroup leaders	8.5	98.2%	41.3%		8.8%	5.7%	15.7%	4	0	3.9%	No Shortage		
Educational assistants	12.3	96.5%	26.0%		6.7%	3.7%	20.1%	6	0	3.9%	No Shortage		
Other childcare & related occupations	13.5	98.5%	43.3%		4.6%	28.4%	11.7%	34	0	3.9%	No Shortage		
<b>Hairdressers, beauticians etc.</b>	20.6	94.3%	33.1%	Average	4.0%	5.2%	8.7%	35	3	3.9%	No Shortage		
<b>Domestic staff and related occupations</b>	17.5	55.0%	38.5%	Average	28.3%	24.6%	2.7%	107	0	3.9%	No Shortage		

Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Agency Survey			
Other personal and protective service occupations	5.9	50.0%	30.4%	Average	11.0%	12.5%	10.5%	8	0		3.9%	No Shortage	
Buyers, brokers etc.	4.5	36.1%	7.4%	Below Average	10.1%	14.3%	1.9%	8	3		4.4%	No Shortage	
Sales representatives	40.1	36.6%	11.7%	Average	11.2%	10.8%	4.9%	46	38	X	4.4%	Inconclusive	
Sales assistants	131.8	72.1%	49.4%	Average	6.9%	17.6%	5.6%	206	72		4.4%	No Shortage	
Other salespersons etc.	3.8	11.2%	21.7%	Average	22.0%	10.2%	1.5%	2	1		4.4%	No Shortage	
Other sales occupations	5.8	64.5%	31.2%	Above Average	8.5%	16.8%	-3.3%	6	3		4.4%	No Shortage	
Food, drink and tobacco operatives	16.8	26.6%	6.6%	Above Average	8.3%	36.9%	-1.0%	24	14		1.5%	No Shortage	
Textiles and tannery process operatives	1.3	47.6%	22.5%	Above Average	4.6%	15.1%	-15.3%	1	1		1.5%	No Shortage	
Chemicals, paper, plastic and related process operatives	11.8	25.7%	4.5%	Below Average	6.8%	15.4%	-9.4%	26	8		1.5%	No Shortage	
Metal making and treating process operatives	1.8	15.2%	3.6%	Below Average	10.9%	30.2%	-3.5%	1	0		1.5%	No Shortages	
Metal working process operatives	1.7	2.6%	4.7%	Below Average	2.6%	23.2%	0.0%	44	47		1.5%	No Shortage	
Assemblers/lineworkers	17.6	48.4%	6.7%	Above Average	3.8%	23.4%	-9.1%	10	6		1.5%	No Shortage	
Other routine process operatives	13.1	56.3%	16.1%	Average	7.5%	28.1%	-6.1%	47	8		1.5%	No Shortage	
Road transport operatives	73.9	2.8%	8.3%	Below Average	22.2%	12.1%	4.3%	78	38		-1.2%	No Shortage	
Other transport and machinery operatives	21.7	3.0%	3.2%	Below Average	13.4%	11.8%	5.3%	24	8		1.5%	No Shortage	
Other plant and machine operatives nec	18.4	5.8%	3.6%	Average	16.6%	18.2%	0.9%	47	28		1.5%	No Shortage	



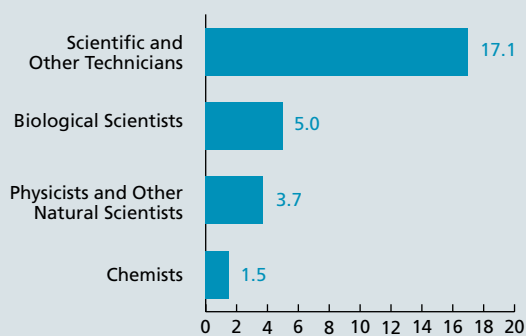
Occupations	Numbers employed ('000)	% female	Part-time	Unemployment	% >55	% Non-Irish Nationals	Annual average growth rate 2002-2007	Employment permits	Difficult to fill vacancies		Replacement rate	Shortage indicator	Comment
									FÁS/ESRI	SLMRU Recruitment Agency Survey			
<b>Other occupations in agriculture, forestry and fishing</b>	16.3	23.1%	20.6%	Average	17.9%	26.1%	-3.0%	163	0		3.1%	No Shortage	
<b>Other occupations in mining and manufacturing</b>	14.8	35.6%	5.8%	Above Average	7.0%	24.0%	18.0%	57	24		4.5%	No Shortage	
<b>Other occupations in construction</b>	41.3	0.2%	4.2%	Above Average	9.4%	31.9%	5.4%	4	0		4.5%	No Shortage	
<b>Other occupations in transport</b>	5.9	8.8%	12.5%	Average	11.5%	27.3%	0.2%	15	2		4.5%	No Shortage	
<b>Other occupations in communication</b>	12.2	18.3%	12.2%	Below Average	16.2%	8.9%	2.5%	1	0		-1.2%	No Shortage	
<b>Other occupations in sales and services</b>	75.4	73.7%	53.2%	Average	17.5%	32.3%	4.7%	344	10		4.5%	No Shortage	
<b>Other occupations n.e.c.</b>	45.8	23.2%	21.1%	Above Average	16.0%	19.8%	14.4%	147	2		4.5%	No Shortage	
<b>All occupations</b>	2,118.7	42.8%	18.0%	Average	12.8%	14.9%	3.6%	9,148	1311				

## 7.1 Science Occupations

### Key points for selected science occupations, 2007

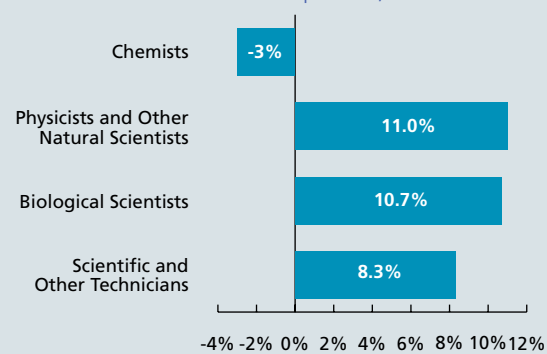
- There are approximately 27,300 persons employed in selected science occupations, which represents just over 1% of Ireland's workforce
- Employment is concentrated in manufacturing (chemical and chemical products), food products and beverages, and healthcare
- Technician level occupations make up almost 63% of employment; professional level occupations account for the remainder
- Laboratory technicians make up more than one third of all scientific technicians
- With the exception of chemists (whose number declined by 3%), employment for each science occupation grew faster than the overall national employment rate of 3.6% for the period 2002-2007
- There were an additional 6,700 posts created in science occupations over the period 2002-2007; job creation was almost evenly distributed between professional and technician level positions
- Over 80% of employment in each of the science occupations is in the 25-54 age group
- More than half of those employed in professional science occupations are female
- Over 90% of persons employed in professional occupations and 62% of those in technician occupations hold at least a third level qualification
- Almost one in five physicists and other natural scientists is non-Irish

**Figure 7.1.1** Numbers Employed (000s) in Science Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.1.2** Average Employment Growth in Science Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.1.1** Age Profile of Science Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Physicists and other natural scientists	2%	89%	10%	100%
Scientific and other technicians	7%	88%	6%	100%
Biological scientists	6%	84%	10%	100%
Chemists	9%	91%	0%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.1.2** Education Profile of Science Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Physicists and other natural scientists	0%	3%	97%	100%
Scientific and other technicians	9%	31%	61%	100%
Biological scientists	2%	1%	97%	100%
Chemists	0%	5%	95%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

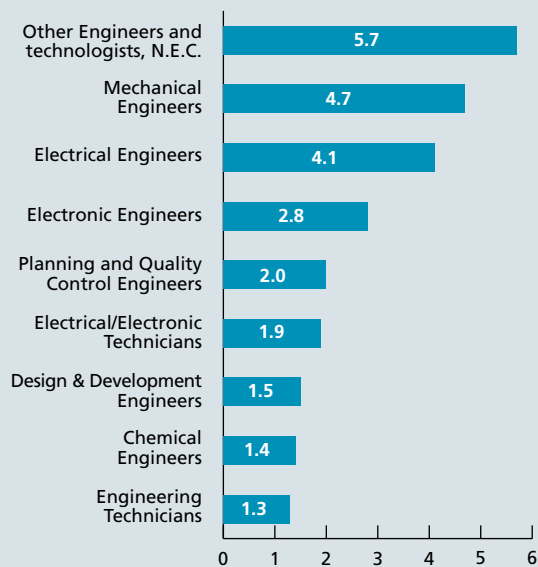
- Government investment in initiatives such as the Strategy for Science, Technology and Innovation and Science Foundation Ireland has led to increased demand for academic researchers and research teams. The declining intake of students to undergraduate level science programmes will result in a smaller pool of graduates with the competencies to undertake innovative and internationally competitive scientific research; this is expected to lead to future shortages in this area.
- The strong employment growth observed for scientific and other technicians combined with difficult-to-fill vacancy and employment permit data indicates that there continues to be a large volume of activity at technician level and that shortages persist, albeit not as acute as previously, in the area of quality control and trouble-shooting, particularly in the pharmaceutical sector.

## 7.2 Engineering Occupations

### Key points for selected engineering occupations, 2007

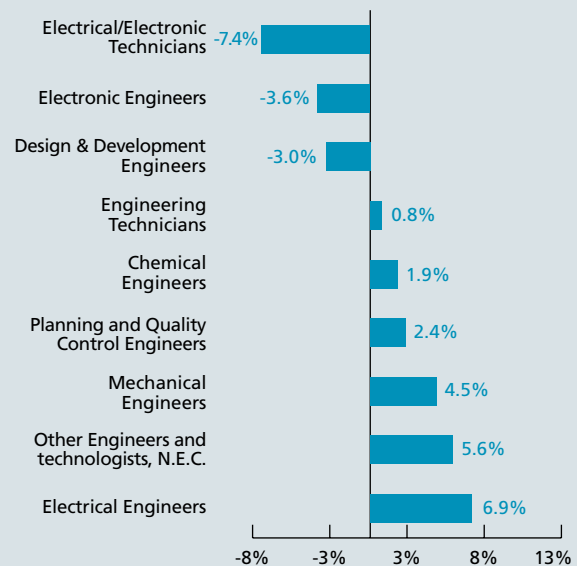
- The number of persons employed in selected engineering occupations totalled 25,500 and made up over 1% of Ireland's workforce
- More than half of employment is in manufacturing (primarily chemical products, radio, television and communications equipment and metal products)
- 85% of employment is at professional level (engineers); the remainder at technician level
- Employment of mechanical engineers, other engineers and technologists and electrical engineers grew strongly over the period 2002-2007 with growth rates exceeding the national annual average rate of 3.6%; In contrast, employment of design and development engineers, electronic engineers and electronic/electrical engineers declined significantly
- Over the period 2002-2007, there were more than 2,000 additional posts in these occupations; almost all new posts were in professional occupations; there were 800 fewer posts at technical level
- The share of workers aged 55 or over in professional occupations is below the national average of 12.8%
- At professional level, the vast majority of those employed are third level graduates; planning and quality control engineers, at 63%, have the lowest share of persons with a third level qualification
- The share of females in engineering professional occupations, at 11.6%, is well below the national average of 43%; planning and quality control engineers have the highest share of females (23.5%); the lowest share is for mechanical engineers (less than 3%)
- The share of non-Irish nationals employed exceeds the national average of 14.9% for mechanical engineers (17.7%) and other engineers and technologists (16.4%)

**Figure 7.2.1** Numbers Employed (000s) in Selected Engineering Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.2.2** Annual Average Employment Growth in Selected Engineering Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.2.1** Age Profile of Engineering Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Chemical engineers	8%	92%	0%	100%
Design and development engineers	12%	85%	3%	100%
Electrical/Electronic technicians	15%	83%	2%	100%
Electrical engineers	8%	81%	11%	100%
Electronic engineers	4%	88%	8%	100%
Engineering technicians	13%	73%	14%	100%
Mechanical engineers	10%	79%	11%	100%
Other engineers and technologists, n.e.c.	6%	88%	6%	100%
Planning and quality control engineers	3%	92%	5%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.2.2** Education Profile of Science Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Chemical engineers	0%	0%	100%	100%
Design and development engineers	4%	25%	71%	100%
Electrical/Electronic technicians	10%	47%	44%	100%
Electrical engineers	2%	10%	88%	100%
Electronic engineers	2%	3%	95%	100%
Engineering technicians	6%	37%	57%	100%
Mechanical engineers	6%	22%	72%	100%
Other engineers and technologists, n.e.c.	4%	15%	81%	100%
Planning and quality control engineers	9%	28%	63%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

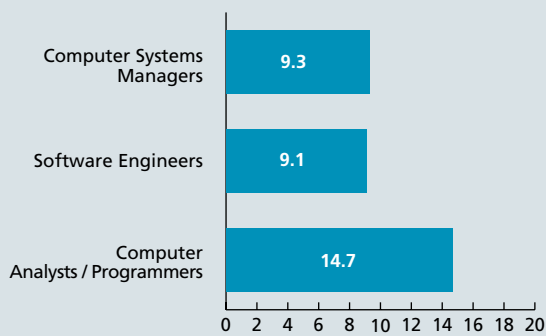
- The need for further innovation in the information technology (IT) and pharmaceutical sectors will ensure that the demand for most engineering professionals (electrical, chemical, design and development, quality control and other engineers and technologists) will remain strong, especially since there has been a fall-off in intake at third level since 2000 leading to possible future shortages.
- There is no evidence of shortages of mechanical engineers.

## 7.3 IT Professional Occupations

### Key points for selected IT Professional occupations, 2007

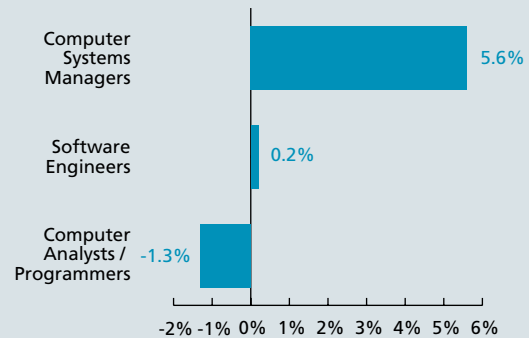
- Just over 33,000 persons are employed in selected IT professional occupations representing almost 2% of Ireland's workforce
- Employment growth for computer systems managers was above the national average of 3.2%; employment for computer analysts/programmers declined
- Over 1,000 net posts were created in IT professional occupations over the period 2002-2007
- Employment in IT professional occupations is skewed towards the younger cohorts; approximately 60% of computer programmers and software engineers are aged less than 35 years; 80% of computer systems managers are less than 45 years
- More than three quarters of those employed in each of these occupations are third level graduates
- Non-Irish nationals comprise just under one quarter of employment in software engineering and computer analysts/programmers occupations which is the highest share of non-Irish nationals in any professional level occupation; almost one-fifth of computer systems managers are non-Irish
- Less than one-fifth of employment in each of these occupations is female

**Figure 7.3.1** Numbers Employed (000s) in IT Professional Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.3.2** Average Employment Growth in IT Professional Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.3.1** Age Profile of IT Professional Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Computer analyst/ programmers	10%	89%	1%	100%
Computer systems managers	3%	90%	6%	100%
Software engineers	9%	91%	0%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.3.2** Education Profile of IT Professional Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Computer analyst/ programmers	3%	18%	79%	100%
Computer systems managers	3%	12%	85%	100%
Software engineers	2%	8%	90%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

The IT sector is expected to continue to perform strongly: business dependence on IT has become economy-wide; the importance of system and network security is growing and new wireless technologies continue to create new business opportunities. This is expected to drive the demand for computer systems managers, software engineers and computer analysts/programmers. Employers continue to source high-level IT skills from abroad. Recent, modest increases in intake to higher education computing courses at honours degree level are not sufficient to balance out the sharp declines that occurred in preceding years. Furthermore, increased funding through Science Foundation Ireland for research teams developing leading edge technologies means that there are increased PhD student places in research. As a result, current shortages of high level IT skills (software, IT services/systems integration, electronics/IC Design, automation and process control) are expected to persist<sup>25</sup>.

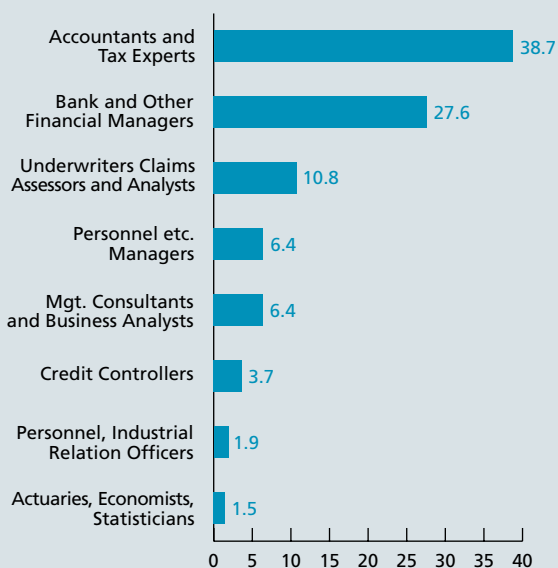
25. A detailed analysis of the future demand for ICT skills is provided in the EGFSN's 2008 publication; Future Requirement for High Level ICT Skills in the ICT Sector

## 7.4 Business and Financial Occupations

### Key points for selected business and financial occupations, 2007

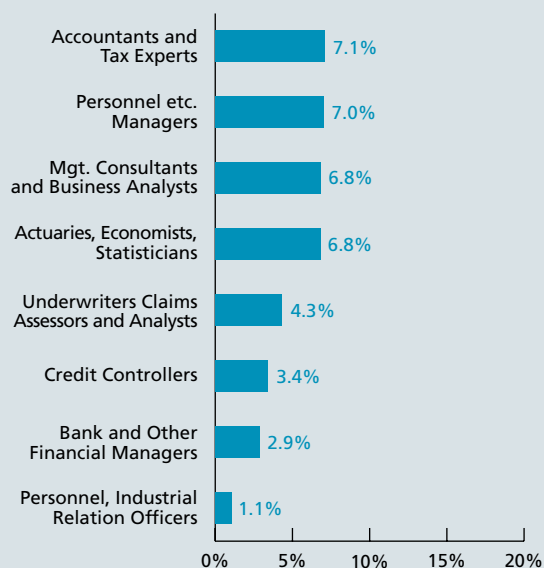
- There were approximately 97,000 persons employed in selected business and financial occupations, accounting for almost 5% of Ireland's workforce
- Almost two thirds of employment is in the financial intermediation and in the real estate, renting and business sectors
- Almost one half of employment is at professional level (mostly accountants and tax experts); over one third is at managerial level; the remainder is at associate professional level
- Employment growth in all professional financial occupations far exceeded the national average over the period 2002-2007
- Over 21,000 net posts were created in these occupations in the period 2002-2007; more than half of these were for accountants and tax experts
- At 13%, management consultants and business analysts have the highest share of over 55s amongst financial occupations
- The share of those employed with third level qualifications is above the national average for all occupations (34%); the lowest share is in credit controllers and bank and other financial managers
- At over 60%, managerial financial occupations (personnel and bank etc. managers) have the highest share of females employed, which is higher than for managerial occupations overall
- The share of non-Irish is above the national average for credit controllers (19.2%), underwriters, claims assessors and analysts (15.1%) and personnel, industrial relations officers (21.5%)

**Figure 7.4.1** Numbers Employed (000s) in Selected Business and Financial Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.4.2** Annual Average Growth in Selected Business and Financial Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data



**Table 7.4.1** Age Profile of Selected Business and Financial Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Accountants and tax experts	12%	80%	8%	100%
Actuaries, economists, statisticians	17%	74%	9%	100%
Bank and other financial managers	7%	85%	8%	100%
Credit controllers	13%	82%	5%	100%
Management consultants and business analysts	5%	82%	13%	100%
Personnel etc. managers	7%	89%	4%	100%
Personnel, industrial relations officers	7%	86%	7%	100%
Underwriters, claims assessors and analysts	10%	83%	7%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.4.2** Education Profile of Selected Business & Financial Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Accountants and tax experts	1%	9%	89%	100%
Actuaries, economists, statisticians	0%	7%	93%	100%
Bank and other financial managers	4%	42%	54%	100%
Credit controllers	6%	41%	53%	100%
Management consultants and business analysts	0%	18%	82%	100%
Personnel etc. managers	3%	16%	81%	100%
Personnel, industrial relations officers	0%	12%	88%	100%
Underwriters, claims assessors and analysts	5%	32%	63%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

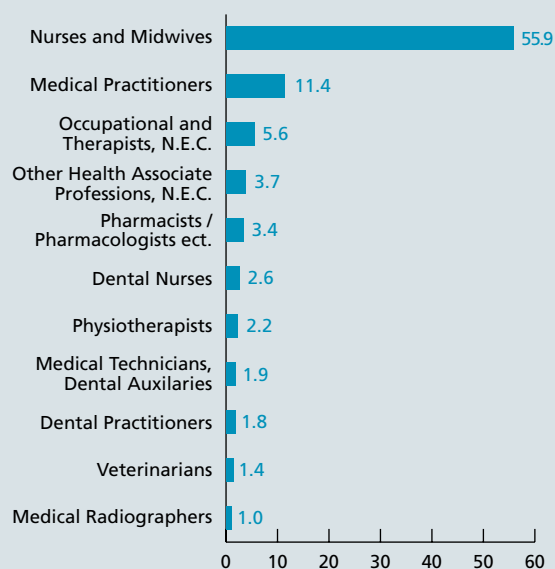
The demand for financial skills, currently shaken by the ongoing credit crunch, is expected to recover and be strong in the medium term. The globalisation in financial services provision and rapid advances in technology, coupled with developments in the domestic and international regulatory environment, are driving a global demand for professionals who can quantify, assess, price and forecast increasingly complex financial outcomes. Employers are continuing to experience difficulty in sourcing professionals in the area of accounting (compliance, financial reporting), actuarial science, quantitative finance (risk and financial engineering) and underwriting. These skills are usually developed, on top of formal undergraduate qualifications, through specialist work experience over a number of years in leading companies in the sector.

## 7.5 Healthcare Occupations

### Key points for healthcare science occupations, 2007

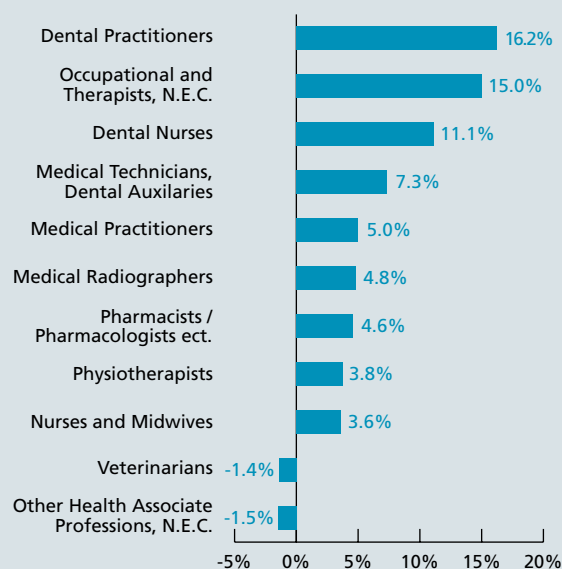
- There are almost 100,000 persons employed in selected healthcare occupations, representing 4.3% of Ireland's workforce
- Over 70% of employment is at associate professional level (most of which are nurses)
- Nurses and midwives are the third largest occupation in the workforce as a whole, after farmers and sales assistants
- Employment growth over the period 2002-2007 was well above the national average for therapists (excluding physiotherapists), dental practitioners (from a very small base) and dental nurses
- More than 17,500 additional posts were created in healthcare occupations over the period 2002-2007
- Over 70% of employment in each occupation is in the 25-54 age group; of all professional occupations, veterinarians, at 27%, have the highest share of over 55s; the share of dental nurses and medical technicians and dental auxiliaries aged less than 25 years is above the national average of 15%
- The majority of those employed in healthcare occupations hold third level qualifications: 90% of those employed in professional occupations and more than 75% of those in associate professional occupations are third level graduates
- Almost 90% of employment in associate professional occupations is female; almost two thirds of pharmacists/pharmacologists are female
- At almost 26%, therapists (excluding physiotherapists) have the highest share of non-Irish nationals employed in any associate professional occupation, far exceeding the national average rate of 14.9%; Medical practitioners (21.2%) have the third highest share of non-Irish employed in professional occupations - only university lecturers and software engineers have higher rates of non-Irish employed in professional occupations

**Figure 7.5.1** Numbers Employed (000s) in Healthcare Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.5.2** Average Employment Growth in Healthcare Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.5.1** Age Profile of Healthcare Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Dental nurses	17.5%	77.8%	4.7%	100.0%
Dental practitioners	0.0%	82.2%	17.8%	100.0%
Medical practitioners	2.1%	81.3%	16.5%	100.0%
Medical radiographers	23.2%	66.1%	10.7%	100.0%
Medical technicians, dental auxiliaries	19.5%	75.5%	5.0%	100.0%
Nurses and midwives	6.4%	80.8%	12.8%	100.0%
Occupational and therapists n.e.c.	6.8%	80.9%	12.3%	100.0%
Other health associate professionals	12.8%	76.0%	11.2%	100.0%
Pharmacists/ pharmacologists etc	8.5%	86.8%	4.7%	100.0%
Physiotherapists	6.7%	78.9%	14.4%	100.0%
Veterinarians	0.0%	73.5%	26.5%	100.0%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.5.2** Education Profile of Healthcare Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Dental nurses	4%	46%	50%	100%
Dental practitioners	4%	0%	96%	100%
Medical practitioners	2%	5%	94%	100%
Medical radiographers	0%	5%	95%	100%
Medical technicians, dental auxiliaries	3%	37%	60%	100%
Nurses and midwives	2%	14%	84%	100%
Occupational and therapists n.e.c.	5%	7%	88%	100%
Other health associate professionals	1%	21%	78%	100%
Pharmacists/ pharmacologists etc	2%	1%	97%	100%
Physiotherapists	0%	3%	97%	100%
Veterinarians	0%	4%	96%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

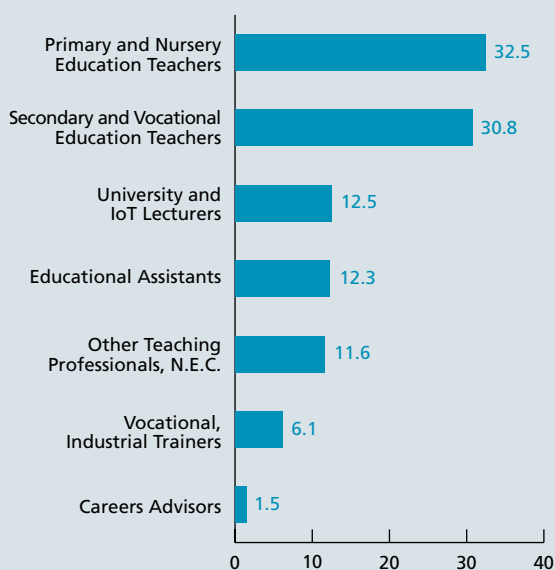
- There is a shortage of medical practitioners in Ireland, particularly general practitioners and specialist doctors.
- There is a shortage of nurses in Ireland: supply from the education system is insufficient to meet estimated replacement demand and preserve the existing employment stock.
- International comparisons on density (the number of each type of therapist to the population) suggest that there could be shortages of all healthcare therapists in Ireland; however, there are limited employment opportunities in the public health service at present.
- Demographic changes (particularly the aging of the population) and the reconfiguration of cancer services in Ireland are fostering a continued demand for radiographers, which are already in short supply.
- Increased demand for oral healthcare and demographic changes has resulted in shortages in this area, particularly since the number of training places for dentists has remained unchanged for 15 years. The number of places for training in orthodontics is also limited and intermittent.
- Data on vets indicates that future shortages may arise, particularly in the food-animal sector in rural areas, given the shift towards domestic animal care (source: the Competition Authority) and the older age profile of the current employment stock.

## 7.6 Education Occupations

### Key points for selected education occupations, 2007

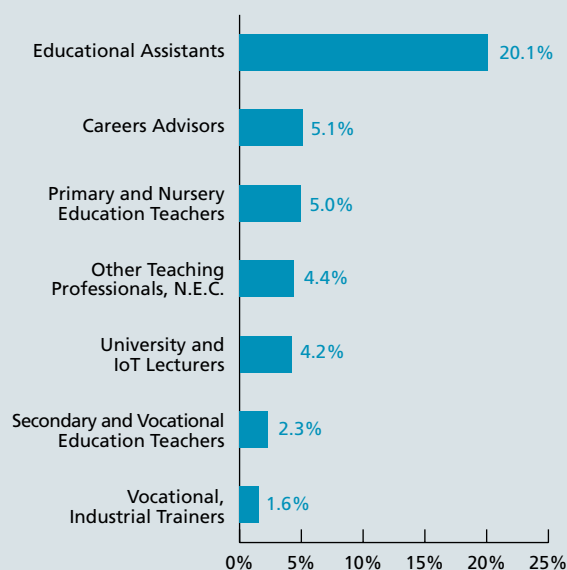
- There are over 105,000 persons employed in selected education occupations which represents 5% of Ireland's total workforce
- Over 80% are employed in professional occupations
- Over the period 2002-2007, approximately 23,000 extra posts were created in these occupations; 65% of these were at professional level
- Educational assistants, at just over 20%, had the strongest employment growth over the period 2002-2007
- More than three-quarters of employment in each occupation is in the 25-54 age group; the highest proportion of over 55s is for vocational, industrial trainers, and university and IoT lecturers which, at 22% and 17.7% respectively, are well above the national average of 12.8%
- The vast majority of education professionals and associate professionals hold third level qualifications; the share of educational assistants with third level qualifications is increasing – up from 20% in 2002 to 41% in 2007
- More than 70% of teaching professionals are female; university and IoT lecturers, however, are predominantly male (54.5%)
- Of all professional occupations in the workforce, university and IoT lecturers have the second highest share of non-Irish nationals employed (23.7%)

**Figure 7.6.1** Numbers Employed (000s) in Education Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.6.2** Average Employment Growth in Education Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.6.1** Age Profile of Education Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Careers advisors	0.0%	88.1%	11.9%	100.0%
Educational assistants	9.2%	84.0%	6.7%	100.0%
Other teaching professionals n.e.c.	10.4%	74.4%	15.2%	100.0%
Primary and nursery education teachers	9.9%	77.5%	12.6%	100.0%
Secondary and vocational education teachers	5.4%	82.0%	12.6%	100.0%
University and IoT lecturers	3.0%	79.3%	17.7%	100.0%
Vocational, industrial trainers	1.7%	76.2%	22.1%	100.0%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.6.2** Age Profile of Education Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Careers advisors	3%	24%	73%	100%
Educational assistants	12%	47%	41%	100%
Other teaching professionals n.e.c.	4%	17%	78%	100%
Primary and nursery education teachers	0%	5%	95%	100%
Secondary and vocational education teachers	0%	3%	97%	100%
University and IoT lecturers	1%	2%	97%	100%
Vocational, industrial trainers	12%	19%	69%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

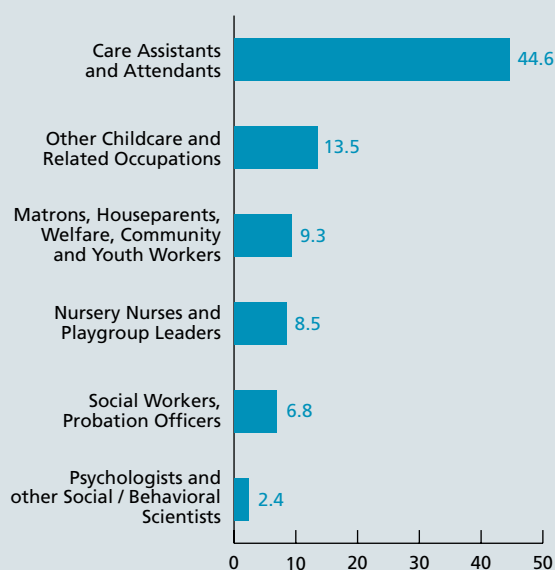
- Although, there is no evidence of widespread shortages in education occupations, secondary school teachers for certain subjects (e.g. mathematics and physical sciences) are proving difficult to source.
- CSO population projections forecast a significant increase in Ireland's school-going population in the years to come which will in turn lead to an increased demand for teachers and support staff at primary level and, in subsequent years, at second level.

## 7.7 Social and Care Occupations

### Key points for selected social and care occupations, 2007

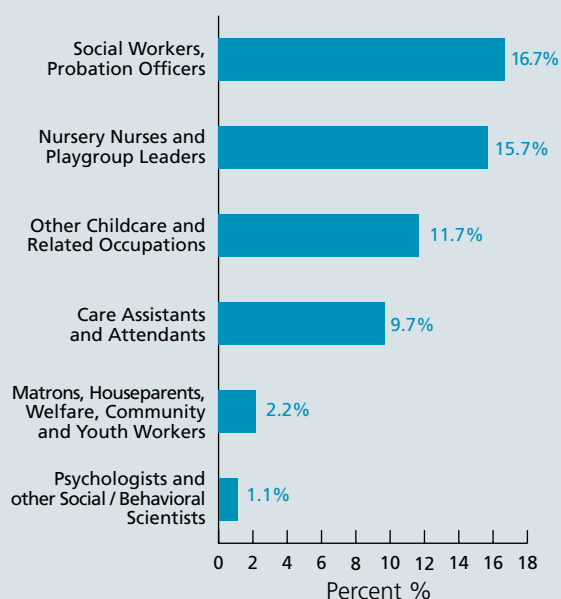
- There are approximately 85,000 individuals employed in selected social and care occupations; this accounts for 4% of Ireland's workforce
- Care assistants and attendants make up the highest proportion of those employed; professional occupations, including psychologists and social workers, make up approximately 11% of those employed in social and care occupations
- Over the period 2002-2007, an additional 31,000 posts were created; employment in most of these occupations grew strongly – well above the national average of 3.6%
- Over one quarter of employment in other childcare and related occupations is aged 15-24
- Approximately 95% of psychologists and other social/behavioural scientists hold third level qualifications; 40% of care assistants and attendants have lower secondary or less
- One fifth of total employment in childcare related occupations is non-Irish
- The majority of employment in social and care occupations is female; the lowest share of female employment is in psychologists and other social/behavioural scientists (67%); in the workforce as a whole, childcare related occupations have the second highest share of female employment at 98.5%
- With the exception of psychologists and other social/behavioural scientists, the share of those in part-time employment in these occupations is well above the national average of 18%; the share is highest for childcare occupations (over 40% work part-time); one third of care assistants and attendants are also in part-time employment

**Figure 7.7.1** Numbers Employed (000s) in Social and Care Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.7.2** Average Employment Growth in Social and Care Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.7.1** Age Profile of Social and Care Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Matrons, houseparents, welfare, community & youth workers	6%	78%	16%	100%
Nursery nurses and playgroup leaders	17%	74%	9%	100%
Care assistants and attendants	7%	75%	18%	100%
Other childcare and related occupations	27%	69%	5%	100%
Psychologists and other social/behavioural scientists	2%	91%	7%	100%
Social workers, probation officers	14%	76%	10%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.7.2** Education Profile of Social and Care Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Matrons, houseparents, welfare, community & youth workers	15%	29%	57%	100%
Nursery nurses and playgroup leaders	24%	44%	32%	100%
Care assistants and attendants	40%	41%	19%	100%
Other childcare and related occupations	27%	43%	30%	100%
Psychologists and other social/behavioural scientists	0%	5%	95%	100%
Social workers, probation officers	7%	12%	81%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

- Within the broad group of psychologists and other social behaviour scientists, there are some indications of shortage of specialist skills (educational and clinical psychologists).
- The evidence for social workers is inconclusive. The education provision for social workers has expanded in recent years and this has helped to reduce shortages that had previously been alleviated by recruitment from abroad. Currently, while there could still be a strong demand for social worker services driven by demographic and social changes, employment opportunities within the HSE are limited.
- Those employed in social care work occupations (matrons, houseparents, welfare, community and youth workers) do not currently require third level qualifications (outside of the HSE) but regulations to be implemented in the future require social workers to hold a relevant degree. Such changes in regulation may have a negative impact on the available supply of qualified social care workers.

## 7.8 Legal and Security Occupations

### Key points for selected legal and security occupations, 2007

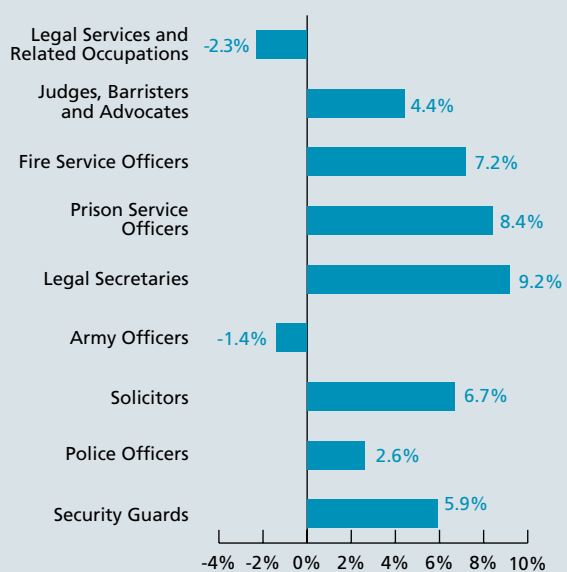
- There are almost 58,000 persons employed in legal and security occupations, constituting almost 3% of total national employment
- The largest occupational grouping is security personnel, numbering just fewer than 17,000
- Employment expansion was evident for almost all occupations during the period 2002-2007, with employment contracting only for two occupations - for those engaged in legal and related services and for army officers
- More than one third of legal associates and almost one quarter of security personnel are in part-time employment
- While legal secretaries and legal associates are almost all female, the opposite is the case for those employed in the army and fire services
- While legal professionals are almost all third level graduates, 30%-40% of army, fire service and security personnel have below Leaving Cert qualifications
- Approximately one fifth of security personnel is non-Irish while legal professional employment has a lower than average share of non-Irish nationals

**Figure 7.8.1** Numbers Employed (000s) in Legal and Security Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.8.2** Annual Average Employment Growth in Legal and Security Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data



**Table 7.8.1** Age Profile of Legal and Security Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Army officers	12%	77%	11%	100%
Fire service officers	0%	93%	7%	100%
Judges, barristers and advocates	3%	82%	15%	100%
Legal secretaries	12%	82%	6%	100%
Legal service & related occupations	5%	90%	5%	100%
Police officers	10%	87%	3%	100%
Prison service officers	0%	95%	5%	100%
Security guards & related occupations	15%	65%	20%	100%
Solicitors	5%	86%	9%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.8.2** Education Profile of Legal and Security Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Army officers	39%	36%	25%	100%
Fire service officers	30%	44%	26%	100%
Judges, barristers and advocates	0%	6%	94%	100%
Legal secretaries	6%	66%	28%	100%
Legal service & related occupations	0%	35%	65%	100%
Police officers	2%	42%	56%	100%
Prison service officers	14%	65%	21%	100%
Security guards & related occupations	40%	42%	17%	100%
Solicitors	0%	0%	100%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

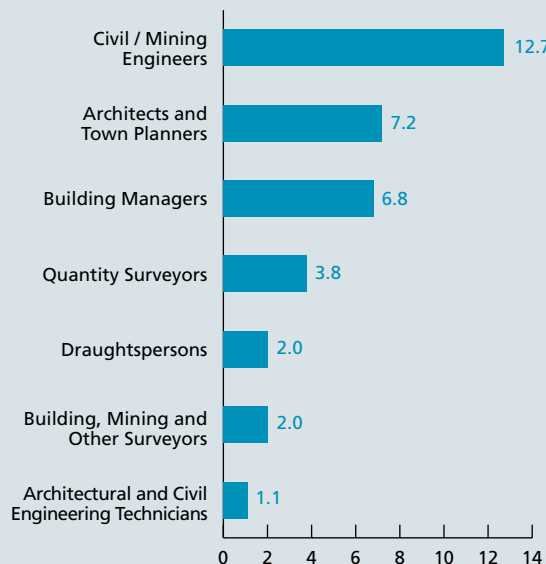
- There are no shortages of legal and security skill occupations in Ireland at present.

## 7.9 Construction Professional Occupations<sup>26</sup>

### Key points for selected construction professional occupations, 2007

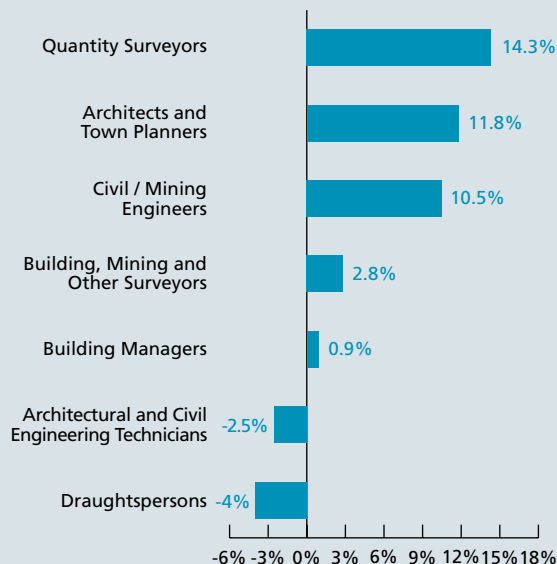
- Approximately 35,000 persons are employed in construction professional occupations, representing just under 2% of national employment
- Employment in these occupations is predominantly concentrated in the construction sector and the real estate, renting and business activities sector (which employs architects, planners, civil engineers and quantity surveyors), with a share of 54% and 27% respectively
- Over the period 2002-2007, employment growth for quantity surveyors, architects and civil engineers by far exceeded the national average mirroring the strong performance of the construction sector; in contrast, negative employment growth was recorded for those employed as draughtspersons and architectural and civil engineering technicians, which is largely a reflection of the continuing shift towards computer aided design
- Almost 10,000 net jobs were created in this occupational group over the period 2002-2007 – approximately 84% at professional level
- At 80%, employment in most construction professional occupations is concentrated in the 25-54 age cohort; one fifth of all quantity surveyors is younger than 25
- Over 90% of those employed at professional level hold third level qualifications, while the corresponding share for associate professionals is just over 80%; building managers is the only occupation among construction professional occupations for which the share of those in employment with third level qualifications is below 50%
- The share of non-Irish nationals represented in the total employment stock of architects / town planners and building managers exceeds the national average – almost 20% and 16% respectively

**Figure 7.9.1** Numbers Employed (000s) in Construction Professional Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.9.2** Average Employment Growth in Construction Professional Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

26. Note: quantity surveyors, draughtspersons and architectural and civil engineering technicians are actually associate professional occupations.

**Table 7.9.1** Age Profile of Construction Professional Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Architects and town planners	4%	82%	14%	100%
Architectural and civil engineering technicians	13%	83%	4%	100%
Building managers	4%	76%	20%	100%
Building, mining and other surveyors	7%	77%	16%	100%
Civil/mining engineers	11%	83%	7%	100%
Draughtspersons	9%	81%	11%	100%
Quantity surveyors	21%	70%	10%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.9.2** Education Profile of Construction Professional Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Architects and town planners	1%	5%	94%	100%
Architectural and civil engineering technicians	4%	9%	87%	100%
Building managers	26%	29%	45%	100%
Building, mining and other surveyors	2%	14%	84%	100%
Civil/mining engineers	1%	4%	95%	100%
Draughtspersons	0%	44%	56%	100%
Quantity surveyors	0%	8%	92%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

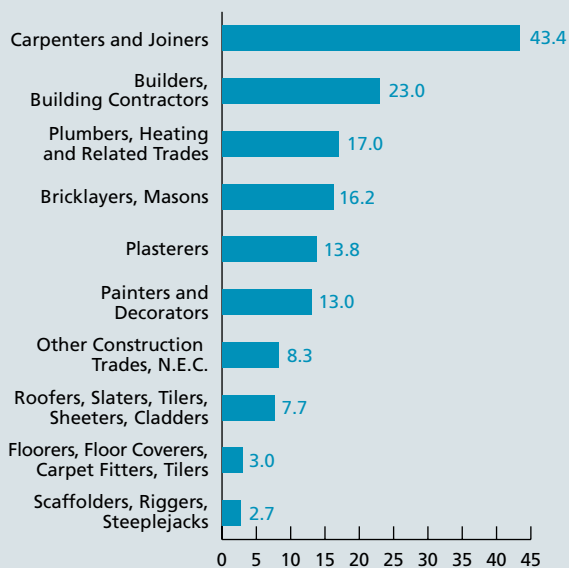
- The data on civil engineers is inconclusive: infrastructure development under the National Development Plan (NDP) – the Government’s blueprint of planned capital investment in infrastructural projects – will create significant employment opportunities for civil engineers. However, any significant delays in the rollout of the NDP would result in recruitment reductions and possibly give rise to excess supply
- In addition, the contraction of the commercial sub-sector of the construction industry observed in recent months will further negatively impact on the demand for civil engineers.
- Given the current and forecasted slowdown of all segments of the industry in the short-term; shortages are not anticipated for each of the other professional construction occupations examined – architects; building, mining and other surveyors; draughtspersons; and architectural engineering technicians; this is a significant change on recent years which had been characterised by an acute shortage of construction professionals.

## 7.10 Construction Craft Occupations

### Key points for selected construction craft occupations, 2007

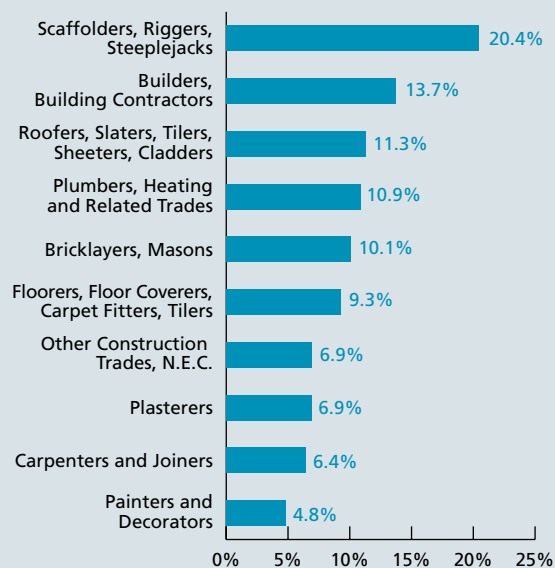
- Approximately 150,000 persons are employed in the selected construction craft occupations, representing 7% of total national employment
- The total number employed in these occupations increased very rapidly between 2002-2007 – by over 50,000 or 52% during the five year period – equivalent to an annual average employment growth rate of 8.7%, which far exceeds the national average of 3.6%
- The annual average rate of employment growth recorded for each of the selected construction craft occupations by far exceeds the national average between 2002 and 2007.
- The age profile of craftspersons is younger than the national average – around 22% are aged 15-24, compared to the national average of around 15%; this is due to the inclusion of apprentices in the employment figures
- Just over 55% of those employed in construction craft occupations hold an upper secondary or FET qualification, while 37% have below Leaving Cert qualifications – both of these proportions exceed the respective national average
- Employment in each of these occupations is almost exclusively male
- The proportion of non-Irish nationals represented in the total employment stock of the majority of construction craft occupations exceeds the national average of 14.9%; over a quarter of those employed in the bricklaying and masonry trade are non-Irish

**Figure 7.10.1** Numbers Employed (000s) in Construction Craft Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.10.2** Average Employment Growth in Construction Craft Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.10.1** Age Profile of Construction Craft Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Bricklayers, masons	24%	70%	5%	100%
Builders, building contractors	6%	74%	20%	100%
Carpenters and joiners	27%	67%	6%	100%
Floorers, floor coverers, carpet fitters, tilers	27%	64%	8%	100%
Other construction trades n.e.c.	12%	74%	14%	100%
Painters and decorators	13%	73%	14%	100%
Plasterers	26%	68%	6%	100%
Plumbers, heating and related trades	38%	54%	8%	100%
Roofers, slaters, tilers, sheeters, cladders	18%	78%	4%	100%
Scaffolders, riggers, steeplejacks	15%	82%	3%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.10.2** Education Profile of Construction Craft Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Bricklayers, masons	40%	56%	4%	100%
Builders, building contractors	47%	43%	10%	100%
Carpenters and joiners	25%	67%	8%	100%
Floorers, floor coverers, carpet fitters, tilers	31%	54%	15%	100%
Other construction trades n.e.c.	57%	35%	8%	100%
Painters and decorators	48%	44%	8%	100%
Plasterers	41%	55%	4%	100%
Plumbers, heating and related trades	24%	71%	6%	100%
Roofers, slaters, tilers, sheeters, cladders	45%	48%	7%	100%
Scaffolders, riggers, steeplejacks	49%	38%	13%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

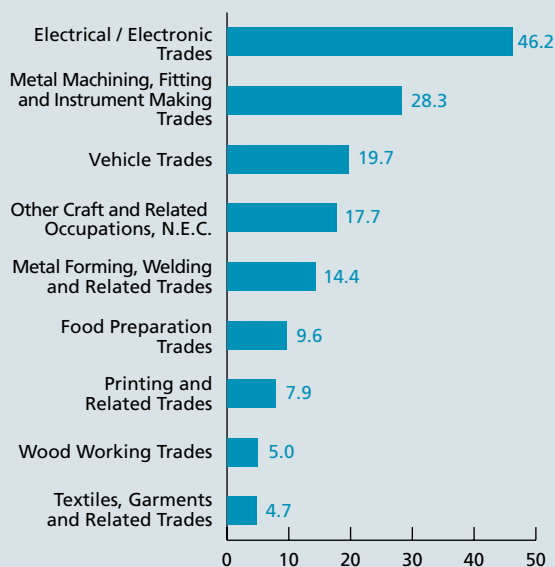
- The demand for construction craftworkers continues to decline as the level of activity in the new residential sub-sector contracts, reflecting a sharp decline in the number of house completions.
- The annual intake of apprentices has been declining sharply for all construction crafts, particularly for bricklayers, plasterers, and carpenters, reflecting a weakening of demand for these skills. Even before the onset of the decline in the residential sector, the annual intake of apprentices in bricklaying had begun to decline as a result of a transition from the use of traditional brick and block work to off-site modern methods of construction (e.g. pre-cast concrete panels and systems, timber frame etc.).
- As the slowdown in activity in the new residential sub-sector continues, shortages are not envisaged for any of the construction craft occupations in the short-term.

## 7.11 Other Craft Occupations

### Key points for selected other craft occupations, 2007

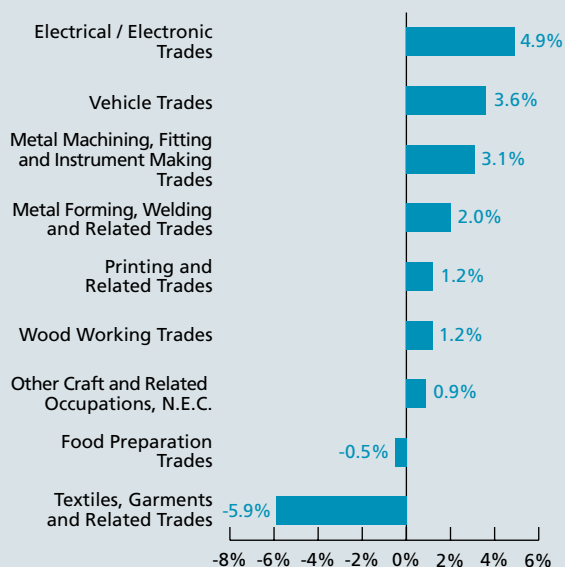
- There are approximately 155,000 persons employed in other craft occupations, representing 7% of the national workforce
- Most of those employed in other craft occupations are in manufacturing and furniture activities – a total of 37% and 24% respectively
- Total employment in other craft occupations increased by approximately 18,000 between 2002 and 2007 – equivalent to an annual growth rate of 2.5% – which is below the national average rate over the same period; 94% of this employment growth was in electrical/electronic and vehicle and metal machining trades
- With the exception of two trades – food preparation and textiles, garments and related trades – employment increased in each of the other craft occupations between 2002 and 2007
- More than a quarter of those employed in electrical/electronic trades are younger than 25; on the other hand, almost one fifth of those employed in textiles, garments and related trades are over 55
- Over a quarter of those employed in other craft occupations have below Leaving Cert qualifications, while 18% hold a third level qualification
- Over 90% of those employed in other craft occupations are male
- The share of non-Irish nationals in the employment stock of most occupations is well above the national average – particularly in food preparation trades and metal forming, welding and related trades – a share of 34.3% and 24.3% respectively

**Figure 7.11.1** Numbers Employed (000s) in Other Craft Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.11.2** Average Employment Growth in Other Craft Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.11.1** Age Profile of Other Craft Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Electrical/ electronic trades	26%	68%	6%	100%
Food preparation trades	11%	78%	11%	100%
Metal forming, welding and related trades	15%	76%	9%	100%
Metal machining, fitting and instrument making trades	14%	73%	13%	100%
Other craft and related occupations, n.e.c.	15%	71%	14%	100%
Printing and related trades	8%	76%	17%	100%
Textiles, garments and related trades	6%	74%	20%	100%
Vehicle trades	25%	64%	11%	100%
Wood working trades	11%	81%	7%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.11.2** Education Profile of Other Craft Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Electrical/ electronic trades	12%	64%	24%	100%
Food preparation trades	41%	49%	11%	100%
Metal forming, welding and related trades	38%	52%	10%	100%
Metal machining, fitting and instrument making trades	28%	51%	21%	100%
Other craft and related occupations, n.e.c.	44%	37%	19%	100%
Printing and related trades	23%	57%	20%	100%
Textiles, garments and related trades	51%	39%	10%	100%
Vehicle trades	31%	61%	7%	100%
Wood working trades	31%	59%	10%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

- There are no shortages in other craft occupations at present.

## 7.12 Arts, Sports and Tourism Occupations

### Key points for selected arts, sports and tourism occupations, 2007

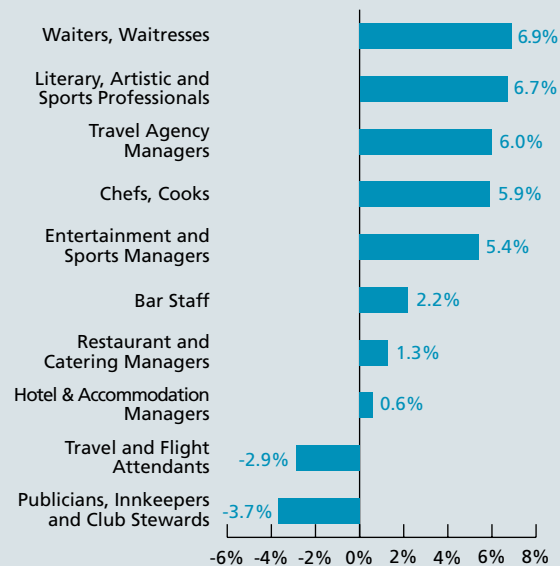
- Approximately 135,000 persons are employed in the selected arts, sports and tourism occupations
- Literary, artistic and sport professionals continue to be the largest occupational sub-group, numbering just under 32,000, having expanded considerably during the period 2002-2007 by 6.7% per annum
- Literary, artistic and sports professionals are most likely to have third level qualifications
- Waiting and bar staff were the youngest of all occupations, with almost one half being younger than 25
- Over 80% of waiting staff are female
- Almost one half of waiting staff and over a third of chefs are non-Irish which is among the highest non-Irish proportions across all occupations in the economy
- More than half of waiting staff work part-time

**Figure 7.12.1** Numbers Employed (000s) in Selected Arts, Sports and Tourism Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.12.2** Annual Average Growth in Selected Arts, Sports and Tourism Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data



**Table 7.12.1** Age Profile of Selected Arts, Sports and Tourism Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Bar staff	47%	46%	7%	100%
Chefs, cooks	13%	80%	8%	100%
Entertainment and sports managers	4%	90%	6%	100%
Hotel and accommodation managers	10%	64%	26%	100%
Literary, artistic and sports professionals	12%	75%	14%	100%
Publicans, innkeepers and club stewards	2%	69%	28%	100%
Restaurant and catering managers	6%	88%	6%	100%
Travel & flight attendants	9%	75%	15%	100%
Travel agency managers	24%	71%	6%	100%
Waiters, waitresses	49%	48%	4%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.12.2** Education Profile of Selected Arts, Sports and Tourism Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Bar staff	25%	59%	16%	100%
Chefs, cooks	23%	43%	34%	100%
Entertainment and sports managers	6%	42%	52%	100%
Hotel and accommodation managers	20%	34%	47%	100%
Literary, artistic and sports professionals	11%	30%	59%	100%
Publicans, innkeepers and club stewards	30%	54%	16%	100%
Restaurant and catering managers	18%	49%	33%	100%
Travel & flight attendants	8%	54%	38%	100%
Travel agency managers	6%	56%	38%	100%
Waiters, waitresses	21%	56%	23%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

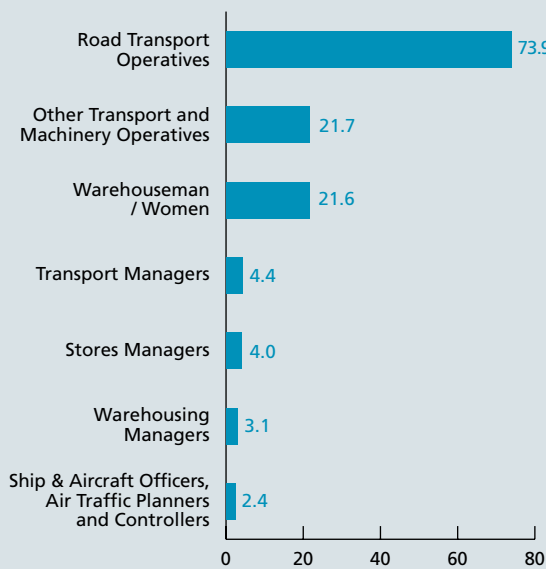
- Skill shortages persist in relation to chefs. There is still a high demand for new qualifiers and employers continue to experience difficulties in sourcing qualified chefs.
- Supply for other occupations is adequate.

## 7.13 Transport and Logistics Occupations

### Key points for selected transport and logistics occupations, 2007

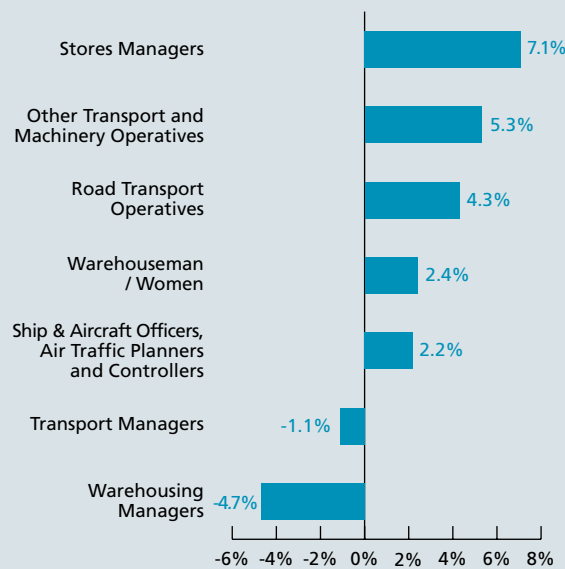
- There are 130,000 persons employed in the selected transport and logistics occupations, constituting almost 7% of total employment
- Over the period 2002-2007, employment growth for stores managers was the highest, expanding by 7.1% on average annually. On the other hand, there were fewer warehousing managers at the end of the period, with employment contracting by 4.7% per annum.
- Transport managers have the largest share of those over 55 years of age, which is the highest within this occupational grouping and also one of the highest across all occupations; warehousing personnel has the highest share of those under 25
- Road transport and machine operatives, ship and aircraft officers, and air-traffic controllers are predominantly male
- As a whole, this broad occupational grouping has a higher than average share of persons with below Leaving Cert qualifications; at the same time, third level qualifications are a prerequisite for entry in some occupations, such as aircraft officers and air traffic controllers
- One fifth of warehousemen/women are non-Irish

**Figure 7.13.1** Numbers Employed (000s) in Selected Transport and Logistics Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.13.2** Annual Average Growth in Selected Transport and Logistics Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.13.1** Age Profile of Selected Transport and Logistics Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Other Transport And Machinery Operatives	12%	75%	13%	100%
Road Transport Operatives	3%	74%	22%	100%
Ship/Aircraft Officers, Air Traffic Planners & Controllers	2%	83%	16%	100%
Stores managers	10%	83%	7%	100%
Transport managers	4%	72%	25%	100%
Warehousemen/women	20%	69%	10%	100%
Warehousing managers	0%	79%	21%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.13.2** Education Profile of Selected Transport and Logistics Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Other Transport And Machinery Operatives	61%	34%	6%	100%
Road Transport Operatives	62%	33%	5%	100%
Ship/Aircraft Officers, Air Traffic Planners & Controllers	12%	22%	67%	100%
Stores managers	28%	48%	25%	100%
Transport managers	32%	41%	27%	100%
Warehousemen/women	37%	49%	14%	100%
Warehousing managers	31%	39%	30%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

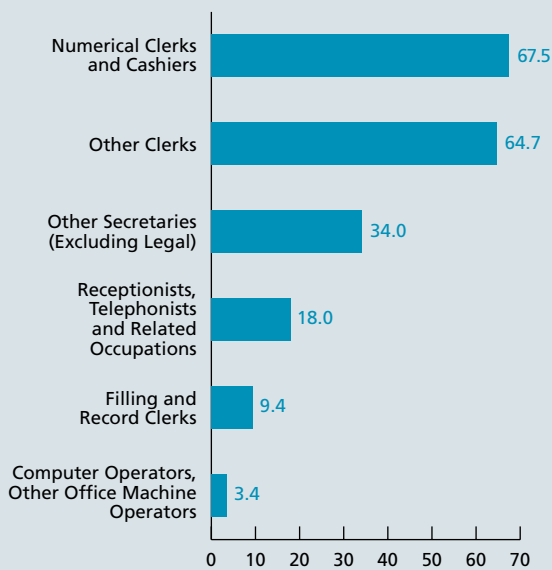
- There are currently no shortages in the area of transport and logistics.

## 7.14 Clerical Occupations

### Key points for selected clerical occupations, 2007

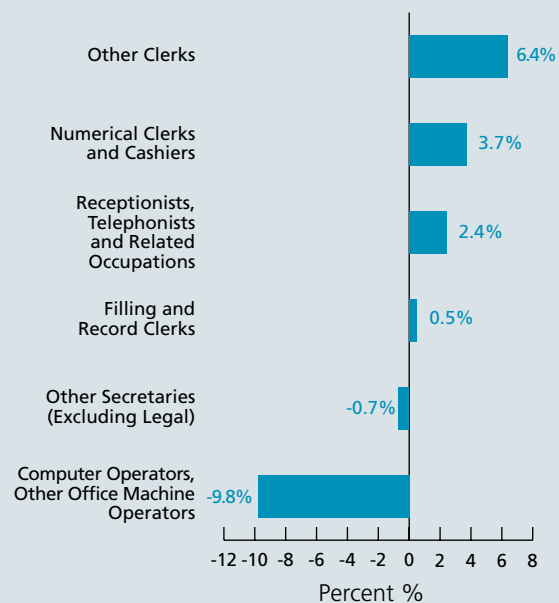
- There are approximately 195,000 individuals employed in clerical occupations, representing just over 9% of total national employment
- Employment is distributed across several economic sectors, including the financial intermediation sector, the real estate, renting and business sector and the wholesale and retail sector
- Employment of numerical clerks and cashiers and other clerks grew strongly over the period 2002-2007, each with growth rates at or in excess of the national average; conversely, negative growth was recorded for computer and other office machine operators which saw a decline of 9.8%; only textile and tannery operatives had a higher rate of negative growth
- One quarter of those employed as receptionists, telephonists and related occupations are aged 15-24; for all other clerical occupations, approximately three quarters of employment is in the 25-54 age group
- Secretaries and receptionists and telephonists have the lowest educational profile with the highest share of persons with below Leaving Cert qualifications and a share of third level graduates that is lower than the national average
- With the exception of computer operatives, clerical occupations are predominantly female
- At 18.6% and 21.6% respectively, the share of non-Irish employed as filing and records clerks and computer and other office machines operators exceeds the national average of 14.9%
- Approximately one third of other secretaries and receptionists and telephonists work part-time

**Figure 7.14.1** Numbers Employed (000s) in Clerical Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.14.2** Annual Average Employment Growth in Clerical Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.14.1** Age Profiles of Clerical Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Computer operators, other office machine operators	21%	73%	5%	100%
Filing and records clerks	13%	74%	14%	100%
Numerical clerks and cashiers	19%	71%	9%	100%
Other clerks	15%	74%	11%	100%
Other secretaries (excluding legal)	7%	79%	15%	100%
Receptionists, telephonists and related occupations	25%	62%	13%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.14.2** Education Profiles of Clerical Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Computer operators, other office machine operators	12%	57%	31%	100%
Filing and records clerks	8%	49%	42%	100%
Numerical clerks and cashiers	9%	50%	40%	100%
Other clerks	12%	55%	33%	100%
Other secretaries (excluding legal)	13%	63%	24%	100%
Receptionists, telephonists and related occupations	15%	59%	26%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

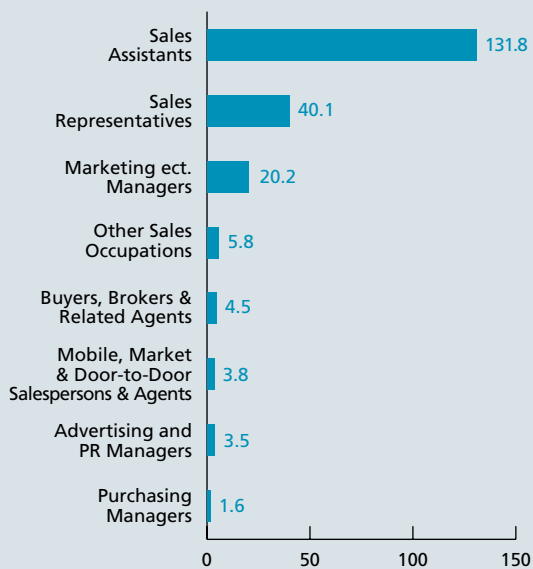
- Although there is no shortage of general clerical skills in Ireland, there is still a shortage of clerks with specific financial skills such as fund accountants and administrators (e.g. fund accounting), primarily at supervisory level. While the challenge to attract and retain candidates for fund accounting and fund administration positions has been decreasing with the loosening of the labour market overall, vacancies in these areas still persist.

## 7.15 Sales Occupations

### Key points for selected sales occupations, 2006

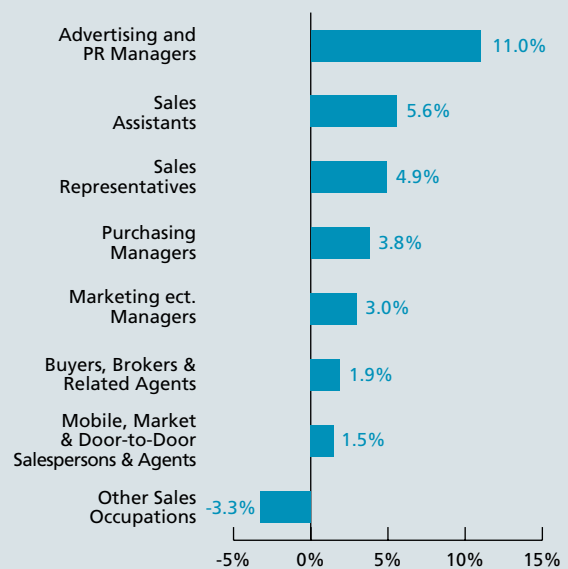
- Approximately 200,000 persons are employed in selected sales occupations, representing 10% of Ireland's workforce
- Employment is concentrated in the retail and wholesale sectors
- Sales assistants, with almost 127,000 employed, is the most populated single occupation in the economy as a whole, accounting for 62% of employment in sales occupations
- Over the period 2002-2007, over 40,000 additional posts were created in these occupations; almost three quarters of these were for sales assistants
- Over half of all mobile market and door-to-door salespersons and almost a third of sales assistants hold below Leaving Cert qualifications; by contrast, more than half of those in management occupations have third level qualifications
- Employment of sales assistants is strongly skewed towards the younger age cohorts with 40% younger than 25
- Almost half of all sales assistants work part-time
- Just over half of all marketing managers and almost three quarters of all sales assistants are female
- At 18%, the share of non-Irish amongst sales assistants is above the national average

**Figure 7.15.1** Numbers Employed (000s) in Sales Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.15.2** Average Employment Growth in Sales Occupations, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.15.1** Age Profile of Sales Occupations, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Advertising and PR managers	7%	89%	4%	100%
Buyers, brokers and related agents	6%	84%	10%	100%
Marketing etc. managers	7%	85%	8%	100%
Mobile, market and door-to-door salespersons and agents	10%	68%	22%	100%
Purchasing managers	6%	84%	11%	100%
Sales assistants and check-out operators	41%	52%	7%	100%
Other sales occupations n.e.c.	21%	71%	8%	100%
Sales representatives	17%	72%	11%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.15.2** Education Profiles of Clerical Occupations, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Advertising and PR managers	3%	16%	82%	100%
Buyers, brokers and related agents	13%	40%	47%	100%
Marketing etc. managers	8%	34%	58%	100%
Mobile, market and door-to-door salespersons and agents	56%	40%	4%	100%
Purchasing managers	0%	44%	56%	100%
Sales assistants and check-out operators	31%	56%	13%	100%
Other sales occupations n.e.c.	20%	55%	25%	100%
Sales representatives	16%	46%	37%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

- As Ireland continues to grow its exports, there are still employment opportunities for marketing managers. Data from the difficult to fill vacancy survey and the SLMRU recruitment agency survey indicates that employers are experiencing difficulties in sourcing marketing managers. The difficulty here is not recruiting young marketing graduates out of college but rather experienced persons who could take up managerial roles.
- Shortage indicators for sales representatives are inconclusive. Many of the recruitment difficulties experienced previously for this occupation appear to have abated but shortages may persist for sales representatives in highly technical areas which require specialised knowledge of the sector or/and product (e.g. software development).

## 7.16 Operatives

### Key points for selected operatives occupations, 2007

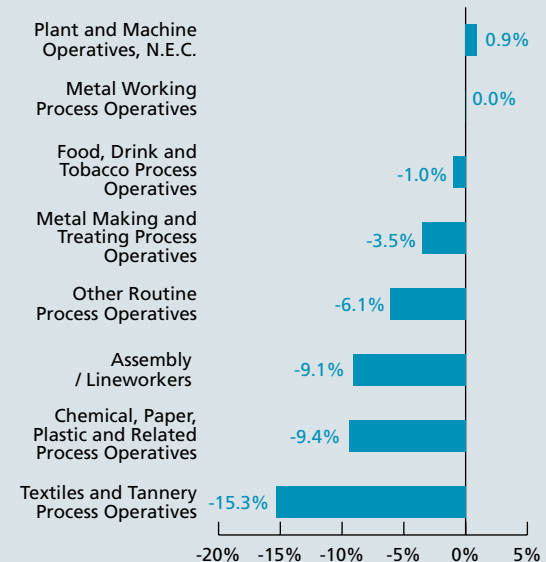
- This occupational grouping is employed across a range of industry sub-sectors; it totalled just above 82,000 or 4% of all persons in employment
- Reflecting the trend of a relative and absolute decline in employment characterising a broad manufacturing sector, and a shift away from labour intensive industries, this occupational grouping contracted during the period 2002-2007; the employment decline was most pronounced for textile and tannery operatives, which contracted by over 15% per annum during the period
- All operative occupations are characterised by above average proportions of those with below Leaving Cert qualifications; two thirds of textile operatives and a half of machine operatives have less than secondary education
- Employment is almost gender balanced in three operative occupations: assembly line workers, routine process operatives and textile operatives, while all other operative occupations are predominantly male
- The share of non-Irish nationals amongst operatives has been increasing and now exceeds the national average in almost all operative occupations

**Figure 7.16.1** Numbers Employed (000s) as Operatives and Related Occupations, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.16.2** Annual Average Employment Growth for Operatives and Related Occupations, 2002-2007 (%)



Source: Analysis by FÁS (SLMRU) based on CSO data



**Table 7.16.1** Age profile of operatives, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Assemblers/line workers	15%	81%	4%	100%
Chemicals, paper, plastic and related process operatives	8%	85%	7%	100%
Food, drink and tobacco process operatives	16%	75%	8%	100%
Metal making & treating process operatives	8%	81%	11%	100%
Metal working process operatives	16%	82%	3%	100%
Other routine process operatives	22%	71%	7%	100%
Plant and machine operatives n.e.c.	10%	73%	17%	100%
Textiles and tannery process operatives	18%	78%	5%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.16.2** Education profile of operatives, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Assemblers/line workers	30%	49%	21%	100%
Chemicals, paper, plastic and related process operatives	29%	55%	16%	100%
Food, drink and tobacco process operatives	42%	44%	15%	100%
Metal making & treating process operatives	46%	50%	5%	100%
Metal working process operatives	46%	51%	3%	100%
Other routine process operatives	33%	42%	25%	100%
Plant and machine operatives n.e.c.	51%	42%	7%	100%
Textiles and tannery process operatives	69%	31%	0%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

- There are no shortages of operatives in Ireland at present.

## 7.17 Labourers and occupations not elsewhere classified (n.e.c.)

### Key points for selected labourers<sup>27</sup>, 2007

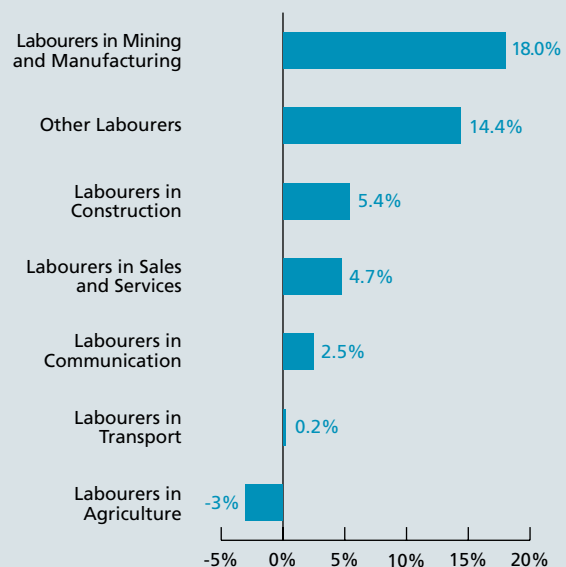
- There are approximately 210,000 labourers in Ireland, representing almost 10% of total national employment
- Over the period 2002-2007, the number of labourers in agriculture contracted by 3%; by contrast, employment growth for labourers in mining, manufacturing and construction exceeded the national average
- Over the period 2002-2007, approximately 55,000 net posts were created in these occupations; most of these new jobs were in the other labourers category (40%) and for labourers in sales and services (28%)
- The share of those in the 15-24 age category is either at or exceeds the national average for all occupations with the exception of labourers in communication
- In general, labourers have the lowest educational profiles of all occupations economy-wide: at least one third, and in some cases more than half, of all labourers are those with below Leaving Cert qualifications
- Almost three quarters of employment in sales and services is female; in all other categories males make up approximately two thirds or more of employment; almost all labourers in construction are male
- More than half of labourers in sales and services and one fifth of those in agriculture are in part-time employment
- Almost one third of labourers in sales and services and in construction is non-Irish, which is almost twice the national average

**Figure 7.17.1** Numbers Employed (000s) as Labourers, 2007



Source: Analysis by FÁS (SLMRU) based on CSO data

**Figure 7.17.2** Annual Average Employment Growth for Labourers, 2002-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

27. There are a number of occupations discussed in this section which for simplicity, are referred to as labourers; these include cleaners, porters, sorters, various types of mates.

**Table 7.17.1** Age Profile of Labourers, 2007

Occupation	Age			Total
	15-24	25-54	55+	
Labourers in agriculture	16%	66%	18%	100%
Labourers in communication	7%	77%	16%	100%
Labourers in construction	21%	70%	9%	100%
Labourers in mining and manufacturing	16%	77%	7%	100%
Labourers in sales and services	15%	67%	18%	100%
Labourers in transport	19%	69%	12%	100%
Other labourers	16%	68%	16%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

**Table 7.17.2** Education profile of operatives, 2007

Occupation	Education			Total
	Lower secondary or less	Upper secondary or FET	Third level	
Labourers in agriculture	46%	43%	11%	100%
Labourers in communication	40%	54%	5%	100%
Labourers in construction	59%	37%	4%	100%
Labourers in mining and manufacturing	41%	49%	11%	100%
Labourers in sales and services	55%	34%	11%	100%
Labourers in transport	55%	31%	14%	100%
Other labourers	46%	39%	15%	100%

Source: Analysis by FÁS (SLMRU) based on CSO data

### Shortage indicators

- There is currently no shortage of labourers in Ireland.

# Section 8 - In Focus: Immigrant workforce (1999-2007)

## Introduction

Since the mid-1990s, favourable economic conditions have attracted substantial inward migration from other countries to Ireland. As a result, Ireland's demographic profile and its workforce have changed considerably.

The focus of this chapter is an analysis of the immigrant population in Ireland based on the results of the Quarterly National Household Survey (QNHS), conducted by the Central Statistics Office. We provide an overview of the non-Irish<sup>28</sup> population in terms of its demographic characteristics, labour market situation and the contribution to the Irish economy.

## Demographic change

For a number of decades the natural increase, which since the 1960s tended to overcompensate for negative net migration, was the single source of the population growth in Ireland (Figure 8.1). This changed in the mid-1990s, when net migration turned positive and even outpaced the natural increase, resulting in a sharp rise in the population size.

Between 2001 and 2005, the population increased by almost 70,000 on average annually, while in the two years to 2007 the growth was estimated at in excess of 100,000 per annum, which in both instances exceeds the population growth for any five-year period since records began. Net migration has been accounting for the majority of that growth.

Inward migration has been outpacing outward migration leading to a peak net migration of in excess of 70,000 in 2006 (Table 8.1). In 2007, net migration declined somewhat, possibly setting a downward trend associated with the less favourable economic climate in the short term.

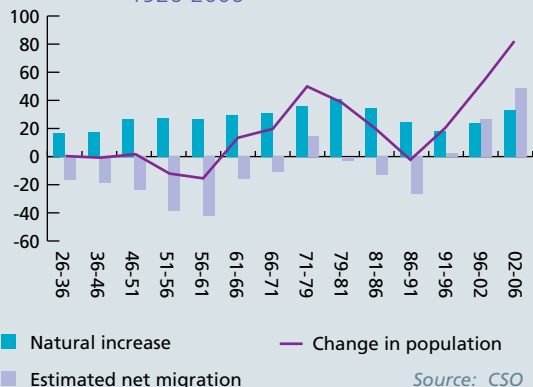
**Table 8.1** Migration Estimates ('000s) 2001-2007

Year	Outward migration	Inward	2007
2001	26.2	59.0	32.8
2002	25.6	66.9	41.3
2003	29.3	60.0	30.7
2004	26.5	58.5	32.0
2005	29.4	84.6	55.1
2006	36.0	107.8	71.8
2007	42.2	109.5	67.3

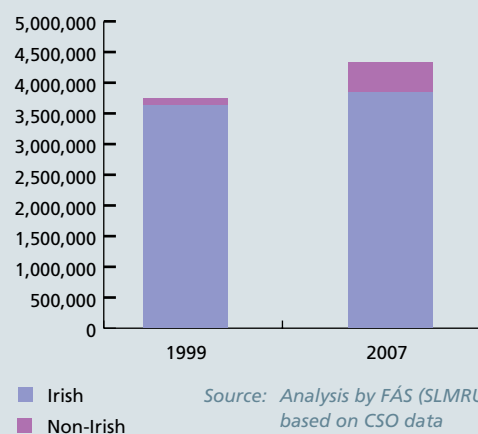
Source: CSO 2008 Population and Labour Force Projections.2011-2041 (revised)

As a result, the number and share of non-Irish nationals has increased markedly: in 1999 there were just under 120,000 non-Irish nationals in Ireland, comprising 3% of the total population; by 2007 the number had increased to just less than half a million accounting for 12% of the population (Figure 8.2). In 2005, the majority of OECD countries had a share of foreign born accounting for over 10% of the population<sup>29</sup>.

**Figure 8.1** Components of Population Growth 1926-2006



**Figure 8.2** Population by Nationality, 1999 & 2007



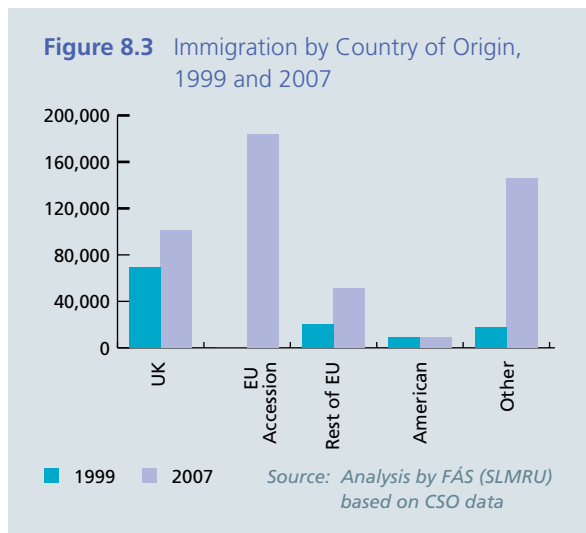
28. For the purpose of this analysis a non-Irish national is defined as a person whose nationality is not Irish (either born in Ireland or abroad).

29. Source: International Migration Outlook: SOPEMI 2007 Edition, OECD Paris (2007: 38).

The growth in the non-Irish population outpaced the growth of the indigenous population: while the number of Irish increased by 6% over the period 1999-2007, over the same period the non-Irish population quadrupled.

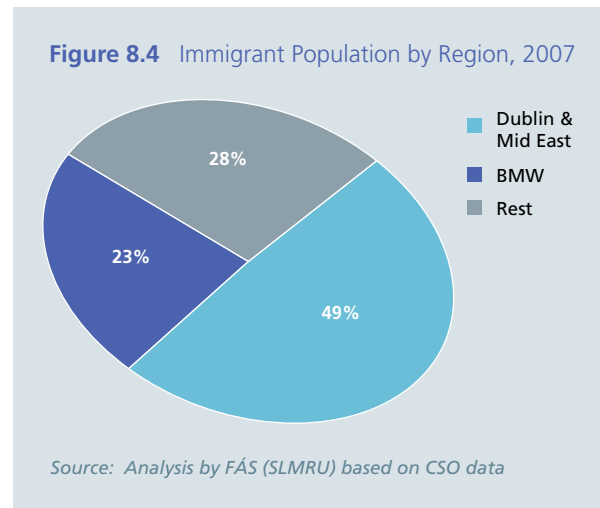
## Immigrant Population

Immigrants to Ireland came from around the world. However, a significant majority originated from the EU. Of the 500,000 non-Irish nationals in Ireland in 2007, almost 70% was from the EU, of which more than a half came from the 10 accession states (which joined the EU in 2004). This is different to 1999 when more than a half of the total immigration stock in Ireland (and three quarters of the EU immigrants to Ireland) was from the UK (Figure 8.3).

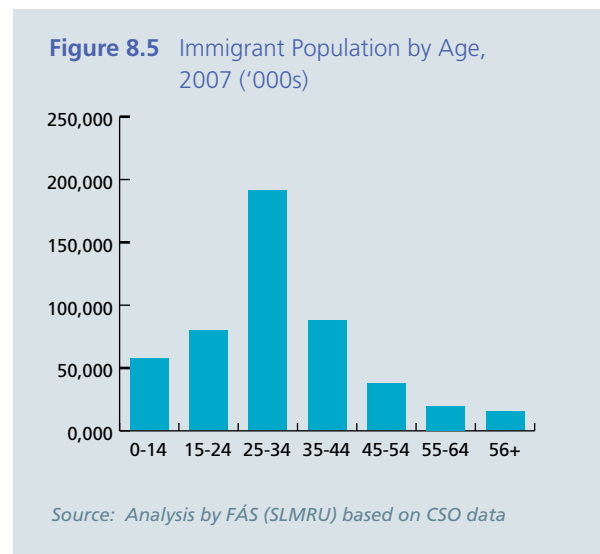


Between 1999 and 2007, with the exception of the Americans, the number of immigrants from all world regions increased: the number of EU nationals rose threefold, while immigration from other parts of the world increased sevenfold (albeit from a small base). Immigrants from outside the EU now account for almost a third of the non-Irish population, almost doubling their share since 1999.

The immigrant population tends to be clustered in the Dublin and the Mid-East regions, where a half of the non-Irish nationals resides (Figure 8.4).



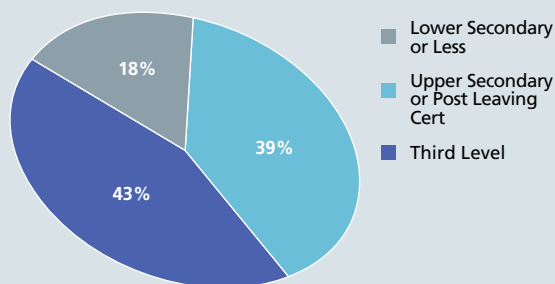
The age profile of non-Irish nationals is strongly skewed towards the younger age cohorts (Figure 8.5): 86% are younger than 45 and almost 40% are aged 25-34. A significant majority (85%) of the non-Irish population is of working age; there are comparatively few children (12% are less than 15 years) and just 5% are aged 60 or more.



There are significantly more males than females among the non-Irish, particularly in the younger age groups.

The immigrant population has a higher education profile than the indigenous population: 43% of working age immigrants hold third level qualifications, of which 73% are holders of degrees or higher awards (Figure 8.6). In terms of the individual nationality groups, more than 60% of Americans in Ireland have a third level qualification; 54% of EU-nationals (excluding UK); 46% of non-EU nationals (excluding Americans); 37% of UK nationals.

**Figure 8.6** Working Age Immigrants by Highest Level of Education Attained, 2007

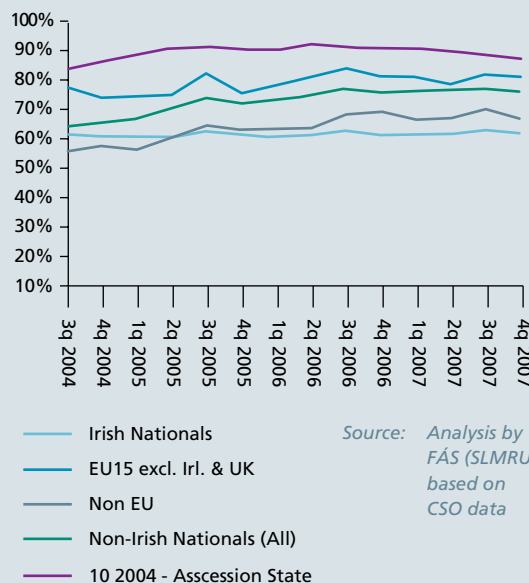


Source: Analysis by FÁS (SLMRU) based on CSO data; EGFSN

The OECD data<sup>30</sup> shows that immigrants to Ireland are higher skilled than those migrating to other countries: 48% of the immigrants in Ireland who were in employment in 2005 held tertiary qualifications. Only Luxemburg had a higher share of high-skilled immigrants in employment at 53%. The rate for Belgium is on a par with that for Ireland although at 29% Belgium's share of lower skilled immigrants is considerably higher than Ireland's. In fact, in 2005 Ireland's share of lower skilled immigrants was amongst the lowest across OECD countries at 14%.

Most immigrants came to Ireland to work. At 74%, the labour force participation rate for immigrants is considerably higher than that for the indigenous population (Figure 8.7). Those arriving from the countries which joined the EU in 2004 have the highest participation rate, while only immigrants from the UK and non-EU countries (the latter most likely to do with the limited labour market access rights) have participation rates that are similar to the rate for the Irish nationals.

**Figure 8.7** Labour Force Participation Rates, by Nationality (Quarterly Figures), 2004-2007



Source: Analysis by FÁS (SLMRU) based on CSO data

Figure 8.8 compares the non-Irish population by the ILO classified labour status in 1999 and 2007. Of the total 420,000 working age immigrants in 2007, three quarters were in employment; one fifth not economically active and the remainder were unemployed.

In absolute terms, the total number of non-Irish nationals increased significantly in each of these categories over the period 1999-2007. There was a fivefold increase in the number in employment, a twofold increase in the number not economically active, and a more than threefold increase in the number of those unemployed. Nonetheless, the data shows that the share of the non-Irish in employment in 2007 was 74%, up from 59% in 1999; there was a corresponding decline in the share of non-Irish that were economically inactive - their share fell 15 percentage points to 21%; the share of those classified as unemployed remained unchanged.

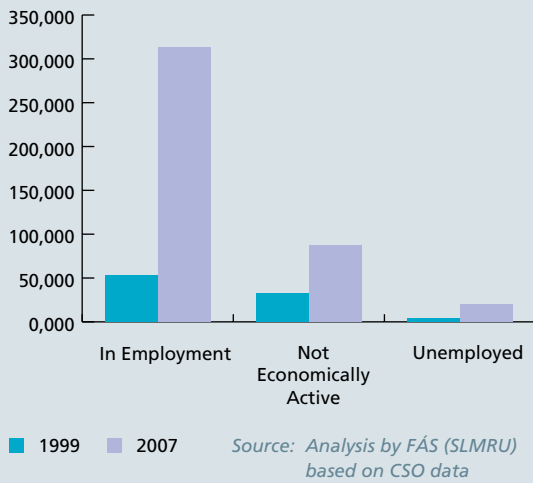
Of approximately 90,000 economically inactive working age immigrants, just over a half was from outside the EU, almost 30% were from the UK, 12% were from the rest of EU and 4% were American.

Examining the economically inactive cohort further we found that 43% of inactive immigrants are engaged in home duties, 31% are students, 7% are retired and the remainder is inactive for other reasons.

In 2007, there were almost 35,000 non-Irish students in Ireland, compared to 22,000 three years previously. Of these, almost 13,000 were from non-EU countries (20% of whom were in part-time employment).

30. Source: International Migration Outlook: SOPEMI 2007 Edition, OECD Paris (2007: 38).

**Figure 8.8** Working Age Immigrants by ILO Labour Status, 1999 and 2007



Almost one third of all economically inactive immigrants holds a third level qualification; of these, 9,000 come from non-EU countries (excluding the US). While some are students, a significant number is inactive due to the low participation rates and/or impediments to their participation in the labour market.

## Immigrant Workforce

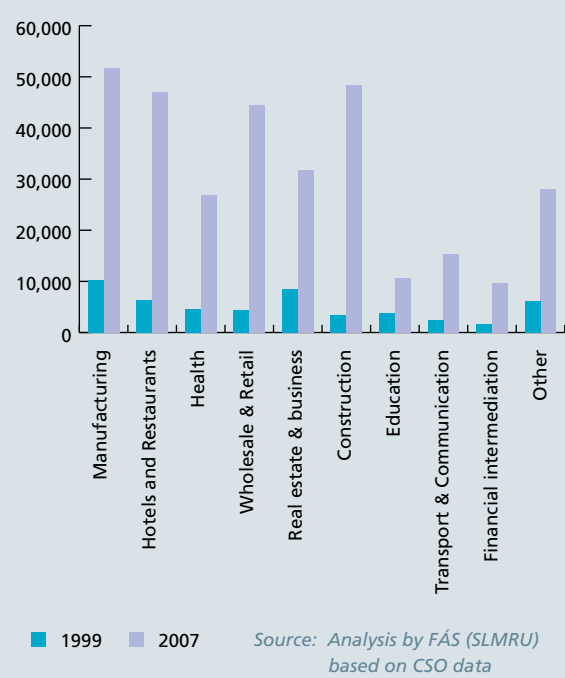
Between 1999 and 2007, 260,000 non-Irish nationals joined the Irish workforce. With the workforce of 315,000, non-Irish nationals accounted for 15% of the total employment in 2007 – an increase of 12 percentage points on 1999.

Non-Irish nationals are employed across all sectors of the economy. Figure 8.9 compares the employment of non-Irish nationals by NACE sector in 1999 and 2007. In 2007, the majority of non-Irish were employed in the manufacturing sector, the construction sector, the wholesale and retail sector and the health sector.

While the number of non-Irish employed in all sectors increased between 1999 and 2007, there has been a slight redistribution in relative terms: within the immigrant workforce, the share employed in manufacturing, real estate and business and education fell, while the share employed in construction, wholesale and retail and hotels and restaurants increased.

The greatest inflow was observed for the construction sector which employed an additional 45,000 non-Irish workers over the eight-year period. The inflow into manufacturing, wholesale/retail and hotels/restaurants was in the range of 40,000 each and over 20,000 each for the business and health sectors.

**Figure 8.9** Employment of Non-Irish Nationals by NACE Sector, 1999 and 2007



All sectors have experienced major changes in the nationality composition of their workforce with the share of non-Irish in almost all sectors moving into two-digit figures by 2007 from mostly negligible shares observed in 1999 (Table 8.2).

In 2007, the hotel and restaurant sector had the highest share of non-Irish in its workforce. One-in-three workers in the hotel and restaurant sector and one-in-five manufacturing workers are now non-Irish. Over-representation of foreign-born workers in manufacturing is observed amongst all OECD countries, while Ireland appears to have a relatively higher concentration of foreign workers in the hotel and restaurant sector compared to other OECD countries<sup>31</sup>.

Of the total employment in the construction sector in 1999, 3% was non-Irish compared to 17% in 2007. Greece and Spain also stand out in the share of immigrant workers in the construction sector with 29% and 18% recorded for 2005 respectively.

31. Source: *International Migration Outlook: SOPEMI 2007 Edition*, OECD Paris (2007: 38)

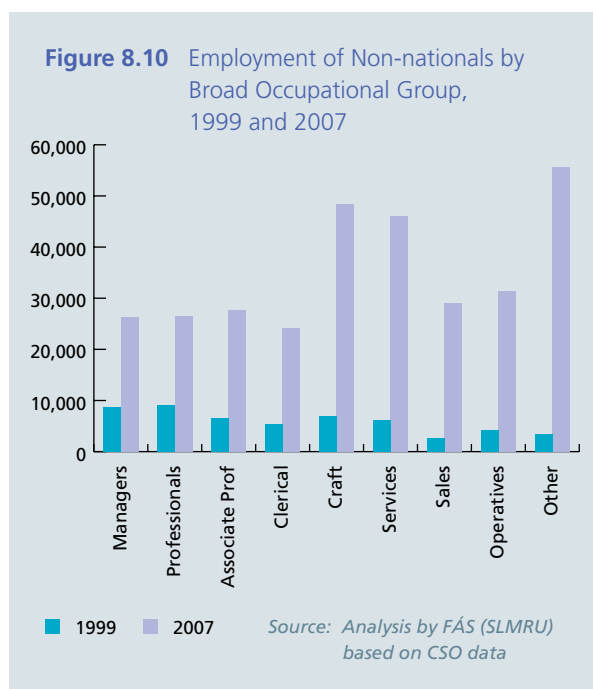
**Table 8.2** Share of Non-Irish Nationals by NACE Sector, 1999 and 2007

Sector	1999	2007
Hotels / Restaurants	6%	35%
Manufacturing	4%	19%
Construction	3%	17%
Business	6%	16%
Wholesale / Retail	2%	15%
Health	4%	13%
Transport / Communication	3%	12%
Financial	3%	11%
Education	4%	8%
Other	2%	8%
<b>Total</b>	<b>3%</b>	<b>15%</b>

Source: Analysis by FÁS (SLMRU) based on CSO data

Non-Irish nationals are found across all professions (Figure 8.10). One third of all immigrants are employed in high skilled occupations as managers, professionals and associate professionals, while over 60% of immigrants work in lower skilled occupations as labourers, operatives or service workers.

Although the occupational employment of non-Irish is somewhat more evenly distributed than the sectoral one, the greatest number of immigrants is found amongst labourers, craft and service workers. These occupational groups also experienced the greatest inflow of immigrant workers over the period 1999-2007 between 40,000 and 50,000 each. The inflow into all other occupational groups was in the range of 15,000-25,000 each.



The nationality composition of the workforce in each occupational group changed markedly over the period 1999-2007, with the share of non-Irish increasing sharply across the board (Table 8.3). One-in-four labourers and one-in-five service workers are now non-Irish, compared to their shares of 2% and 4% in the overall workforce in 1999.

Non-Irish labourers work primarily as construction labourers, cleaners and labourers in catering. Interestingly, 18% of immigrant labourers hold a third level qualification.

Non-Irish service workers are employed primarily as waiters, chefs, childcare workers, care assistants, bar staff and security guards. One third hold third level qualifications (compared to 20% of Irish), 65% of whom have attained degree level or higher (compared to 30% of Irish).

**Table 8.3** Share of Non-Irish Nationals by broad occupation, 1999 and 2007

Broad occupation	1999	2007
Labourers	2%	27%
Personal Service	4%	19%
Operatives	3%	18%
Craft	3%	16%
Sales	2%	16%
Associate Professionals	5%	15%
Professionals	6%	11%
Clerical	3%	10%
Managers	3%	8%
<b>Total</b>	<b>3%</b>	<b>15%</b>

Source: Analysis by FÁS (SLMRU) based on CSO data

Table 8.4 lists individual occupations with the highest number of non-Irish employed. More than 20,000 non-Irish sales assistants are employed in Ireland, followed by more than 10,000 waiters and similar number of cleaners and building labourers.

Workers from the 10 EU accession countries account for at least a half, and in some cases over 80%, of the immigrant workforce in almost all listed occupations. Non-EU immigrants account for the majority of non-Irish nurses (80%) and chefs (45%).



**Table 8.4** Occupations with the Highest Number of Immigrants

Occupation	Number of non-Irish
Sales assistants	21,900
Cleaners, domestics	13,200
Other Building & civil engineering labourers	12,500
Waiters, waitresses	11,400
Nurses	9,600
Chefs, cooks	8,800
Carpenters & joiners	8,100
Drivers of roads goods vehicles	7,400
All other labourers & related workers	6,900
Other clerks (not specified)	5,900
<b>Total</b>	<b>3%</b>

Source: Analysis by FÁS (SLMRU) based on CSO data

Table 8.5 lists individual occupations with the highest share of non-Irish in the employment stock. The catering workforce has a high share of non-Irish: more than a half of all kitchen porters, a half of all waiters and a third of all chefs and catering assistants in Ireland are non-Irish. Food processing is also heavily reliant on immigrant labour with 37% of all food process operatives and 30% of butchers sourced from abroad. By contrast, non-Irish workers are rarely found in legal professions, amongst civil servants, farmers and primary school teachers.

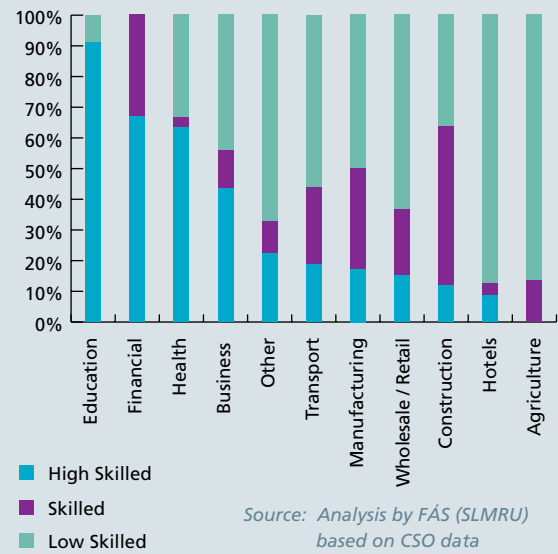
**Table 8.5** Occupations with the Highest Share of Immigrants

Occupation	Number on non-Irish
Kitchen porters	60%
Waiters, waitresses	50%
Packers, bottlers, canners, fillers	42%
Other farming occupations	42%
Other food, drink and tobacco process operatives	37%
Other building and civil engineering labourers	36%
Chefs, cooks	35%
Butchers, meat cutters	33%
Counterhands, catering assistants	30%
Cleaners, domestics	30%

Source: Analysis by FÁS (SLMRU) based on CSO data

Figure 8.11 presents the skill distribution of sectoral employment for the immigrant workforce. Most immigrants working in the education, health and financial sector are employed in high skilled jobs as managers, professionals or associate professionals. They account for 90%, 63% and 60% of each sector's immigrant workforce respectively. By contrast, a half or more of all immigrants working in agriculture, manufacturing, hotels and restaurants and transport are employed in lower skilled jobs as service workers, operatives or labourers.

**Figure 8.11** Employment of Non-Irish by Sector and Skill<sup>32</sup>, 2007



## Labour market contribution 1999-2007

Over the period 1999-2007 approximately half a million additional jobs were created in the Irish economy. Approximately half of these jobs were filled by Irish persons. Given that at that time Ireland was operating at an unemployment rate of 4%, economic growth would have been adversely affected if the remainder of the employment growth, amounting to over a quarter of a million additional posts, had not been met by immigrant workers.

Table 8.6 shows the net job creation of the period 1999-2006 by sector and nationality.

While the employment of Irish persons in manufacturing declined by 60,000 over the period, the number of non-Irish actually increased by just over 40,000, resulting in a net employment decline of just under 20,000 for the sector and suggesting that some Irish workers were

32. High skilled occupations comprise managers (excluding farmers), professionals and associate professionals; skilled occupations comprise craft and clerical occupations; low skilled occupations include personal service occupations, sales occupations, operatives and labourers.

replaced by immigrant labour. Similarly, there were 10,000 fewer Irish employed in the hotel and restaurant sector over the period 1999-2007. At the same time, the number of immigrants working in the sector increased by 40,000, thereby compensating for the decline in the

employment of Irish, as well as filling the additional posts created over the period.

In other sectors (excluding the education sector), at least a quarter and in some cases more than half of the employment growth was filled by non-Irish workers.

**Table 8.6** Net Job Creation by Nationality and Sector, 1999-2007

Sector	Net job creation 1999-2007			Non-Irish share in total net job creation	EU as share of non-Irish
	Total	Irish	Non-Irish		
Manufacturing	-19000	-61000	42000	216%	79%
Construction	140000	95000	45000	32%	82%
Wholesale/Retail	72000	32000	40000	55%	77%
Hotels/ Restaurants	30000	-10000	40000	133%	68%
Transport,	26000	13000	13000	48%	77%
Financial	30000	22000	8000	26%	72%
Business	61000	38000	23000	38%	66%
Education	39000	32000	7000	18%	56%
Health	93000	70000	22000	24%	35%
Other	40000	19000	22000	54%	79%
<b>Total</b>	<b>512000</b>	<b>251000</b>	<b>261000</b>	<b>51%</b>	<b>72%</b>

Source: Analysis by FÁS (SLMRU) based on CSO data

Excluding the healthcare sector where most of the non-Irish staff is from outside the EU, a significant majority of recruited immigrants in all other sectors was from the EU, primarily from the ten EU accession countries.

Table 8.7 shows the net job creation for the period 1999-2007 by broad occupation and nationality. Immigrant labour played a key role in filling low skilled jobs. Employment growth for operatives was filled exclusively by non-Irish. Moreover, non-Irish workers met the demand of 14,000 jobs which were created as a result of the employment contraction of Irish operatives. Similarly, almost all labouring jobs

(90% of net job creation) were filled by non-Irish.

A half of the employment growth for craft workers and just under a half of the employment growth for service and sales workers was filled by immigrant labour. Immigrants also played a significant role at the higher end of the skills scale by filling 21%, 39% and 62% of employment growth for professionals, associate professionals and managers.

With the exception of associate professionals (which include nurses), a significant majority of immigrant labour used to fill the employment growth for each occupational group was from the EU.

**Table 8.7** Net Job Creation by Nationality and Occupation, 1999-2007

Occupation	Net job creation 1999-2007			Non-Irish share in total net job creation	EU as share of non-Irish
	Total	Irish	Non-Irish		
Managers	28000	11000	18000	62%	72%
Professionals	82000	65000	17000	21%	59%
Associate Prof	54000	33000	21000	39%	41%
Clerical	55000	36000	19000	35%	77%
Craft	82000	40000	41000	51%	81%
Personal Service	86000	46000	39000	46%	62%
Sales	56000	29000	26000	47%	74%
Operatives	13000	-14000	27000	205%	85%
Labourers	57000	5000	52000	91%	78%
<b>Total</b>	<b>512000</b>	<b>251000</b>	<b>261000</b>	<b>51%</b>	<b>72%</b>

Source: Analysis by FÁS (SLMRU) based on CSO data



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## EGFSN Members

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Ms. Liz Carroll,	Training and Development Manager, ISME
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Ms. Marie Bourke,	Head of Human Capital and Labour Market Policy, Forfás (also Head of Secretariat)
Mr. Martin Shanahan,	Divisional Manager, Science, Technology and Human Capital, Forfás



## Publications by the Expert Group on Future Skills Needs

Publication	Date of Publication
All-Island Skills Study	October 2008
Monitoring Ireland's Skills Supply: Trends in Education/Training Outputs 2008	July 2008
Future Requirement for High-Level ICT Skills in the ICT Sector	June 2008
Future Skills Needs of the Irish Medical Devices Sector	February 2008
Survey of Selected Multi-National Employers' Perceptions of Certain Graduates from Irish Higher Education	December 2007
The Future Skills and Research Needs of the International Financial Services Industry	December 2007
National Skills Bulletin 2007	October 2007
Monitoring Ireland's Skills Supply: Trends in Education/Training Outputs	July 2007
Tomorrow's Skills: Towards a National Skills Strategy	March 2007
National Skills Bulletin 2006	December 2006
Future Skills Requirements of the International Digital Media Industry: Implications for Ireland	July 2006
Careers and Labour Market Information in Ireland	July 2006
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Monitoring Ireland's Skills Supply: Trends in Education/Training Outputs	January 2006
Data Analysis of In-Employment Education Training in Ireland	December 2005
Skills Needs in the Irish Economy: The Role of Migration	October 2005
National Skills Bulletin 2005	October 2005
The Demand & Supply of Foreign Language Skills in the Enterprise Sector	May 2005
Skills Requirements of the Digital Content Industry in Ireland Phase I	February 2005
Innovate Market Sell	November 2004
The Supply and Demand for Researchers and Research Personnel	September 2004
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The Third Report of the Expert Group on Future Skills Needs - Responding to Ireland's Growing Skills Needs	August 2001

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Publication	Date of Publication
Benchmarking Mechanisms and Strategies to Attract Researchers to Ireland	July 2001
Report on E-Business Skills	August 2000
Report on In-Company Training	August 2000
The Second Report of the Expert Group on Future Skills Needs - Responding to Ireland's Growing Skills Needs	March 2000
Business Education and Training Partnership 2nd Forum, Dublin	March 2000
Business Education and Training Partnership Report on the Inaugural Forum, Royal Hospital Kilmainham	March 1999
The First Report of the Expert Group on Future Skills Needs - Responding to Ireland's Growing Skills Needs	December 1998

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