



National Skills Bulletin 2007

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*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 2007 is the third annual report by the Expert Group on Future Skills Needs (EGFSN) on skills and occupational trends in Ireland. The objective of the Bulletin is to outline key labour market statistics in order to assist policy formulation in the areas of employment, education and training, and immigration. It also aims to provide information for students, career guidance advisors, and other interested parties relating to developments in the Irish labour market.

The main focus of the Bulletin is the analysis of employment at occupational level for the period 2001-2006. Each occupation is examined in terms of its employment profile (based on the data from the Quarterly National Household Survey by the Central Statistics Office (CSO)), recent employment trends and other available indicators on the demand and supply of skills. These include the number of employment permits issued to non-EU nationals by the Department of Enterprise, Trade and Employment; an indication of difficulty in filling positions from the monthly FÁS/ESRI Vacancy Survey; 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 as provided 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.

By synthesizing all of the above information, we comment on the balance between the demand and supply for each occupation. Identified shortages are defined in terms of their characteristics, i.e. skill shortage or labour shortage, 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 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.

The purpose of this Bulletin is solely to identify occupations where shortages exist. Further study is necessary to identify the cause of these shortages and, consequently, 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 new employment schemes for non-EU workers.
- 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 examines the employment profile of females working in Ireland.

Key findings

In 2006, there were more than 2 million persons (including those older than 65) in employment in Ireland. This is just under 87,000 additional jobs on the preceding year. The increase in employment was not evenly distributed in terms of economic sectors or broad occupational groups.

Over the period 2001-2006, an estimated additional 300,000 jobs were created in the economy. Employment growth in the construction and healthcare sectors was the strongest and by far exceeded the national average of 3% per annum. On the other hand, employment in agriculture and manufacturing contracted. Within manufacturing, employment declined in almost all sub-sectors with the most pronounced fall in the metals and machinery, and textiles and clothing sub-sectors.

Of the broad occupational groups, the strongest employment growth was recorded for professional occupations, while the number of machine operatives and farmers continued to decline.

The education and training system is a key source of skills in Ireland. Just under 190,000 vocational training awards were made in 2006 (with some individuals receiving two or more awards). Approximately 59,000 individuals graduated from third level education (though many continued to further study). At third level, social sciences, business and law account for the most graduates.

In February 2007, new employment permit arrangements were introduced for non-EU citizens wishing to work in Ireland: the green card scheme, intra-company transfer scheme and employment permit scheme. During the first 5 months, over

3,000 new permits were issued. The non-EU workers were most frequently sourced for the areas of nursing and care, software development, food processing, catering, accounting and equestrian work.

In 2006, vacancies were numerous across all occupations, with professional, associate professional, managerial, clerical and services positions most frequently advertised. Occupations most commonly cited by employers as difficult to fill included managerial, professional and associate professional.

Based on the data used in the analysis, shortages were identified for a number of occupations. These were classified into skill and labour shortages. Skill shortages refer to a situation where there is an insufficient number of trained/qualified individuals in the domestic market to meet the demand for an occupation. Labour shortages refer to a situation where there is an insufficient number of individuals willing to take up employment opportunities in a particular occupation.

Skill shortages

Skill shortages were identified in the following sectors:

Construction

Currently, there is a shortage of architects; however, the education provision for architects has increased significantly in recent years, which is expected to assist in balancing demand and supply in the medium term.

Significant shortages are occurring for experienced quantity surveyors. They are required in particular for procurement activity and estimations of large projects, such as for those relating to the NDP and hospital buildings. Employers frequently cite quantity surveyors as difficult to source.

Shortages of building managers relate primarily to site managers and construction project managers; regular citations occur in the difficult to fill vacancy survey.

Due to the large infrastructural projects envisaged under the National Development Plan (NDP) skills shortages in civil engineering at professional and technician level are expected to persist.

As residential activity slows, the demand for construction craft personnel will decline. As such, no shortages are expected in these occupations with the exception of construction plant fitters. Fitters are involved in the maintenance of machinery on infrastructure sites and demand for this occupation will increase as the majority of construction activity shifts to infrastructure projects.

Financial

Current demand for financial skills is strong and the outlook for the future is positive. The demand in the international segment of the sector is driven by two forces: the expansion of back office activities which represent a core platform of the sector and the demand which is arising from the expansion of middle and front office activities which are associated with higher added value and higher skills.

In terms of specific skills, currently there are shortages in the areas of accounting (financial reporting and audit), quantitative finance (risk and investment analysis) and compliance (regulatory issues).

Engineering

There is evidence of shortages of engineers of all types; current demand is strong with employers frequently experiencing difficulties in sourcing engineers. Even in the case of quality control engineers where employment has contracted, employers are experiencing recruitment difficulties in meeting replacement demand. Demand for engineers is expected to continue to be strong in the coming years due to the projected strong performance of the pharmaceutical, medical devices and IT sectors; on the supply side, a decline in enrolments in engineering courses in recent years is expected to contribute to future shortages of engineering skills.

At technician level, there is an issue with a decline in supply, and resulting shortages, due to a fall in the uptake of engineering courses in general and the increased progression from higher certificate and ordinary degree (technician) to honours degree (professional) level.

Information Technology

There are shortages of software engineers and computer analysts/programmers with employers continuously sourcing IT skills from abroad. These shortages are expected to persist into the future: on the demand side, IT employment is projected to grow strongly as highlighted both in the latest reports by Forfás and FÁS/ESRI; some of the factors underlying the expected strong demand for IT skills include the economy's increasing dependence on IT, the growing importance of system and network security and the emergence of new security technologies, changing work and home patterns arising from the use of broadband wireless infrastructure; on the supply side, enrolments on computing courses have been declining.

Scientists

Initiatives such as the Strategy for Science Technology and Innovation and Science Foundation Ireland aim to significantly increase public expenditure on research and development over the next eight years and seek, among others, to double the number of PhDs. This will create a demand for postgraduate researchers in the future. A decline in science uptake, particularly for degree courses, will negatively affect future supply and skills shortages in this area are expected to arise.

The data on difficult to fill vacancies and work permits indicates possible shortages in some areas at technician level in science occupations.

Healthcare

There is evidence of shortages in many healthcare occupations including medical practitioners, dentists, various types of therapists and radiographers. In 2006 and 2007, the number of university places for medical doctors increased significantly but this will not impact on supply in the short to medium term. Similarly, despite a recent increase in the education and training provision for radiographers, the increase will still not be sufficient to alleviate the shortages experienced in this area.

The number of dentists being trained annually has not increased in over 20 years leading to shortages in this area. In particular, there appears to be a current lack of dentists in specialist areas such as orthodontics; the 2006 increase in training places for orthodontists is not expected to balance the demand and supply in the short run.

There may also be a shortage of pharmacists due to a growth in demand in recent years. Although graduates have begun to emerge from new courses introduced in response to shortages, this is expected to be insufficient to meet both the expansion and replacement demand; the replacement demand is expected to be higher than average due to the older age profile of existing pharmacists.

Despite a recent increase in supply from the education system, work permit data indicates that many nurses continue to be sourced from abroad, suggesting difficulties in attracting and retaining staff in the profession.

The broad nature of the psychologists and other social behavioural scientists occupational group may mask shortages for specific skills, notably in the case of educational and clinical psychologists. Although education provision for clinical psychologists has increased recently, the demand for experienced staff will not be met in the short term.

Transport and Logistics

The analysis of quantitative data suggests that skill shortages are occurring for heavy goods vehicle (HGV) drivers at present, evident from the reported difficulties in sourcing by some employers. However, it also seems that these difficulties are less manifest than last year.

There is a shortage of freight forwarding, custom clearance and import/export documentation processing staff; the shortage is due to the lack of awareness of employment opportunities by potential candidates and the limited training provision in this area.

Sales

Marketing managers are being increasingly sourced from non-Irish stock indicating a skills shortage in this area.

There is a shortage of skills in relation to sales representatives with technical, product and sectoral knowledge.

Addressing skills shortages in these areas is important to the development of indigenous companies and their performance in the export markets.

Catering

There is a shortage of chefs: employers are frequently citing vacancies for chefs as difficult to fill, almost one third of chefs are non-Irish with their share in employment increasing markedly and a significant number of chefs are sourced from outside of the European Economic Area (EEA).

Manufacturing

Some current shortages are being experienced in the areas of metal machining, fitting and instrument making; in terms of specific job titles, there are shortages of aircraft mechanics, lift installation engineers and sheet metal mechanics. These skills are being imported from outside of the EU and employers cite them frequently as difficult to source.

The number of work permits issued for welders and the share of non-Irish nationals in the employment stock suggest that many employers are experiencing difficulties in sourcing welders domestically.

Labour Shortages

Labour shortages were identified in the following sectors:

Financial

There is an acute shortage of fund accountants, fund administrators and shareholder services officers. The shortage is mainly due to staff retention issues. This poses a challenge to Ireland's efforts to preserve and expand existing back office activities in the international financial services sector.

Services

At present, labour shortages are experienced with regard to private security occupations, despite the large inflows of non-Irish. Recent regulatory changes, introduced by the Private Security Authority, will set a minimum education requirement for entry into this occupation at FETAC level 4. This is likely to affect the supply by prolonging the preparatory period for new entrants and exacerbating existing shortages.

A labour shortage is being experienced in relation to waiting staff at present. This occupation has become particularly dependent on non-Irish labour.

Healthcare

The share of non-Irish domestic childminders has increased significantly indicating that there is a labour shortage for this occupation. The demand, however, is being met primarily from EU member states.

There appear to be issues with the high turnover of care assistants.

Sales

There is a shortage of sales assistants evident in the continuous increase in the share of non-Irish employed in this occupation.

Food Manufacturing

Food preparation trades, and in particular butchers and de-boners, have one of the highest proportions of non-Irish nationals employed. They appear regularly in the work permit data suggesting employers are having difficulty sourcing workers from the EU.

Labourers

The changes in the nationality composition of the employment stock and the work permit data suggest that employers continue to source labourers from abroad, particularly in the services, agriculture and construction sectors. Currently, Irish persons appear to be reluctant to take up jobs as labourers given the availability of alternative job opportunities.

The In focus section of this year's Bulletin explores the current state of the Irish female workforce. The analysis highlighted the following:

- In 2006, 870,000 females were in employment
- The female participation rate increased from 48% to 53% over the period 2001-2006
- The female employment rate is at the EU27 average. However, it stands significantly below Scandinavian countries and with a high disparity between male and female employment rates
- Females continue to withdraw from the workforce earlier than males
- Females have a higher education profile than males, with females outnumbering males among degree holders
- 1 in 3 females works part-time, compared to 1 in 15 males
- In terms of occupations, females are primarily employed as nurses and carers, clerks, teachers and sales assistants
- The share of females in managerial, professional and associate professional occupations is increasing, with females set to outnumber males in professional occupations by 2012.

Comparison with the National Skills Bulletin 2006

In general, recent employment trends have followed the pattern of preceding years. At occupational level, many of the shortages identified in the National Skills Bulletin 2006 have persisted.

However, compared to the year previously, in a number of occupations the gaps between demand and supply are narrowing due to the inflow of non-Irish workers, such as HGV drivers, warehouse staff, services related occupations and labourers.

An important development, however, is the slowing of the residential sub-sector of the construction industry in recent times and the associated loosening of the labour market for most construction craft occupations.

Section 1 General Labour Market Trends

There were just over 4.2 million persons residing in the Republic of Ireland in the second quarter of 2006 (Figure 1.1). The total working age (15-64) population amounted to just over 2.9 million; 864,600 persons were younger than 15 and 469,700 older than 65.

Of the working age population, almost 2 million were in employment. Approximately 924,400 persons of working age were classified as *not in employment*, 90% of which were economically inactive with the remainder seeking employment.

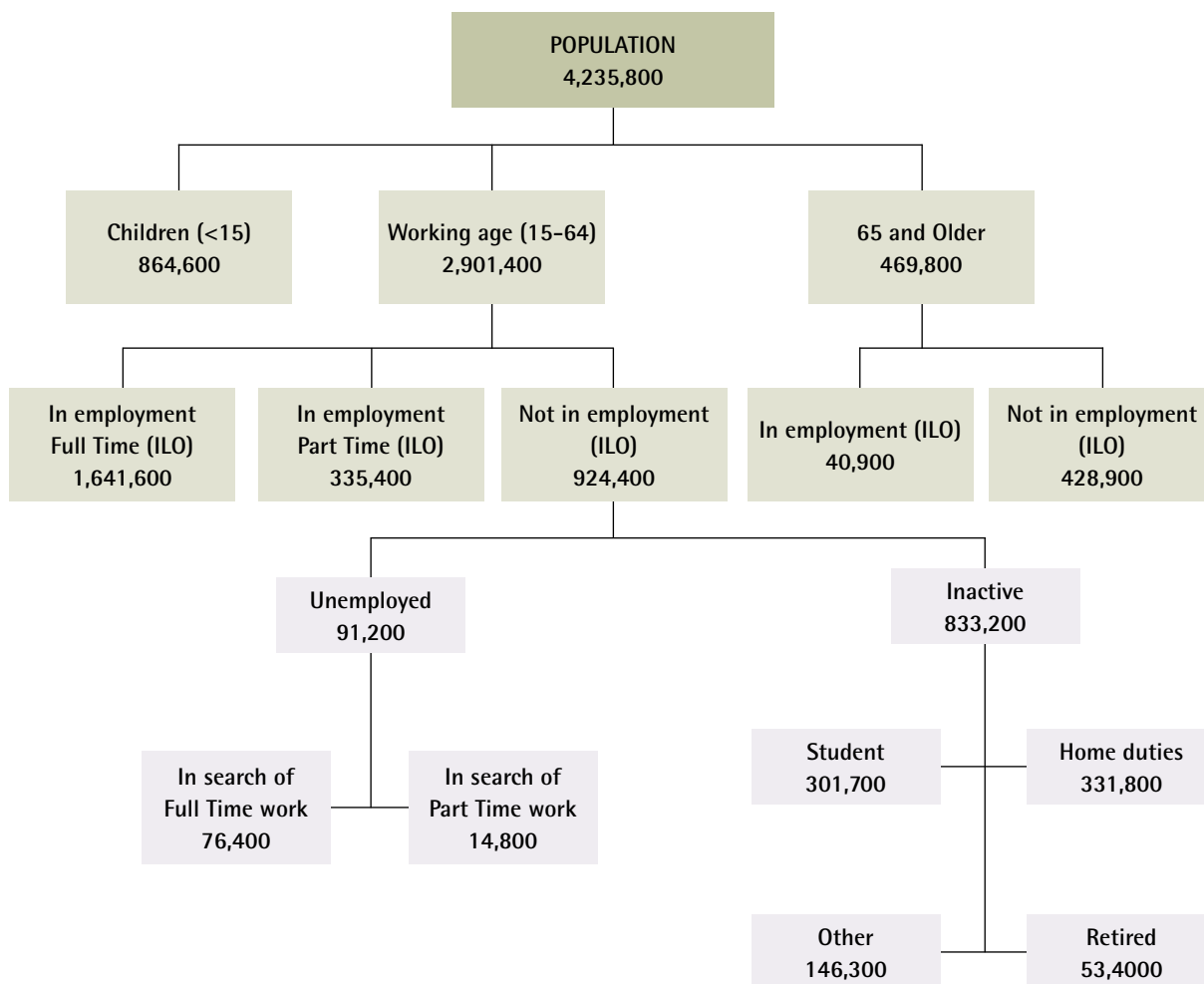
Of those who were economically inactive, the majority were engaged in home duties (40%), 36% were students, 6% were retired, and the remainder was marginally attached to the labour market or inactive for other reasons.

Approximately 40,800 persons who were 65 and older were in employment, with almost 60% employed on a full-time basis (the corresponding figure for the working age population was above 80%).

Over the period 2005-2006, the working age population increased by approximately 86,500 persons. This increase has been absorbed by the labour market: employment increased by the equivalent, while unemployment remained unchanged.

During the period 2001-2006, the average annual employment growth in Ireland was 3.2% (Figure 1.2). Following a strong economic performance in 2006, with GNP growth of 7.4% and employment growth of 4.4%, the economy is expected to revert to a more sustainable growth path.

Figure 1.1 Population by Labour Status in Quarter 2, 2006

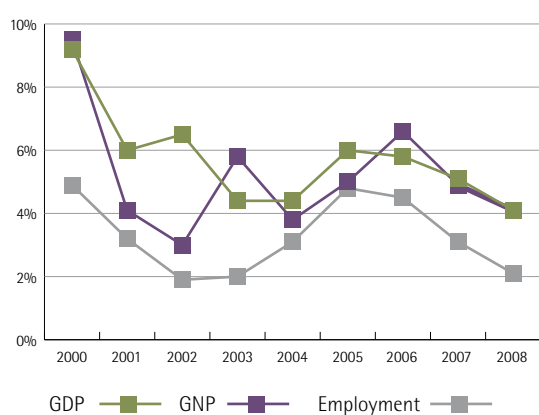


Source: CSO

The Central Bank estimates that GNP growth will be in the region of 4.8% in 2007, slowing down to 4% in 2008. This is in line with the most recent projections from the ESRI, which predicts the volume of GNP to grow by 4.8% in 2007 and by 3.7% in 2008¹.

The deceleration of economic growth is expected to impact on the labour market accordingly. Thus, employment growth is expected to be 3% in 2007 and 2% in 2008².

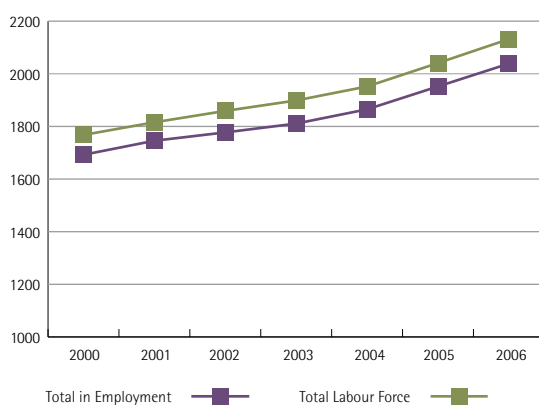
Figure 1.2 Economic and Employment Growth, 2000-2008*



Source: CSO and Central Bank³

During the period 2001-2006, the Irish labour force grew from approximately 1.8 million to 2.1 million (Figure 1.3). In this period, just under 300,000 additional jobs were created, with the numbers in employment growing from approximately 1.7 million to approximately 2 million, an increase of 17% in relative terms⁴.

Figure 1.3 Labour Force in 000s, 2000-2006



Source: CSO

1 ESRI, July 2007. Quarterly Economic Commentary, Summer 2007. Dublin: ISBN/ISSN No 0376-7191

2 Central Bank and Financial Services Authority of Ireland, Quarterly Bulletin 2, 2007: 27-28.

3 Central Bank and Financial Services Authority of Ireland, Quarterly Bulletin 2, April, 2007.

4 These figures are averaged over the four quarters of each year, while the data in Figure 1.1 refers to Quarter 2 2006.

In 2006, the unemployment rate was 4.4% (Table 1.1), showing no significant changes on the preceding four years. The Central Bank forecasts an increase in the unemployment rate in the short-run: 4.5% for 2007 and 4.8% for 2008. The most recent figures available from the ESRI are slightly less sanguine: the rate of unemployment is expected to increase to 4.7% this year, and is likely to increase by a further 0.3 percentage points to reach 5% in 2008.⁵

Over the period 2001-2006, the participation rate increased from 59.9% to 63%. Both male and female participation rates showed increases, however, female participation rate grew faster. (See Section 8 for further analysis on female employment). Higher participation has resulted in an estimated 100,000 additional persons in the labour force.

Table 1.1 Unemployment and Participation Rates, 2001-2006

Year	Unemployment Rate (%)	Participation Rate (%)
2001	3.9	59.9
2002	4.4	60.0
2003	4.6	60.2
2004	4.5	60.7
2005	4.4	62.0
2006	4.4	63

Source: CSO

Another important determinant of labour force growth since 2001 was immigration, which is set to remain one of the key factors impacting on the Irish labour market. The CSO estimates that for the period between 2001 and 2005 inward migration averaged 64,000 per annum, reaching 70,000 in 2005 and increasing further to 87,000 in 2006 (Table 1.2). The flip side is that outward migration fell from 26,600 in 2001 to 17,000 in 2006, and the net effect has been that the Irish population had been boosted by approximately 259,000 persons during the period. The majority of immigrants are of working age (approximately 47% were aged 25-44 in 2006) and partake in the Irish labour force.

Table 1.2 Migration Estimates (000s) 2000-2006

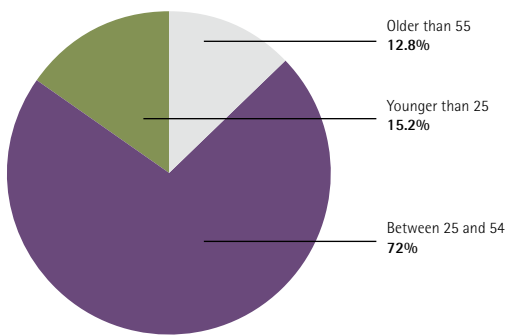
Year	Net migration	Outward migration	Inward migration
2001	32.8	26.2	59.0
2002	41.3	25.6	66.9
2003	29.8	20.7	50.5
2004	31.6	18.5	50.1
2005	53.4	16.6	70.0
2006	69.9	17.0	86.9

Source: CSO Population and Migration Estimates

5 ESRI Quarterly Economic Commentary, Summer 2007.

Figure 1.4 shows the distribution of overall employment by age groups in 2006. The overwhelming majority (72.0%) were aged 25-54; 12.8% were over the age of 55; 15.2% were under 25. This is almost identical to the distribution for 2005. A slight ageing of the workforce has occurred in relation to 2001 when the figures were 71.6%, 11.2% and 17.3% respectively. The decrease in the share of those under 25 is primarily due to the delayed entry into employment and the higher participation rate in third level education.

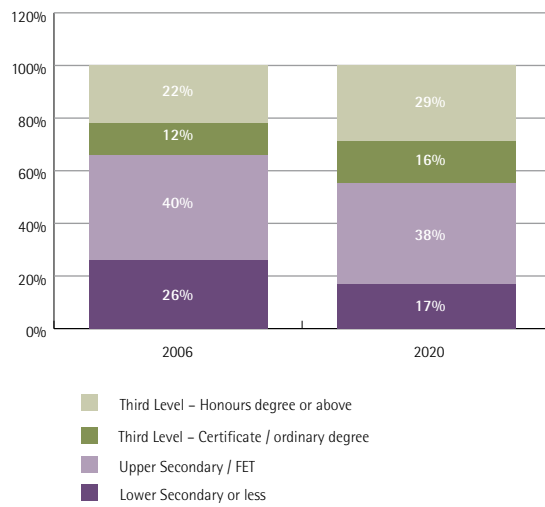
Figure 1.4 Employment by Age, 2006



Source: CSO

Figure 1.5 shows the distribution of those in employment by the highest level of education achieved. In 2006, one third of those employed had third level qualifications; over one quarter had attained lower secondary education or below. The education profile of employment has been improving in recent years, however, further up-skilling is required. The National Skills Strategy⁶ outlines that in order to meet the skills demand of a knowledge based economy projected for 2020, 45% of the workforce will need to hold third level qualifications.

Figure 1.5 Employment by Education, 2006 and 2020



Source: CSO, EG FSN

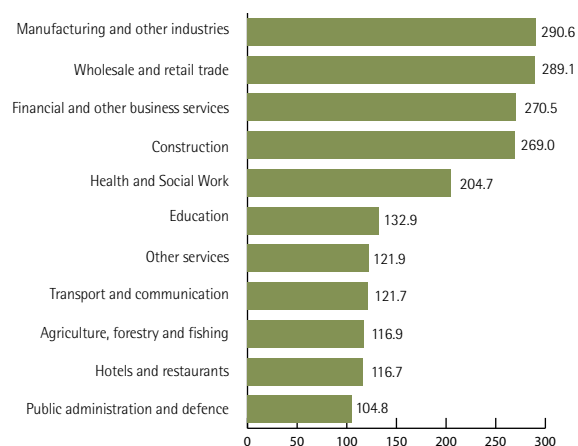
Section 2 Industry Employment Trends

2.1 Employment

This section examines the sectoral employment trends in the Irish economy. First, broad sectors are examined in terms of employment growth and employment levels. Second, where relevant, employment trends in the sub-sectors of each broad sector are examined. Finally, given its continuing importance to the overall economy, the manufacturing sector is examined in more detail.

Total employment in 2006 was 2.04 million. This is broken down into eleven economic sectors (Figure 2.1). The manufacturing sector remains the largest with 291,000 persons employed, just above the wholesale and retail sector employing 289,000 people. On the other hand, the sectors with the least employed were the agriculture, forestry and fishing sector, the hospitality sector (employing just under 117,000 persons each) and public administration and defence (employing 105,000 persons).

Figure 2.1 Employment by Sector in 000s, 2006



Source: CSO

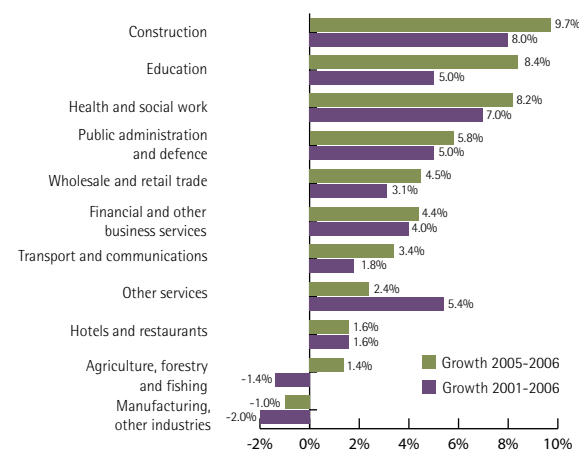
2.2 Employment Growth (2001-2006)

During the period 2001-2006, employment in Ireland increased by just above 293,000 persons or by over 16.5%. This translates into an annual average growth rate of 3.2%. Approximately 86,500 net jobs were created in the economy between 2005 and 2006.

2.2.1 Employment Growth by Sector

In this section, employment growth in each sector is considered and differences in employment growth rates in sub-sectors are outlined. This is illustrated in Figure 2.2, where all sectors are ordered by the magnitude of change in employment levels for the periods 2001-2006 and 2005-2006.

Figure 2.2 Annual Average Employment Growth by Sector, 2005-2006 and 2001-2006 (%)



Source: CSO

Construction:

Between 2005 and 2006, employment in the construction sector grew strongly, increasing by almost 10%, with total employment reaching 269,000. This exceeds the annual average increase in employment for the five year period (2001-2006) of 8%. Construction remained the strongest performing sector in terms of employment growth, accounting for more than one quarter of net jobs generated in 2006, thus demonstrating its continuous relevance to the Irish economy.

Education:

A total of 132,900 persons were employed in the education sector in 2006. At a rate of 8.4%, employment growth between 2005 and 2006 was higher than the 5-year annual average. With 10,300 additional posts created, this amounts to 13% of the total employment growth in the economy in 2006.

Health:

The health sector employed 204,000 persons in 2006. Compared with the corresponding figure for 2001, this is an increase of 58,800 persons. The annual rate of increase in relation to 2005 was 8.2%, exceeding the 5-year annual average of 7%. The health sector accounted for 20% of additional posts created in the economy in 2006.

Public Administration and Defence:

A total of 104,800 persons were employed in public administration and defence in 2006. Employment in this sector grew by an average of 5% per annum over the period 2001-2006.

Wholesale and Retail Trade:

The wholesale and retail trade sector employed a total of 289,100 persons. Employment in 2006 grew by 4.5% in relation to 2005, which was ahead of the annual average growth rate of 3.1% observed during the five year period.

Within this sector, the retail sub-sector grew by 2.3%. The wholesale sub-sector grew much faster at 11.3%, accounting for the majority of the new posts in the overall sector. The motor trade sub-sector grew by 5.6% in 2006, thus accelerating ahead of its 5-year annual average growth rate of 2.7%.

Financial and Other Business Services:

The financial and business services sector expanded by 4.4% in 2006, which was in line with the annual average rate of increase that has been observed during the five year period. There were an additional 11,300 persons employed in this sector in 2006. This sector accounted for almost 13% of jobs created in the economy in 2006.

In terms of employment growth, particularly strong performances were observed for financial intermediation and real estate.

Transport and Communication:

The transport and communication sector expanded by 3.4%, adding 4,000 jobs in 2006, ahead of the average annual rate of increase observed in the five year period, 2001-2006. Of the 121,700 persons employed in this sector, 51,500 were working in the land transport sub-sector; 38,900 in post and telecommunications; 20,100 in supporting and auxiliary transport activities, including travel agencies. The air transport sub-sector has expanded by 48% over the period 2005-2006 – a strong performance following a trough in preceding years.

Employment in the post and communication sub-sector grew by 13.3% in 2006 to 38,900, reversing the negative growth rates experienced over the 2000-2005 period.

Other Services:

A total of 121,900 persons were employed in the other services sector. Employment grew by 2.4%, which was a slowdown in relation to the growth rate experienced in 2005, as well as in relation to that observed in the five year period. Within this sector, the recreational, cultural and sporting activities sub-sector was the largest, employing 49,600 persons in 2006, which was 30% more than in 2001. Sanitation and refuse disposal also grew strongly, expanding by 6,000 people in 2006.

Hotels and Restaurants:

Between 2005 and 2006, the hospitality sector expanded by 1.6% – the slowest growth of all growing sectors – bringing

the total number of employed to 116,700. The sector employs approximately 8,700 more persons than in 2001.

One third of the new jobs created in this sector in 2006 were in the hotel industry, which has benefited from tax incentives and the increased number of overseas tourists.

Agriculture, Forestry and Fishing:

A total of 116, 900 persons were engaged in agricultural, forestry and fishing activities in 2006, which was, somewhat more than in 2005. Over the period 2001-2006, employment contracted at an annual average rate of 1.4%.

2.2.2 Manufacturing and Other Productive Industries

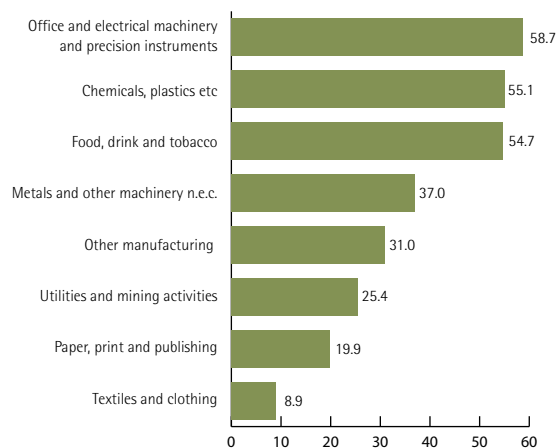
This section looks at the main sub-sectors of the industrial sector, examining employment and employment growth over the five-year period 2001-2006. Industry continues to make a considerable contribution to the Irish economy in terms of GDP, employment and exports.

Employment

At 14.3%, industry accounted for a sizable share of the Irish workforce in 2006. Over the period 2001-2006, the numbers employed in industry fell steadily to approximately 290,600. The decline averaged 2% per annum, resulting in a contraction of the industrial workforce of 10%.

Figure 2.3 depicts industrial employment broken down into eight sub-sectors. The office, electrical machinery and precision instruments sub-sector, remained the largest in terms of employment, with 58,700 persons. This sector was closely followed by the chemical & plastics sub-sector and the food, drink & tobacco sub-sector. Conversely, the smallest number of persons were engaged in the textiles and clothing sub-sector.

Figure 2.3 Employment (000s) by Industrial Sector, 2006



Source: CSO

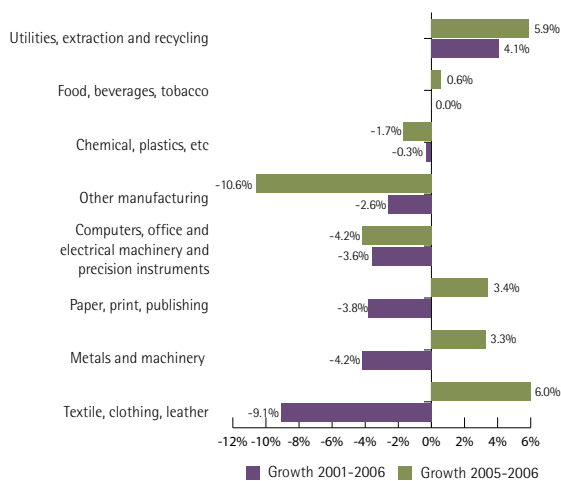
Employment Growth (2001-2006)

Figure 2.4 shows the growth in employment in the different industrial sub-sectors for periods 2001-2006 and 2005-2006.

Most operations associated with traditional industries have declined noticeably in recent years. There has also been a decline in the computer, office and electrical machinery sub-sector. The only sector to experience growth in employment was the utilities, extraction and recycling sector, while the tobacco, food and beverage sector remained static during the period.

However, this negative trend appears to have been reversed to some extent with the printing, metals and textile sub-sectors recording a positive growth rate between 2005 and 2006.

Figure 2.4 Annual Average Employment Growth in Industrial Sectors (%), 2005-2006 and 2001-2006



Source: CSO

Utilities and Mining Activities

The utilities, extraction and mining sector has been expanding consistently since 2001, the only sector to do so in this period. It grew by 4.1% on average, per annum. The most dynamic in terms of job creation was the recycling sub-sector, which more than doubled since 2001. The traditional utilities sub-sector (i.e. electricity and gas supply), the largest sub-sector in terms of numbers employed, has remained static during the five year period. The extraction of crude petroleum and natural gas sub-sector grew strongly in relative terms, but from a very low base.

Chemicals, Plastics, and Non-metallic Materials

Employment in this sector has contracted by almost 1,000 over the period 2001-2006. While the manufacturing of chemicals sub-sector grew slightly, it was not sufficient to counteract the decline in employment in the other two sub-sectors, particularly plastics and rubber which lost almost 3,500 jobs.

Food, Drink and Tobacco

The food, drink and tobacco sector has effectively experienced no change during the five year period, employing a total of 54,700 in 2006. The vast majority of persons engaged in this sector are employed in the food and drink sub-sector.

Office and Electrical Machinery and Precision Instruments

The office and electrical machinery and precision instruments sector remained the largest employer in manufacturing in 2006, employing 58,700 persons. However, this sector has been contracting consistently during the last five years, by 3.6% per annum, translating into approximately 11,700 fewer jobs since 2001.

Most sub-sectors were losing jobs during the five year period, with the exception of the manufacture of medical, precision and optical instruments sub-sector, which expanded by 5.3% per annum. However, this growth rate is strongly influenced by a high level of growth prior to 2004.

Despite a recovery in 2005, employment in the manufacture of computers and office machinery sub-sector in 2006 has failed to reach levels recorded in 2001.

Paper, Print and Publishing

Over the period 2001-2006, employment in this sector contracted by an average of 3.8% per annum. However, in 2006, it employed 19,900 persons – an increase on the previous year.

Metals and Machinery

This sector is also known as the traditional engineering sector. It contracted in terms of the number of persons employed by 4.2% per annum between 2001 and 2006. However, a positive annual growth rate was recorded for 2006.

Textiles and Clothing

Employment in this sector has declined by 9.1% on average annually over the period 2001-2006 or from 14,400 in 2001 to 8,900 in 2006. This period saw the closure of many traditional textile operations in Ireland, some of which have relocated to lower cost destinations.

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

The other manufacturing sector includes the manufacture of wood and furniture, transport equipment and other manufacturing not elsewhere classified. Employment declined by 10.6% between 2005 and 2006. This is a continuation of a previously observed trend.

2.3 Expected Employment Trends by Sector

In this section we outline employment expectations by sector, based on a report on current and expected trends in occupational employment (FÁS/ESRI)⁷.

Overall, employment expectations for the medium term are positive. Specific sector trends are outlined below in general terms, given that more detailed analysis will be provided in subsequent sections of the report.

Construction

Following exceptionally strong performance in recent years, construction is expected to revert to a more sustainable growth path. While a decline is expected to occur in the residential sub-sector, this is likely to be compensated by the growth in the commercial and infrastructure sub-sectors.

Healthcare

The health sector is expected to continue to grow strongly. Increased demand will arise from upward demographic trends, increased expectation regarding the quality of service, high private health insurance coverage, ageing of population and similar issues.

Manufacturing and Other industry

Employment expectations in the medium term are positive, although the sector is set to continue to experience a decline in terms of its share of employment within the economy overall. Employment growth rate is expected to be low and to turn negative in the long run.

Distribution

Employment expectations in the wider distribution sector are positive for the current period, although a slowdown has been predicted for the future.

Financial and Business Services

Employment in the business and services sector is expected to grow strongly until 2010. The outlook for the long term remains positive. Employment growth forecasts for this sector exceed those for all other sectors.

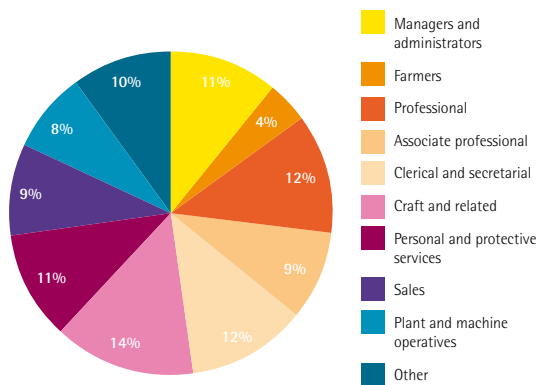
⁷ FÁS/ESRI Manpower Forecasting Studies: Occupational Employment Forecasts 2012, 2007

Section 3 Employment by Broad Occupation

3.1 Employment

This section examines employment by broad occupational group in 2006. Of the total employment of just over 2 million persons in 2006, the highest share of employment (14%) was in the craft and related category; combined, professionals and associate professionals accounted for 21% (Figure 3.1). Since 2005, the shares of professionals and craftspersons increased by one percentage point, while the share of farmers and operatives declined.

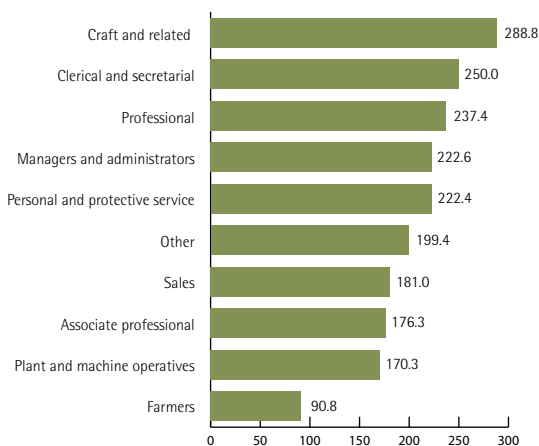
Figure 3.1 Employment by Broad Occupational Group (%), 2006



Source: CSO

Figure 3.2 shows employment levels for 2006 by broad occupational group. With an employment level of 288,800 persons, craft and related occupations is the largest occupational category. There are 250,000 various clerks employed in Ireland. Together, professional and associate professional occupations account for over 400,000 persons employed.

Figure 3.2 Numbers Employed by Broad Occupational Group, 2006 (000s)



Source: CSO

3.2 Employment Growth (2001-2006)

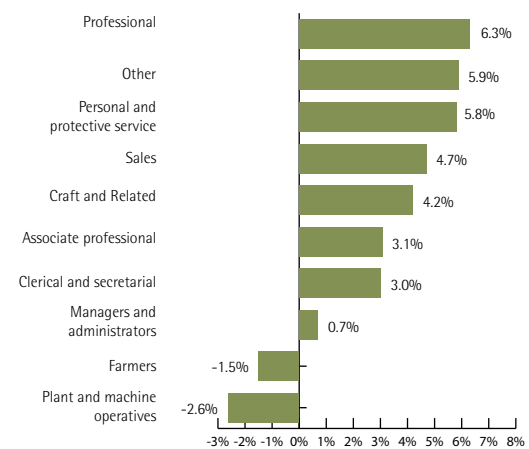
Figure 3.3 presents the 5-year average annual employment growth rates for broad occupational groups.

Employment growth for professional occupations has been accelerating and at 6.3% was the strongest of all occupational groups. More than 60,000 net professional jobs were created over the period.

Employment growth in craft, sales, services and other categories outpaced the average national employment growth. In excess of 50,000 net jobs were created in both personal services and craft related occupations.

In contrast, the numbers employed as plant and machine operatives declined by 2.6% per annum; almost 25,000 net job losses were recorded. In addition, the number of farmers declined by over 7,000 over the same period or by 1.5% on average annually.

Figure 3.3 Annual Average Employment Growth by Broad Occupational Group (%), 2001-2006

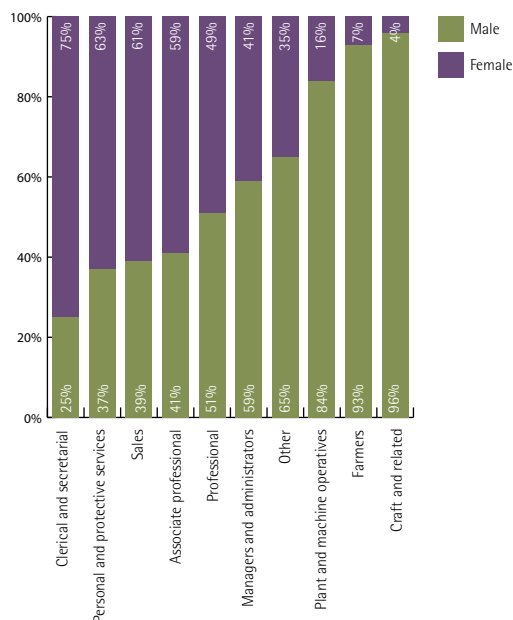


Source: CSO

3.3 Employment by Gender

The gender distribution by broad occupational group is presented in Figure 3.4. The distribution has remained almost unchanged since 2005; there has been a slight decline in the share of female operatives. Female workers continued to dominate in clerical, sales, services and associate professional occupations. Professionals are almost equally distributed between genders. Operatives, craftspersons and farmers are predominantly male.

Figure 3.4 Employment by Gender in Broad Occupational Groups (%), 2006



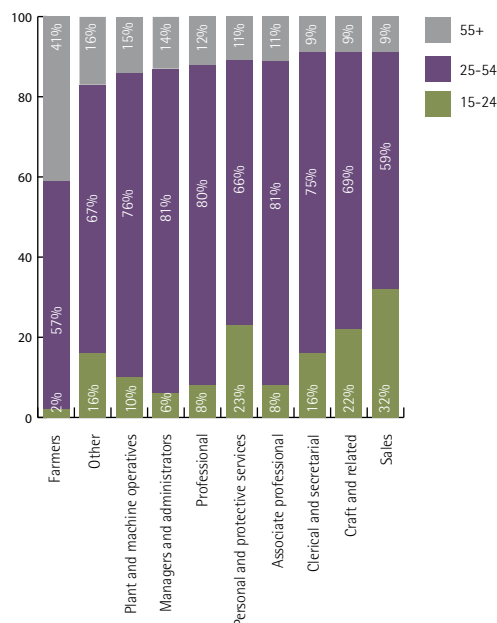
Source: CSO

3.4 Employment by Age

The age distribution of the broad occupational groups in 2006 is presented in Figure 3.5. Sales, craft and services occupations had the highest proportion of persons younger than 25. This is partly due to the uptake of sales and services related jobs by students (temporary) and by those who exit the education system at lower levels. The relatively small proportion of those under 25 in professional and associate professional occupations is related to the fact that these positions tend to be associated with longer periods of study before entry.

Of all occupational groups, the highest share of older workers is in the farmer category. The ageing of the farmer workforce continues: in 2006, 41% of farmers were older than 55 in 2006, compared to 38% in 2005.

Figure 3.5 Employment by Age in Broad Occupational Groups (%), 2006



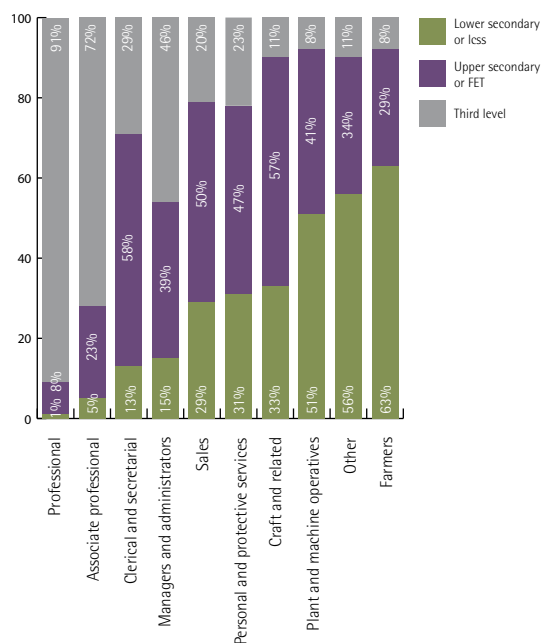
Source: CSO

3.5 Employment by Education

The education distribution of employment in broad occupational groups is presented in Figure 3.6. The highest proportion of third level graduates is found in professional and associate professional occupations, with in excess of 90% and 70%, respectively. On the other hand, more than half of farmers, plant and machine operatives, and labourers (classified mostly as 'other') have attained lower secondary education or less. These three categories also have the lowest share of those employed with third level qualifications.

With the exception of operatives, the share of employment with third level education increased in all occupational groups since 2005 – a trend that has been observed for many years. The greatest increase in the share of employment with third level education was for associate professionals and personal and protective service providers, 3 and 4 percentage points respectively.

Figure 3.6 Employment by Education in Broad Occupational Groups (%), 2006



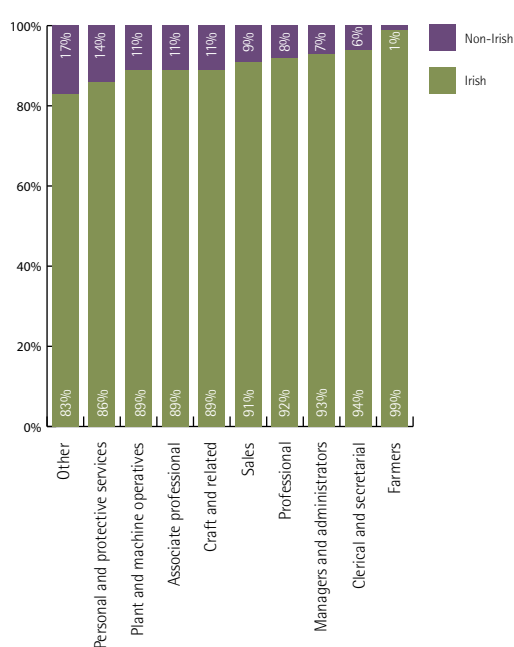
Source: CSO

3.6 Employment by Nationality

Employment in broad occupational groups by nationality is shown in Figure 3.7. At 17%, the occupational group classified as 'other', which consists mostly of labourers, has the highest share of non-Irish persons in employment. This is followed by personal and protective services occupations where the share of non-Irish persons in employment was 14%. Both rates are well above the national average of 9.7%

The share of non-Irish persons in all occupational groups, except farmers, increased between 2005 and 2006. The highest increase in the share of non-Irish workers was in 'other' category (mostly labourers) and personal and protective services, 3 percentage points each. Most of this change is a result of a significant inflow of persons from the EU10 (formerly accession states) into the Irish labour market.

Figure 3.7 Employment by Nationality in Broad Occupational Groups (%), 2006



Source: CSO

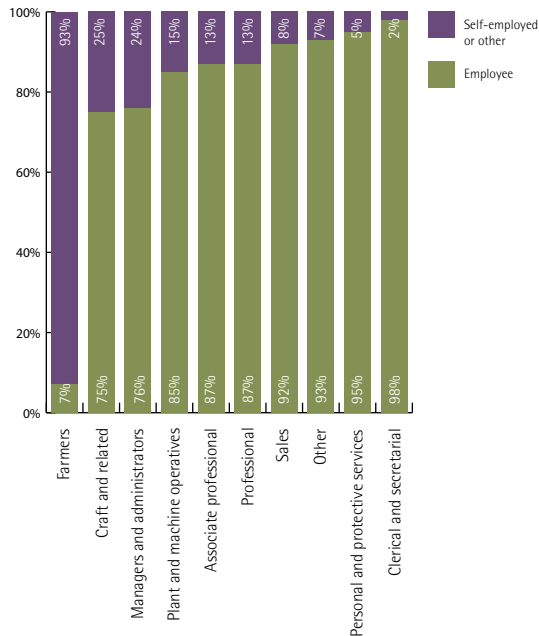
3.7 Employment Status

Figure 3.8 shows the employment status of persons in employment by broad occupational group. In almost all occupational groups, with the exception of farmers who are primarily self-employed, a significant majority of persons are employees.

The high share of self-employed persons in managerial occupations is due to a large number of persons who are proprietors of the businesses they manage e.g. publicans, shop owners. One quarter of craftspersons are self-employed given that, in many cases, the nature of the job allows for freelance business arrangements (e.g. plumber, painter).

The distribution of employment in broad occupational groups by employment status has not changed significantly since 2005.

Figure 3.8 Employment by Employment Status in Broad Occupational Groups (%), 2006

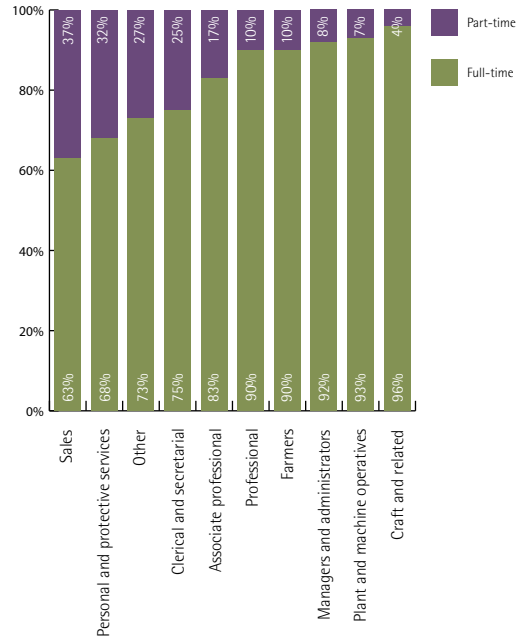


Source: CSO

The distribution of employment in broad occupational groups between full- and part-time employment is shown in Figure 3.9. For all occupational groups, most of employment was full-time. The occupational groups with the highest proportion of part-time workers are sales, services, 'other' and clerical. Interestingly, sales, services and clerical occupational groups also have the highest proportion of females. The relatively high share of part-time employment in the 'other' category is due to the inclusion in this category of persons working as labourers in domestics (e.g. cleaners) whose services are often required on an hourly, part-time basis.

The distribution of employment between full- and part-time has not changed significantly since 2005. There has been a slight increase in part-time workers in the clerical category and a similar increase in the share of part-time farmers. In contrast, there has been a slight decline in the share of part-time associate professionals.

Figure 3.9 Full-time and Part-time Employment in Broad Occupational Groups (%), 2006



Source: CSO

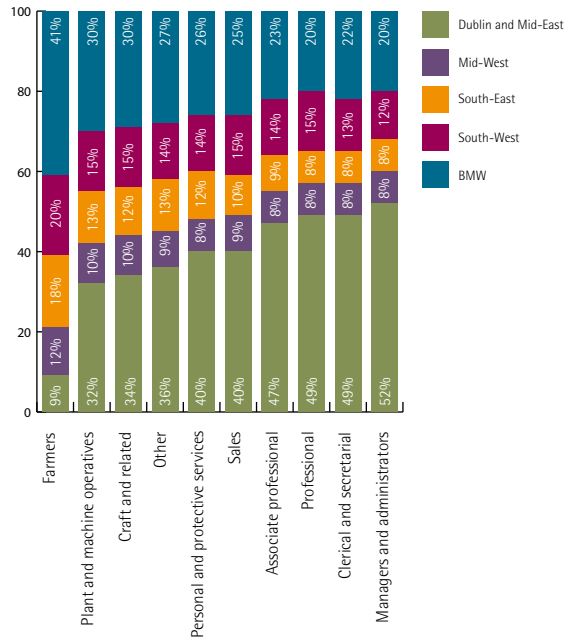
3.8 Employment by Region

For all occupational groups, excluding farmers, the regional distribution of employment is skewed towards the Dublin and mid-east region. Almost half of all professionals, associate professionals, managers and clerks are in this region. In contrast, only 9% of farmers are located in Dublin and the mid-east, with 41% located in the south-east region.

Craftspersons and plant operatives are the most evenly distributed occupations across the regions.⁸

⁸ 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.

Figure 3.10 Employment by Region in Broad Occupational Groups (%), 2006



Source: CSO

Section 4 Education and Training

The objective of this section is to provide a brief overview of the supply of skilled labour from education and training providers in Ireland. A more detailed overview can be found in *Monitoring Ireland's Skills Supply: Trends in Education/Training Output* (EGFSN, 2007). Education and training qualifications are classified by levels according to the National Framework of Qualifications (NFQ). There are 10 levels within the framework, 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/Postgraduate 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 2006⁹. No framework qualifications have been made at Levels 1 and 2 as yet.

4.1 Junior and Leaving Certificate

In 2006, 57,900 Junior Certificate awards were made at level 3 on the NFQ. The Leaving Certificate spans NFQ levels 4 and 5 with a total of 54,100 awards. Approximately 3,200 of these awards were for Applied Leaving Certificates. There were a total of 37,000 Leaving Certificate Established awards and 14,000 awards for the Leaving Certificate Vocational Programme.

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, a range of 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 awards shown in Table 4.1 are a combination of certificates (major awards), minor awards, specific purpose awards and supplemental awards.

In 2006, a total of 111,099 candidates received 130,226 awards from FETAC across levels 3 to 6 as detailed in Table 4.2. It is possible for an individual to receive two or more awards.

Over 24,500 candidates received certificates (major awards) in 2006, with candidates receiving only one award. Candidates receiving component awards – obtained by receiving several minor awards – totalled 65,521. Almost 25,000 candidates received specific purpose awards in 2006 and a further 196 candidates received supplemental awards.

Table 4.1 Summary of Education and Training Awards by NFQ Level, 2006⁹

	Not Placed	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9/10	Total
Junior Certificate	-	57,900	-	-	-	-	-	-	57,900
Leaving Certificate	-	-	54,100	-	-	-	-	-	54,100
FETAC	-	37,600	27,100	110,000	15,000	-	-	-	189,700
Institutes of Technology	-	-	-	-	14,600	-	8,000	1,200	23,800
Universities	-	-	-	-	2,600	-	16,700	11,600	30,900
Private Colleges (mostly HETAC)	600	-	-	-	1,000	-	2,200	200	4,000
Professional Institutes	7,300	-	-	-	-	-	-	-	7,300
Total	7,900	95,500	191,200		33,200		26,900	13,000	367,700

Source: State Examination Commission, FETAC, HEA, HETAC, NUI, Professional Institutes, Open University

⁹ Graduation data for universities and Institutes of Technology is based on 2005 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, 2006

Award Type	No. of Awards	No. of Candidates
Certificates (Major)	26,299	24,515
Components (composite of minor awards)	75,703	65,521
Specific Purpose	28,028	24,777
Supplemental	196	191
Total	130,226	111,099*

Source: FETAC

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

Of the 26,299 certificates, 13% were at level 3, 7% at level 4, 54% at level 5, and 27% at level 6 (Table 4.3). Craft and childcare courses accounted for a high proportion of certificates. On average, holders of component awards achieve two minor awards in one year so the 75,703 component awards are comprised of 135,170 minor awards. Of the minor awards, the highest proportion was at level 5. A significant number of minor awards were for courses in computer literacy and applications. Most specific purpose awards were made at level 5. Specific purpose and supplemental awards were primarily in areas relating to construction and built environment. All supplemental awards were made at level 6.

Table 4.3 FETAC Awards by Award Type and Award Level, 2006

Award Type	Level 3	Level 4	Level 5	Level 6	Total
Certificates	3,488	1,739	14,071	7,001	26,299
Minor	34,064	24,062	72,003	5,041	135,170
Specific Purpose	39	1,342	23,887	2,760	28,028
Supplemental	-	-	-	196	196
Total	37,591	27,143	109,961	14,998	189,693

Source: FETAC

3.3 Universities & Institutes of Technology

Level 7/6

There were approximately 17,200 graduates from institutes of technology (IoTs) and universities at level 7/6 in 2005. Although an overall increase of 16% occurred in the period 2000–2005, graduate output declined for the first time in 2005 (a drop of 9% since 2004). The numbers enrolling on level 7/6 courses have also been on the decline; therefore, graduate output at this level is set to continue to fall in the medium term.

Figure 4.1 shows graduates by broad discipline in 2004 and 2005. The decline in the overall number of graduates in 2005 has had a wide ranging effect on various disciplines.

Health and Welfare: The most significant decline in graduate output over the period 2004–2005 was in health and welfare. This is due to the change in nursing from a level 7 to a level 8 award.

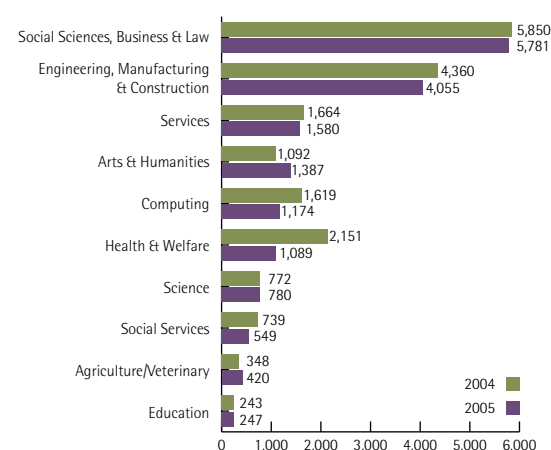
Science: Although graduate output has remained relatively unchanged in recent years, a reduction in the numbers choosing the science discipline at level 7/6 in recent years will lead to a fall in graduate output in the forthcoming years.

Social Science, Business and Law: Social science, business and law courses yielded by far the highest number of graduates at this level in both 2004 and 2005, although the numbers were down slightly in 2005.

Engineering, Manufacturing and Construction: The numbers graduating from engineering-related courses declined by 8% between 2004 and 2005. This trend is expected to persist in the medium term as the number of CAO acceptances at level 7/6 continues to decline.

Computing: Graduate output from computing courses experienced a significant decline of 38% between 2004 and 2005. A reduced number of computing graduates is expected in the short term although the most recent CAO data suggests a recovery may occur in the medium term.

Figure 4.1 Graduations in Universities and IoTs at Level 6/7, 2004 and 2005



Source: HEA, HETAC

Level 8

There were approximately 24,700 level 8 awards made by universities and IoTs in 2005; an increase of 39% in the period 2000–2005. With increases in the number of CAO acceptors on

level 8 courses in recent years, graduate output is expected to increase into the future.

Figure 4.2 shows graduates by broad discipline for IoTs and universities.

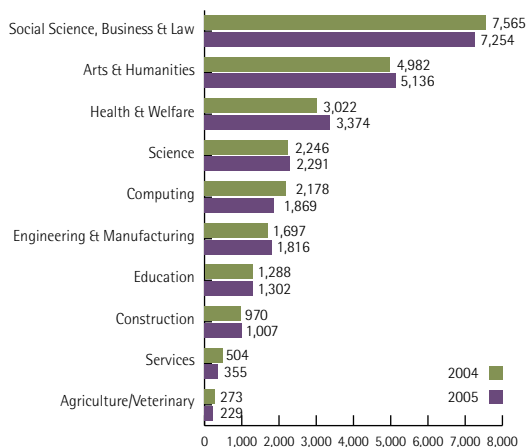
Computing: Graduate output declined significantly in 2005 and will continue to do so in the medium term due to the 49% drop in CAO acceptances since 2000. Since 2005, CAO acceptances are showing signs of recovery and this should have a positive effect on future output.

Health & Welfare: The number of graduates in this discipline continues to increase. This is due to changes in the training system for nurses and to the introduction of courses in pharmacy and radiography.

Engineering: Graduate output increased in 2005, but a decline is expected to occur in the short-term due to the fall in CAO acceptors since 2000.

Science: Graduate output in this discipline increased slightly between 2004 and 2005. Continued increases in graduate output are expected in the short-term but will reverse in the medium term due to a decline in CAO acceptances.

Figure 4.2 Graduations in Universities and IoTs at Level 8, 2004 and 2005



Source: HEA, HETAC

Level 9/10

Level 9/10 refers to graduate diplomas, taught and research masters, and doctorates. There were 13,000 graduates at levels 9/10 from universities and IoTs in 2005; an increase of 39% in the period 2000-2005. With enrolments increasing, it is expected that graduate output will continue to increase in the coming years. Approximately 39% of all awards were for graduate diplomas; 55% were masters awards; and a further 6% were awarded for doctorates.

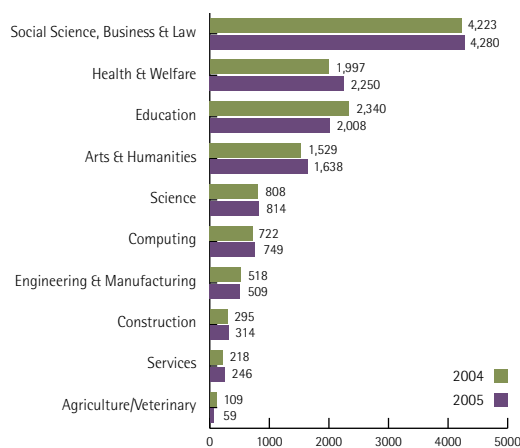
The discipline breakdown of level 9/10 awards, for both 2004 and 2005, is shown in Figure 4.3. The highest number of awards was for social science, business and law (4,280), health and welfare (2,280) and education (2,008).

Health and Welfare: Awards in this discipline increased by over 250 since 2004. The majority of awards are for graduate diplomas.

Computing: Awards increased slightly in 2005; most awards were for masters degrees.

Science: With 306 awards, most doctorates were made in this discipline.

Figure 4.3 Graduations in Universities and IoTs at Level 9/10, 2005



Source: HEA, HETAC

4.6 Private Education and Training

Education and training in Ireland also includes a small, but significant, private sector. Private education and training may be gained through private colleges or through the 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).¹⁰ 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.¹¹

In 2006, over 11,000 awards – recognised either by HETAC, Irish or UK universities or professional bodies – were made to registered students in Ireland. Of these, 7,263 were awarded

¹⁰ The Open University is an exception; since it is a chartered university in the UK it has the authority to award its own degrees.

¹¹ The data in this section is not directly comparable with that in the NSB 2006 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).

to members of professional institutes and were made mostly in business, finance and law. Of the remaining 3,976 awards, the vast majority were accredited by HETAC.

Awards Discipline

Table 4.4 provides a breakdown of the private education awards (private colleges and professional institutions) by discipline. Finance, business and law account for most of the awards made in the private education data examined here, totalling almost 9,000. 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 insurance. Arts and humanities account for 13% 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.

Table 4.4 Private education awards by discipline, 2006

Discipline	Total	%
Finance, business and law	8,889	79%
Arts & Humanities	1,477	13%
Other	638	6%
Science	235	2%
Grand Total	11,239	100%

Source: HETAC, private colleges, professional institutions

Awards Level

While all HETAC awards are placed on the NFQ, many of the professional institutes' awards currently are 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 award type.¹²

At 65%, the majority of HETAC awards were at level 8; these awards were made primarily in business and arts and humanities (approximately 1,000 awards each). Level 7/6 awards made up almost 30%, while the remaining 6% were at level 9/10 (mostly in the area of arts and humanities).

Table 4.5 HETAC awards for private colleges by NFQ level, 2006

Level	Total	%
Level 6/7	992	29%
Level 8	2,224	65%
Level 9/10	200	6%
Grand Total	3,416	100%

Source: HETAC

Professional institutes' awards are not classified according to level. However, in consultation with individual bodies, it was possible to establish four broad categories, as detailed in Table 4.6:

- **Sub-degree:** includes awards made on completion of courses designed for students normally holding a Leaving Certificate or equivalent; two thirds of all awards in Table 4.6 were at this level, mostly in finance.
- **Degree:** includes awards that are either developed in conjunction with a university or where a sub-degree qualification from the same institute is required for entry to the programme; 18% of awards were made at this level.
- **Postgraduate:** includes awards made on completion of a course where the minimum entry requirement is a primary degree or equivalent; 8% of awards were made at this level.
- Other: awards which could not be classified.

Table 4.6 Professional institutions awards by level, 2006

Level	Total	%
Sub-degree	4,949	68%
Degree	1,337	18%
Postgraduate	590	8%
Other	387	5%
Grand Total	7,263	100%

Source: Individual contact with professional institutes

¹² Note that data from UK universities was not available by level and is therefore not included in Table 4.5

Section 5 Employment Permits

The extent to which employers source labour from abroad can be used as an indicator of either skill or labour shortages domestically. It is difficult to establish the extent of sourcing from the EU countries given that for the citizens of the EU countries (with the exception of Romania and Bulgaria) there are no access restrictions to the Irish labour market and data on inflows, particularly at occupational level, is not readily available. On the other hand, inflows of labour from non-EU countries are easier to capture given that prior to entering the Irish labour market non-EU citizens must obtain an employment permit from the Department of Enterprise, Trade and Employment.

In 2006, 7,334 new work permits were issued to non-EU nationals, primarily for occupations in the service industry and healthcare. In the same year, 2,358 work visas were issued, of which 80% were for nurses and 10% for software engineers.

Stemming from the Employment Permits Act 2006, new employment permit arrangements were introduced for non-EU citizens in February 2007. These include new employment permit schemes: the green card scheme, intra-company transfer (ICT) scheme, work permit scheme and third level graduate scheme. A brief description of the schemes and associated to-date activity data regarding each of these schemes is outlined in this section.

Green card scheme

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 or 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. Over the period February – June 2007, 1,045 new green cards were issued. One half of all new green cards issued were in the healthcare sector, of which 80% were for nurses. Of the 129 green cards issued in the financial services sector, the majority were for accountants (including auditors) and various types of financial analysts. In the information technology sector, 123 green cards were issued, mostly for software developers and system analysts.

Intra-company transfers (ICT)

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. It is limited to senior management, key personnel – staff with specialist knowledge requiring a high level of qualification, experience or specialist technical knowledge – and trainees earning more than €40,000 a year. Over the period Feb – Jun 2007, 156 ICT permits were issued, with the significant majority for positions at managerial level.

Employment permit scheme

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 in question 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. Ineligible job categories include clerical, childcare, transport, sales, hotel, catering, craft and general labouring.

Employment permits for spouses and dependants of employment permit holders. This scheme was introduced to allow spouses and dependants of employment permit holders to apply for a work permit, regardless of what occupation they are in and without a labour market test.

Over the period February – June 2007, 1,517 new employment permits were issued, of which just over one half represents a residual of the previously run work permit scheme that is being phased out. An additional 425 work permits were issued to spouses and dependents of employment permit holders.

Of the total of almost 2,000 employment permits issued (inclusive of spouse/dependants), 376 were for healthcare positions, mainly nurses, A&E and locum consultants and care assistants. Other occupations for which employment permits were most frequently issued include food processing trades (boners, butchers), equestrian work riders, chefs, visiting lecturers, pilots, truck drivers.

Over the same period, 37 employment permits for training purposes were issued, mostly in relation to manufacturing equipment training.

Table 5.1 Employment permits by type, Feb-Jun 2007

Type of Permit	Feb	Mar	Apr	May	Jun	Total
Employment Permit	262	396	255	278	326	1,517
Green Card	4	130	268	318	325	1,045
Intra-Company Transfer (ICT)	10	38	41	33	34	156
Spousal/Dependent		14	36	161	214	425
Training				35	2	37
Total	276	578	600	825	901	3,180

Source: DETE

Table 5.2 Employment permits by sector, Feb-Jun 2007

Sector	Employment Permit	Green Card	ICT	Spousal	Training	Total
Agriculture and Fisheries	42	1		3		46
Catering	51	2	1	28		82
Construction	30	75	3	15		123
Domestic	4			13		17
Education	72	6		10		88
Entertainment	5	1		1		7
Financial Services	19	129	9	22		179
Government	2	1				3
Healthcare	273	537	2	103		915
Information Technology	29	123	6	6		164
Legal Services	1	4		6		11
Manufacturing	18	30	32	2	36	118
Pre New Legislation Permit	800	8		15		823
Research	36	16	1	1		54
Retail	16	5		27		48
Services	57	100	101	171	1	430
Sport	13	1				14
Tourism	7	1	1	1		10
Transport	42	5		1		48
Total	1,517	1,045	156	425	37	3,180

Source: DETE

Section 6 Vacancies

6.1 Introduction

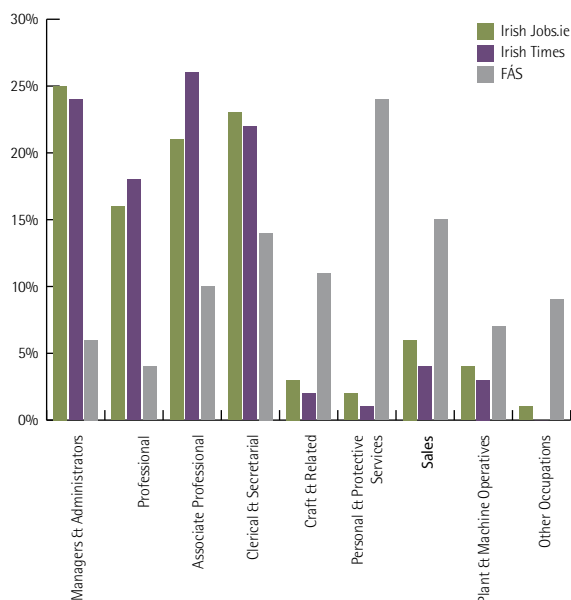
Vacancy data can provide a useful indicator of the demand for skills in the economy. Vacancies arise from either the creation of a new position by an employer (expansion demand) or through a person leaving an already existing position (replacement demand). Replacement demand can be further differentiated between people who leave an occupation entirely (due to retirement, career change, emigration, illness) and those who change jobs within an occupation (turnover). It is not possible to determine whether a vacancy is due to expansion or replacement demand but it does provide an indication of where the vacancies are and how this changes over time.

The Skills and Labour Market Research Unit (SLMRU) collects vacancy data from a number of sources, namely those vacancies notified to 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. As all of these data sources are available on a monthly basis, they can provide up-to-date information on the current demand for skills. It is important to note that a duplication issue arises when examining vacancy data: the same vacancy may reappear in the same vacancy stock and/or can be advertised simultaneously through various sources.

6.2 Vacancies by Occupational Grouping

Figure 6.1 shows the occupational distribution of vacancies in 2006. IrishJobs.ie and the Irish Times report a similar proportion of vacancies for managers and administrators, with the Irish Times reporting slightly higher proportions of professional and associate professional vacancies. FÁS' largest share of vacancies is for the personal and protective services, clerical and secretarial and sales.

Figure 6.1 Vacancies by Occupational Group (%) , 2006

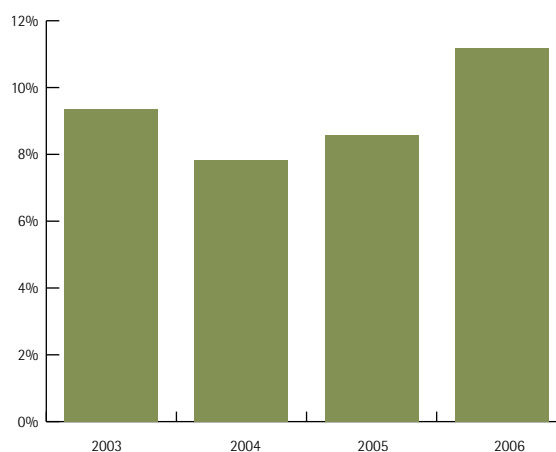


6.3 FÁS/ESRI Difficult to Fill Vacancy Survey

This section examines the results of the difficult to fill vacancy survey carried out by FÁS/ESRI.

The percentage of firms reporting vacancies that are difficult to fill fell from 9.3% in 2003 to 7.8% in 2004, as per Figure 6.2. Since then, the percentage of firms reporting difficult to fill vacancies has been increasing, reaching 11.2% in 2006. According to the latest data, this trend seems to be continuing into 2007.

Figure 6.2 Companies with Difficult to Fill Vacancies, 2003-2006 (%)



Source: FÁS/ESRI

In terms of sectors (Table 6.1), 48% of all difficult to fill mentions in 2006 were within the industry sector; an increase in the share of 11 percentage points since 2004. The share of construction sector mentions has declined from 23% in 2004 to 15% in 2006. The number of employers in the retail sector citing difficult to fill vacancies has declined.

Table 6.1 FÁS/ESRI Difficult to Fill Vacancies by Sector, 2004-2006 (%)

	2004	2005	2006
Construction	23%	20%	15%
Industry	37%	32%	48%
Retail	13%	13%	8%
Services	27%	34%	30%
Total	100%	100%	100%

Source: FÁS/ESRI

Of the total difficult to fill mentions, 19% were for managerial and administrators' occupations, primarily for marketing managers, building managers and production and works managers (Table 6.2). Mentions for professionals and associate professionals accounted for 16% and 15% of the total respectively. An increase in the number of mentions occurred in the professional group in the period 2004-2006; with engineering positions cited as the most difficult to fill. Declines occurred in the number of mentions for craft and related occupations and plant and machine operatives. For craft occupations, declines in the number of difficult to fill mentions for bricklayers, carpenters and plasterers accounted for much of the fall.

Table 6.2 FÁS/ESRI Difficult to Fill Vacancies by Occupation, 2004-2006 (%)

	2004	2005	2006
Managers & Administrators	21%	21%	19%
Professional	9%	15%	16%
Associate Professional	12%	18%	15%
Clerical & Secretarial	6%	9%	11%
Craft & Related	19%	13%	12%
Personal & Protective Services	4%	3%	4%
Sales	9%	10%	10%
Plant & Machine Operatives	13%	9%	9%
Other Occupations	6%	3%	4%
Total	100%	100%	100%

Source: FÁS/ESRI

Section 7 Occupational Employment Profiles

In this section we examine employment trends by occupation. The section is organised as follows: first, a table containing 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 in bold are broad occupational groups and are made up of individual occupations presented below them.

Column 2 presents the employment stock for each occupation. Employment is reported as an annual average for 2006. *Source:* 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 2006 QNHS.

Column 4 shows the percentage of part-time workers in the total employment of an occupation. *Source:* Quarter 2 2006 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 2006 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 12) 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 2006 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 in certain occupations. *Source:* Quarter 2 2006 QNHS.

Column 8 shows the average annual employment growth for the period 2001-2006. This was used to assess current employment growth trends and may be a guide to future trends. *Source:* QNHS 2001-2006.

Column 9 presents the number of new work permits issued for each occupation for the year 2006. 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 10 gives the number of work visas and work authorisations issued for 2006. The work visa and authorisation scheme covers only selected occupations in the construction, healthcare and IT sectors. 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 11 reports the number of employers who mentioned these occupations as difficult to fill. A frequent mention of an occupation as difficult to fill was used as an indicator of a shortage. *Source:* FÁS/ESRI Monthly Employment and Vacancy Survey Report, Jan-Dec 2006

Column 12 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 13 provides an indication of shortage for each occupation. The indicator was derived by considering all indicators (columns 2-12), as well as by using additional information on vacancies and 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 14 elaborates further on the shortages identified in column 13. So that:

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

Using the data from the table, 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 were grouped together. For each family of skills, the employment level, employment growth, age and education profiles of the occupation are examined. First, the level of employment in 2006 is presented. This is followed by an examination of employment growth trends for the period 2001-2006. Small occupations were either excluded or grouped.

Age profiles were analysed by grouping employment into the following categories: persons aged 15 to 24, 25 to 54 and 55 or older.

Education profiles were examined 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.

In addition, an indication of shortage is provided. This was done by analysing demand and supply indicators. Demand indicators included employment composition and growth, replacement demand, vacancies and immigration. 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 more sustainable growth patterns. This was done to avoid overestimation of demand.

The supply of skills was approximated using the expected output from the formal education system¹³. 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 was not reported. This is 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 complicated the task of determining supply. Thus, the intention was 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

¹³ It must be noted that individuals may not work in the occupations that they trained for.

where available. The objective was to identify areas of shortages, without quantifying them. Identified shortages are classified as skill or labour shortages and an indication of the persistence of shortages is also discussed. However, the results 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. Further study is necessary to identify the cause of these shortages and, consequently, the appropriate policy response. The EGFSN's research programme includes a number of such studies including skills in financial services, IT and construction.

Table 7.1 Demand and Shortage Indicators for Selected Occupations

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55	% Non-Irish National	Annual average growth rate 2001-2006	Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
General managers and administrators	21,500	37.0%	9.5%	Below Average	19.5%	4.5%	11.8%	18		5	-1.5%	No shortage	
Production managers in industry	27,600	18.1%	1.2%	Below Average	11.8%	7.7%	6.7%	78		105	-1.5%	No shortage	
Building managers	6,400	9.4%	0.7%		17.1%	6.4%	1.1%	10		51	-1.5%	Skill shortage	S,C,F
Specialist managers	41,700	41.9%	6.6%	Below Average	6.4%	7.1%	1.6%	210		92	-1.5%	Skill shortage	
Marketing etc. managers	20,100	40.7%	6.8%		7.6%	5.7%	2.4%	132		78	-1.5%	Skill shortage	C
Purchasing managers	1,500	26.0%	3.5%		2.8%	8.9%	6.9%	6		1	-1.5%	No shortage	
Advertising & PR managers	3,000	53.1%	5.4%		10.8%	11.6%	2.3%	14		2	-1.5%	No shortage	
Personnel managers	5,900	69.9%	10.9%		6.1%	12.6%	6.9%	13		4	-1.5%	No shortage	
Computer systems managers	8,500	21.2%	3.2%		1.0%	5.4%	-0.5%	19		2	-1.5%	Inconclusive	
Financial institution and office managers	34,000	63.3%	11.6%	Below Average	8.1%	4.7%	1.1%	93		30	-1.5%	No shortage	
Bank and other financial managers	24,700	62.3%	11.7%		8.2%	6.3%	0.7%	91		26	-1.5%	No shortage	
Credit controllers	4,000	73.4%	14.5%		5.3%	1.5%	4.9%	2		4	-1.5%	No shortage	
Managers in transport and storage	11,900	16.1%	2.1%	Below Average	12.9%	3.8%	5.3%	17		9	-1.5%	No shortage	
Transport managers	4,000	15.4%	1.3%		16.1%	1.3%	2.4%	1		2	-1.5%	Skill shortage	C
Stores managers	4,700	20.3%	2.1%		12.3%	4.7%	8.2%	13		7	-1.5%	No shortage	
Warehousing managers	3,200	10.7%	3.0%		9.8%	5.8%	5.2%	3		0	-1.5%	No shortage	
Protective service officers	1,600	3.7%	0.0%	Average	17.5%	0.0%	2.0%	3		0	-1.5%	No shortage	
Managers in farming, horticulture, forestry and fishing	91,500	6.8%	9.6%	Below Average	40.9%	0.7%	-1.5%	14		1	3.1%	No shortage	
Farm owners and managers	90,800	6.5%	9.6%		41.1%	0.7%	-1.5%	2		1	3.1%	No shortage	
Managers and proprietors in service industries	68,900	43.2%	8.9%	Below Average	19.0%	8.8%	-3.0%	112		23	-1.5%	No shortage	
Hotel & accommodation managers	5,800	59.5%	16.0%		25.1%	15.2%	-5.2%	13		3	-1.5%	No shortage	
Restaurant & catering managers	9,200	61.0%	12.7%		6.6%	20.9%	-0.7%	59		1	-1.5%	No shortage	

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55	% Non-Irish National	Annual average growth rate		Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
							2001-2006	2006						
Publicans, innkeepers & club stewards	5,800	29.6%	7.1%		36.5%	1.9%	-4.3%	0		0	-1.5%	No shortage		
Entertainment/sports managers	2,300	42.8%	11.5%		11.1%	2.3%	2.3%	10		0	-1.5%	No shortage		
Travel agency managers	2,400	77.4%	14.3%		10.6%	22.7%	2.7%	7		0	-1.5%	No shortage		
Other managers and administrators	14,700	49.2%	10.3%	Below Average	17.2%	7.4%	-5.8%	115		13	-1.5%	No shortage		
Natural scientists	9,700	59.7%	7.1%	Below Average	5.6%	7.3%	7.1%	39		17	2.8%	No shortage		
Chemists	2,400	17.9%	2.0%		5.4%	5.5%	6.7%	3		7	2.8%	Skill shortage	F	
Biological scientists	4,400	61.1%	10.0%		10.0%	5.0%	10.0%	13		8	2.8%	Skill shortage	F	
Physicists & other natural scientists	2,900	52.7%	7.4%		0.0%	11.7%	3.7%	23		2	2.8%	Skill shortage	F	
Engineers and technologists	45,200	12.1%	2.7%	Below Average	7.4%	11.3%	6.0%	281		142	2.8%	Skill shortage		
Civil/mining engineers	11,500	7.6%	0.8%		9.1%	10.5%	9.3%	6	105	28	2.8%	Skill shortage	S,C,F	
Mechanical engineers	5,200	4.9%	1.3%		8.3%	11.2%	7.5%	0		6	2.8%	Skill shortage	F	
Electrical engineers	4,000	4.2%	1.5%		6.9%	7.9%	5.8%	3		6	2.8%	Skill shortage	C,F	
Electronic engineers	3,500	11.5%	4.3%		5.3%	10.0%	-0.1%	23		0	2.8%	Skill shortage	C,F	
Software engineers	10,200	20.9%	5.8%		2.3%	11.5%	4.9%	174	313	7	2.8%	Skill shortage	S,C,F	
Chemical engineers	1,600	5.9%	2.3%		3.1%	13.2%	9.1%	0		3	2.8%	Skill shortage	C,F	
Design & development engineers	1,900	25.2%	3.6%		7.8%	17.7%	7.8%	19		7	2.8%	Skill shortage	C	
Planning & quality control engineers	1,800	27.9%	0.0%		12.9%	11.3%	-0.6%	5		22	2.8%	Skill shortage	C	
Other engineers & technologists n.e.c.	5,700	12.0%	2.7%		12.1%	13.0%	6.1%	51		63	2.8%	No shortage		
Health professionals	17,200	43.5%	13.1%	Below Average	15.7%	14.7%	5.6%	719		0	2.8%	Skill shortage		
Medical practitioners	10,400	39.1%	12.7%		16.2%	19.1%	7.2%	620	33	0	2.8%	Skill shortage	S,C,F	
Pharmacists/pharmacologists etc	2,800	70.2%	16.2%		17.9%	9.9%	3.8%	94		0	2.8%	Skill shortage	C	
Dental practitioners	1,500	68.2%	20.7%		9.5%	0.0%	2.9%	2	1	0	2.8%	Skill shortage	S,C,F	
Veterinarians	1,900	82.0%	7.2%		14.7%	6.1%	5.8%	3		0	2.8%	No shortage		
Teaching professionals	84,200	70.9%	14.9%	Below Average	14.5%	4.6%	3.9%	97		0	2.8%	No shortage		
University and IoT lecturers	11,800	45.6%	13.0%		17.4%	13.6%	5.6%	53		0	2.8%	No shortage		

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55 National	% Non-Irish	Annual		Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
							average growth rate 2001-2006	average 2006						
Secondary and vocational education teachers	32,100	68.2%	13.2%		16.2%	3.9%	4.0%	2		0	2.8%	No shortage		
Primary & nursery education teachers	32,000	82.0%	8.1%		11.4%	2.1%	4.4%	9		0	2.8%	No shortage		
Other teaching professionals n.e.c.	8,300	73.1%	36.1%		15.1%	4.5%	6.1%	32		0	2.8%	No shortage		
Legal professionals	10,700	46.1%	5.5%	Below Average	11.0%	2.8%	5.8%	15		11	2.8%	No shortage		
Judges, barristers & advocates	2,400	49.6%	2.3%		16.5%	2.4%	8.4%	3		0	2.8%	No shortage		
Solicitors	8,400	45.2%	6.3%		9.5%	2.9%	5.1%	12		11	2.8%	No shortage		
Business and financial professionals	41,800	42.3%	6.1%	Below Average	7.4%	6.0%	7.8%	97		45	2.8%	Skill shortage		
Accountants & tax experts	36,000	43.7%	5.8%		6.4%	5.2%	6.9%	30		36	2.8%	Skill shortage	C,F	
Actuaries, economists, statisticians	1,200	29.9%	5.1%		13.9%	0.0%	1.8%	6		5	2.8%	Skill shortage	C,F	
Business analysts	6,200	41.0%	9.6%		13.3%	11.8%	10.5%	104		4	2.8%	Skill shortage	C	
Architects, town planners and surveyors	9,100	29.0%	4.8%	Below Average	9.8%	15.7%	13.0%	18		24	2.8%	Skill shortage		
Architects	6,700	36.2%	5.8%		10.0%	20.8%	17.3%	12	49	5	2.8%	Skill shortage	C	
Building, mining and other surveyors	2,300	7.3%	2.1%		9.5%	2.3%	6.6%	4		15	2.8%	No shortage		
Librarians, archivists & curators	1,500	71.6%	25.0%	Below Average	14.6%	5.6%	1.8%	4		0	2.8%	No shortage		
Other professional occupations	11,800	60.2%	12.6%	Below Average	20.0%	11.5%	9.2%	17		0	2.8%	No shortage		
Psychologists & other social/ behavioural scientists	2,500	59.0%	9.2%		17.4%	13.7%	10.5%	5	3	0	2.8%	Skill shortage	C	
Social workers, probation officers	6,100	84.0%	15.6%		12.7%	9.0%	20.3%	11	14	0	2.8%	Inconclusive		
Scientific technicians	21,000	31.0%	4.4%	Below Average	7.5%	7.4%	0.7%	187		50	2.6%	Skill shortage		
Laboratory technicians	6,200	51.9%	5.3%		5.6%	7.0%	-1.2%	58		7	2.6%	No shortage		
Engineering technicians	1,100	11.0%	5.3%		0.0%	10.0%	3.1%	16		8	2.6%	No shortage		
Architectural and civil engineering technicians	1,600	26.4%	8.9%		14.2%	13.4%	-1.4%	12		10	2.6%	Skill shortage	C, F	

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55	% Non-Irish National		Annual average growth rate 2001-2006	Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
						%	National							
Other scientific technicians n.e.c.	9,600	26.2%	3.8%		8.3%	7.8%	10.7%	97			22	2.6%	Skill shortage	C
Draughtpersons, quantity and other surveyors	5,300	8.4%	4.2%	Below Average	16.3%	6.1%	2.0%	30			56	2.6%	Skill shortage	
Draughtpersons	2,100	14.0%	3.0%		16.6%	8.6%	-2.8%	19			6	2.6%	No shortage	
Quantity surveyors	3,000	4.7%	5.4%		16.8%	4.7%	5.2%	10	43		50	2.6%	Skill shortage	C,F
Computer analyst/ programmers	14,800	23.1%	3.6%	Below Average	2.2%	13.6%	-0.9%	302	96		7	2.6%	Skill shortage	S,C,F
Ship/aircraft officers incl. Air traffic controllers	2,800	11.2%	11.9%	Below Average	10.2%	13.0%	4.8%	61			0	2.6%	No shortage	
Health associate professionals	65,900	89.9%	26.1%	Below Average	13.3%	13.6%	5.0%	186			4	2.6%	Skill shortage	
Nurses and midwives	53,600	92.5%	25.1%		13.5%	14.2%	4.7%	35	1953		0	2.6%	Skill shortage	C
Medical radiographers	1,000	95.5%	25.3%		23.3%	9.0%	3.2%	24	9		0	2.6%	Skill shortage	C
Physiotherapists	1,900	91.0%	22.1%		12.2%	11.7%	5.4%	19	10		0	2.6%	Skill shortage	C
Medical technicians, dental auxiliaries	1,700	54.7%	15.6%		4.0%	10.8%	2.9%	35			1	2.6%	No shortage	
Occupational & therapists n.e.c.	4,600	82.9%	43.8%		11.5%	12.4%	10.0%	71	34		3	2.6%	Skill shortage	C
Other health associate professionals n.e.c.	3,700	65.1%	21.8%		13.8%	11.7%	2.6%	2			0	2.6%	No shortage	
Legal associate professionals	1,000	84.7%	3.7%	Below Average	3.6%	6.5%	0.0%	6			8	2.6%	No shortage	
Business and financial associate professionals	14,600	48.3%	7.1%	Below Average	9.3%	7.5%	1.9%	87			67	2.6%	Skill shortage	
Underwriters, claims assessors and analysts	10,700	41.5%	7.3%		8.2%	6.1%	3.5%	35			40	2.6%	Skill shortage	S,C,F
Personnel, industrial relations officers	2,100	73.1%	2.6%		13.0%	15.2%	3.4%	5			4	2.6%	No shortage	
Matrons, houseparents, welfare, community & youth workers	8,100	77.7%	25.7%	Below Average	14.2%	6.6%	2.3%	18			0	2.6%	No shortage	
Literary, artistic and sports professionals	28,900	39.8%	19.3%	Average	10.4%	11.2%	5.3%	185			14	2.8%	No shortage	
Other associate professional and technical occupations	13,900	49.8%	15.2%	Average	15.4%	3.7%	1.1%	379			23	2.8%	No shortage	

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55	% Non-Irish National	Annual average growth rate 2001-2006	Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
Careers guidance advisors	1,500	74.9%	25.5%		16.0%	6.0%	8.8%	1		0	2.6%	No shortage	
Vocational, industrial trainers	5,500	48.2%	18.8%		14.3%	2.1%	-2.0%	12		2	2.8%	No shortage	
Administrative/clerical officers and assistants in civil service	33,400	69.0%	13.5%	Below Average	10.4%	1.4%	4.4%	0		4	3.5%	No shortage	
Numerical clerks & cashiers	64,800	77.6%	26.9%	Below Average	7.8%	6.7%	3.0%	130		55	3.5%	Labour shortage	S,C
Filing & records clerks	9,800	70.0%	28.3%	Below Average	17.1%	8.5%	-1.0%	42		27	3.5%	Skill shortage	C
Other clerks	56,100	80.4%	24.7%	Below Average	8.0%	5.0%	5.5%	70		33	3.5%	No shortage	
Warehousemen/women	20,800	12.7%	9.8%	Average	8.3%	13.3%	2.1%	51		7	3.5%	No shortage	
Secretaries, personal assistants etc.	43,500	96.3%	33.4%	Average	10.3%	5.1%	3.1%	25		21	3.5%	No shortage	
Legal secretaries	4,700	100.0%	22.5%		5.0%	5.8%	6.2%	6		10	3.5%	No shortage	
Other secretaries	38,900	95.8%	34.6%		10.9%	5.0%	2.8%	19		11	3.5%	No shortage	
Receptionists & telephonists	17,800	90.1%	34.7%	Average	10.6%	11.7%	0.5%	30		20	3.5%	No shortage	
Computer & other office machine operators	3,800	57.8%	11.6%	Average	1.8%	10.5%	-8.5%	16		3	3.5%	No shortage	
Construction trades	83,000	0.9%	2.4%	Average	9.3%	14.9%	8.1%	94		29	2.7%	No shortage	
Bricklayers, masons	16,400	0.5%	1.3%		6.4%	22.9%	8.7%	14		4	2.7%	No shortage	
Roofers, slaters, tilers, sheeters, cladders	7,100	0.0%	3.9%		5.9%	18.5%	12.2%	13		4	2.7%	No shortage	
Plasterers	14,500	1.1%	1.9%		7.4%	16.1%	8.7%	16		5	2.7%	No shortage	
Builders, building contractors	20,200	0.5%	1.1%		13.4%	10.2%	9.4%	5		3	2.7%	No shortage	
Scaffolders, riggers, steeplejacks	3,000	0.0%	0.0%		1.4%	23.1%	13.8%	21		1	2.7%	No shortage	
Floors, floor coverers, carpet fitters, tilers	3,200	1.2%	4.8%		7.4%	11.0%	11.4%	6		4	2.7%	No shortage	
Painters & decorators	11,800	2.8%	4.7%		12.1%	10.0%	3.1%	6		7	2.7%	No shortage	
Other construction trades n.e.c.	7,000	0.6%	5.2%		12.1%	8.0%	4.7%	13		1	2.7%	Skill shortage	C,F
Metal machining, fitting & instrument making trades	26,700	4.4%	2.7%	Below Average	10.8%	5.5%	0.2%	124		53	1.5%	Skill shortage	C
Electrical/ electronic trades	45,200	4.2%	2.1%	Average	6.1%	6.0%	4.8%	107		10	2.1%	No shortage	
Electrical/ electronic trades with electrician technicians	47,700	4.2%	2.0%		6.1%	5.7%	3.1%	111		13	2.1%	No shortage	

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55	% Non-Irish National	Annual average growth rate 2001-2006	Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
Metal forming, welding & related trades	30,300	0.8%	1.9%	Average	8.1%	9.1%	5.7%	36		40	2.2%	Skill shortage	
Plumbers, heating & related trades	15,900	0.3%	1.1%		7.9%	6.0%	9.0%	4		9	2.7%	No shortage	
Other metal forming, welding & related trades	14,500	1.4%	2.8%		7.8%	12.6%	2.7%	32		31	1.5%	Skill shortage	C
Vehicle trades	20,000	1.5%	3.4%	Average	9.7%	9.4%	3.1%	12		8	2.7%	No shortage	
Textiles, garments and related trades	4,300	54.3%	21.5%	Average	16.4%	7.2%	-8.2%	27		18	2.7%	No shortage	
Printing and related trades	7,400	28.8%	6.9%	Above Average	8.5%	9.0%	-1.9%	8		4	2.7%	No shortage	
Woodworking trades	45,600	0.7%	2.5%	Average	8.5%	9.0%	6.2%	51		11	2.7%	No shortage	
Carpenters & joiners	40,100	0.4%	2.6%		8.2%	8.4%	6.7%	44		7	2.7%	No shortage	
Wood working trades	5,500	3.1%	3.7%		10.9%	13.4%	2.7%	7		4	2.7%	No shortage	
Food preparation trades	9,900	11.8%	3.6%	Average	9.4%	29.6%	-0.1%	137		6	1.5%	Labour shortage	C
Other craft & related occupations	16,400	10.9%	16.7%	Above Average	14.3%	7.2%	-0.7%	155		1	2.7%	No shortage	
NCOs and other ranks in the armed services	6,000	6.8%	0.7%	Below Average	5.3%	0.0%	-2.0%	0		0	1.2%	No shortage	
NCOs and other ranks including senior officers	6,900	7%	0.6%		5.9%	0.0%	-1.2%	1		0	3.9%	No shortage	
Security and protective service occupations	32,300	15.8%	13.8%	Average	11.4%	8.4%	5.3%	62		0	3.9%	No shortage	
Police officers	11,700	19.0%	2.6%		5.2%	0.0%	2.6%	2		0	3.9%	No shortage	
Fire service officers	2,500	6.3%	12.3%		10.9%	0.0%	3.5%	0		0	3.9%	No shortage	
Prison service officers	2,600	15.1%	2.4%		2.1%	0.0%	0.0%	0		0	3.9%	No shortage	
Security guards	16,100	13.7%	23.8%		18.8%	17.1%	8.7%	62		0	3.9%	Labour shortage	C
Catering occupations	66,100	54.9%	38.3%	Above Average	6.3%	23.6%	3.8%	845		53	3.9%	Labour shortage	
Chefs, cooks	21,800	47.3%	17.7%		7.9%	30.3%	4.4%	754		38	3.9%	Skill shortage	C
Waiters, waitresses	19,700	82.6%	54.2%		6.5%	32.6%	3.7%	68		5	3.9%	Labour shortage	C
Bar staff	24,700	40.2%	43.5%		4.7%	11.0%	3.4%	23		10	3.9%	No shortage	
Travel attendants and related occupations	3,200	62.6%	31.2%	Below Average	13.0%	16.4%	-6.8%	4		0	3.9%	No shortage	
Travel & flight attendants	3,000	66.1%	33.0%		12.4%	17.3%	-8.0%	4		0	3.9%	No shortage	

Occupations	Numbers employed	% female	Part-time	Unemployment	% >55 National	% Non-Irish	Annual			Replacement rate	Shortage indicator	Comment
							average growth rate 2001-2006	Work permits 2006	Work Visas/ Authorisations 2006			
Health and related occupations	47,000	84.0%	34.6%	Below Average	16.8%	9.9%	10.0%	444	2.6%	No shortage		
Care assistants etc.	43,400	84.0%	35.7%		17.8%	10.7%	10.5%	439	2.6%	Labour shortage	C	
Dental nurses	2,700	100.0%	28.1%		4.4%	0.0%	4.4%	5	2.6%	No shortage		
Childcare and related occupations	29,300	96.2%	41.6%	Average	9.6%	13.0%	14.2%	56	3.9%	No shortage		
Nursery nurses and playgroup leaders	7,100	97.0%	43.6%		5.6%	9.1%	16.6%	3	3.9%	No shortage		
Educational assistants	9,500	94.7%	31.0%		13.0%	5.5%	19.1%	5	3.9%	No shortage		
Other childcare & related occupations	12,700	96.7%	48.6%		9.2%	20.8%	10.2%	48	3.9%	Labour shortage	C	
Hairdressers, beauticians etc. Domestic staff and related occupations	18,900	93.0%	25.8%	Average	2.1%	4.1%	7.1%	26	3.9%	No shortage		
	14,700	59.7%	41.1%	Average	29.9%	13.4%	-1.4%	65	3.9%	No shortage		
Other personal and protective service occupations	4,500	38.6%	30.4%	Below Average	9.5%	6.5%	10.8%	4	3.9%	No shortage		
Buyers, brokers etc.	5,000	41.0%	1.9%	Below Average	12.9%	3.3%	5.6%	11	4.4%	No shortage		
Sales representatives	39,500	31.8%	9.4%	Below Average	10.7%	7.2%	4.4%	43	4.4%	Skill shortage	C	
Sales assistants	126,900	73.0%	48.6%	Average	7.8%	9.2%	5.5%	122	4.4%	Labour shortage	C	
Other salespersons etc.	3,300	12.7%	20.0%	Above Average	10.4%	5.8%	-2.5%	0	4.4%	No shortage		
Other sales occupations	6,300	61.3%	29.9%	Below Average	13.7%	15.4%	-3.1%	9	4.4%	No shortage		
Food, drink and tobacco operatives	15,900	25.7%	6.7%	Above Average	9.6%	24.2%	-0.9%	6	1.5%	No shortage		
Textiles and tannery process operatives	1,800	42.4%	5.8%	Above Average	18.5%	14.3%	-8.4%	5	1.5%	No shortage		
Chemicals, paper, plastic and related process operatives	11,600	32.6%	9.6%	Average	9.8%	8.8%	-10.3%	7	1.5%	No shortage		
Metal making and treating process operatives	2,000	10.9%	4.4%	Below Average	10.6%	6.4%	-4.5%	4	1.5%	No shortage		
Metal working process operatives	1,300	13.5%	0.0%	Below Average	8.1%	4.0%	5.8%	75	1.5%	No shortage		
Assemblers/lineworkers	18,100	49.7%	7.0%	Above Average	6.1%	11.6%	-13.1%	4	1.5%	No shortage		
Other routine process operatives	11,000	50.4%	14.4%	Above Average	8.0%	20.7%	-13.0%	35	1.5%	No shortage		

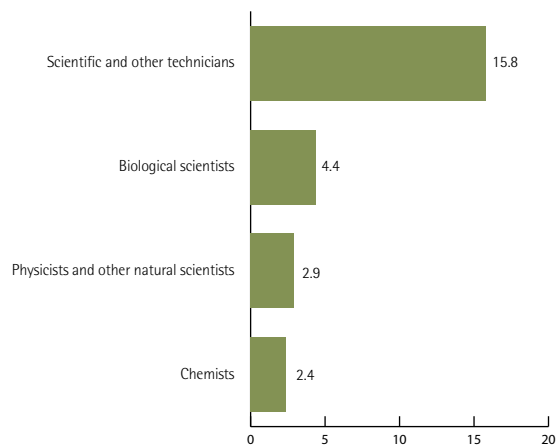
Occupations	Numbers employed	% female	Part-time	Unemployment	% >55	% Non-Irish National	Annual average growth rate		Work permits 2006	Work Visas/ Authorisations 2006	Difficult to fill vacancies	Replacement rate	Shortage indicator	Comment
							2001-2006	2006						
Road transport operatives	70,500	2.6%	6.7%	Below Average	20.5%	7.1%	4.0%	71		43	-1.2%	Skill shortage	C	
Other transport and machinery operatives	19,600	2.4%	2.9%	Average	12.9%	7.9%	3.1%	75		7	1.5%	No shortage		
Other plant and machine operatives n.e.c.	18,400	8.7%	4.8%	Average	13.2%	12.9%	1.5%	41		19	1.5%	No shortage		
Other occupations in agriculture, forestry and fishing	16,400	19.3%	22.2%	Average	16.6%	20.7%	-3.8%	288		0	3.1%	No shortage		
Other occupations in mining and manufacturing	11,500	34.2%	7.7%	Above Average	8.9%	14.0%	20.8%	95		31	4.5%	No shortage		
Other occupations in construction	38,800	0.4%	4.0%	Above Average	8.7%	22.6%	3.9%	9		3	4.5%	No shortage		
Other occupations in transport	5,300	5.6%	10.7%	Above Average	16.0%	13.9%	-1.4%	17		1	4.5%	No shortage		
Other occupations in communication	11,700	15.9%	8.9%	Average	19.2%	2.2%	1.4%	1		2	-1.2%	No shortage		
Other occupations in sales and services	66,700	71.9%	55.4%	Average	19.3%	19.8%	3.8%	275		14	4.5%	Labour shortage	C	
Other occupations n.e.c.	55,400	21.0%	15.1%	Above Average	16.0%	13.4%	20.8%	117		9	4.5%	No shortage		
All Occupations	2,037,700	42.4%	17.4%	Average	12.8%	9.7%	3.2%	7,319	2,666	1,491				

7.1 Science Occupations

Key points for selected science occupations, 2006

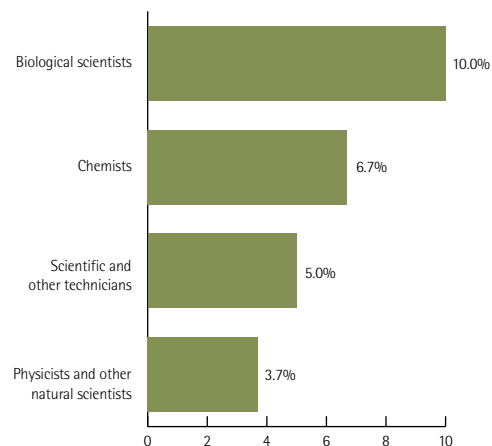
- Just over 25,000 persons are employed in selected science occupations, representing 1.3% of Ireland's workforce
- Employment is concentrated in manufacturing (chemical and chemical products) and healthcare
- Over 60% of employment is at technician level; the remainder at professional level
- Approximately one quarter of all scientific technicians are laboratory technicians
- Employment for each of these occupations grew faster than the overall national employment rate of 3.2% for the period 2001-2006
- Over the period 2001-2006 more than 6,000 net posts were created in these occupations; 45% at professional level and 55% at technician level
- Over 80% of employment in each occupation is in the 25-54 age group
- Over 90% of those employed in professional occupations hold at least a third level qualification; there has been a continuous increase in the share of technicians with third level qualifications (56% in 2004 to 62% in 2006)

Figure 7.1.1 Numbers Employed (000s) in Science Occupations, 2006



Source: CSO

Figure 7.1.2 Average Employment Growth in Science Occupations, 2001-2006



Source: CSO

Table 7.1.1 Age and Education Profile of Science Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Physicists and other natural scientists	12%	88%	0%	100%	0%	1%	99%	100%
Scientific and other technicians	11%	82%	7%	100%	11%	27%	62%	100%
Biological scientists	6%	84%	10%	100%	1%	6%	93%	100%
Chemists	11%	83%	5%	100%	2%	7%	91%	100%

Source: CSO

Shortage indicators

- Initiatives such as the *Strategy for Science Technology and Innovation and Science Foundation Ireland* aim to significantly increase public expenditure on research and development over the next eight years and seek, among others, to double the number of PhDs. This will create a demand for postgraduate researchers in the future.

A decline in science uptake, particularly for degree courses, will negatively affect future supply and skills shortages in this area are expected to arise.

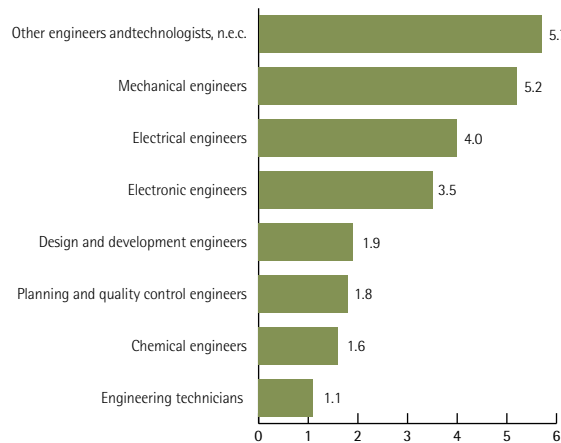
- The data on difficult to fill vacancies and work permits indicates possible shortages in some areas at technician level.

7.2 Engineering Occupations

Key points for selected engineering occupations, 2006

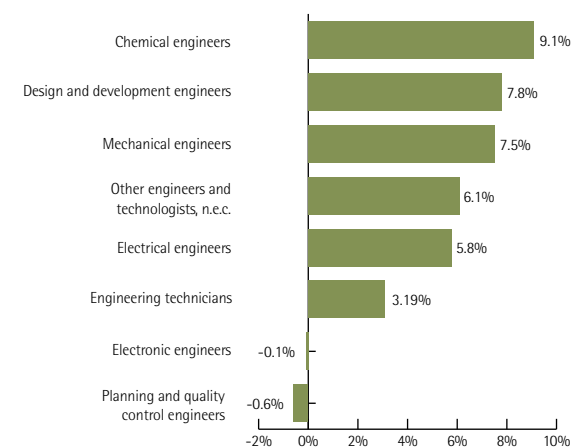
- 25,000 persons are employed in selected engineering occupations, representing 1.2% of Ireland's workforce
- Employment is concentrated in manufacturing (primarily chemical products, machinery and equipment, radio etc. equipment, medical etc. instruments), construction and communications
- Over 95% of employment is at professional level (engineers); the remainder at technician level
- Employment of engineers, with the exception of electronic and quality control (QC) engineers, grew strongly over the period 2001-2006 with in excess of 5% on average annually; employment of chemical engineers grew in excess of 9%
- Over the period 2001-2006 just under 4,000 net posts were created in these occupations; 95% at professional level
- Over 80% of employment in each occupation is in the 25-54 age group
- At least three quarters of engineers in any category hold a third level qualification; the lowest share of third level graduates is found in the planning and QC engineering category, which also has the highest share of over 55s; over the last several years, the share of technicians with third level qualifications has been increasing continuously
- Females constitute less than a third of employment in each engineering occupation; the lowest share is for electrical and mechanical engineers (less than 5%)
- With the exception of electrical engineers, the share of non-Irish is above the national average of 9.7% in all engineering occupations e.g. 12% of software engineers is non-Irish

Figure 7.2.1 Numbers Employed (000s) in Selected Engineering Occupations, 2006



Source: CSO

Figure 7.2.2 Annual Average Employment Growth in Selected Engineering Occupations, 2001-2006 (%)



Source: CSO

Table 7.2.1 Age and Education Profiles of Engineering Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Chemical engineers	15%	82%	3%	100%	0%	5%	95%	100%
Design and development engineers	9%	83%	8%	100%	0%	20%	80%	100%
Electrical engineers	3%	90%	7%	100%	3%	20%	78%	100%
Electronic engineers	11%	83%	5%	100%	1%	4%	95%	100%
Engineering technicians	5%	95%	0%	100%	4%	26%	70%	100%
Mechanical engineers	9%	83%	8%	100%	6%	19%	75%	100%
Other engineers and technologists, n.e.c.	5%	83%	12%	100%	6%	16%	78%	100%
Planning and quality control engineers	5%	82%	13%	100%	15%	25%	60%	100%

Source: CSO

Shortage indicators

- There is evidence of shortages of engineers across the board; current demand is strong with employers frequently experiencing difficulties in sourcing engineers; even in the case of QC engineers where employment has contracted, employers are experiencing recruitment difficulties in meeting replacement demand; demand is expected to continue to be strong in the coming years due to the expected strong performance of the pharmaceutical, medical devices and IT sectors; on the supply side, a decline in enrolments in engineering courses in recent years is expected to contribute to future shortages of engineering skills.
- At technician level, there is an issue with a decline in supply, and resulting shortages, due to a fall in the uptake of engineering courses in general and the increased progression from ordinary degree (technician) to honours degree (professional) level.

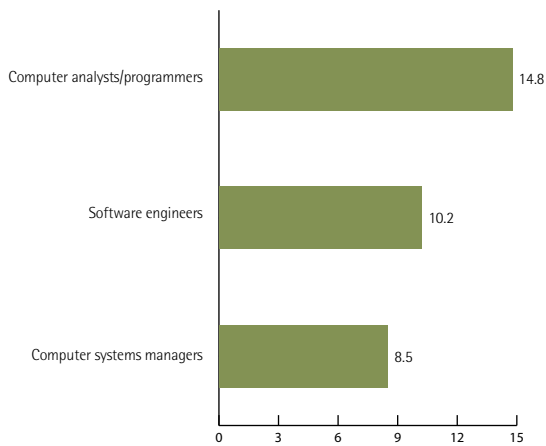
7.3 IT Professional Occupations

Key points for selected IT Professional occupations, 2006

- Approximately 33,500 persons are employed in selected IT professional occupations, with 49% within the computer and related activity sector
- Average employment growth for software engineers was above the national average of 3.2%

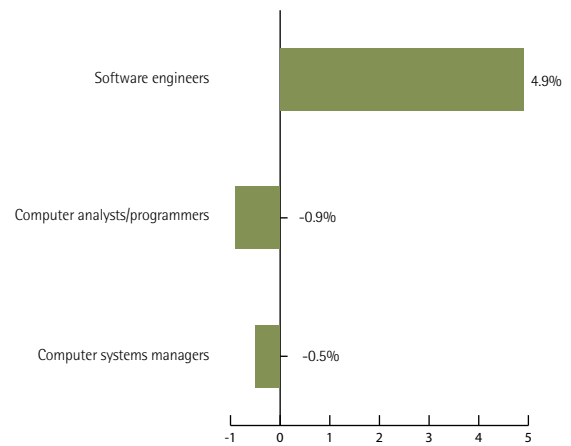
- Only 1% of computer systems managers are aged under 24 as experience is usually a requirement for this occupation
- Over three quarters of those employed in each of these occupations hold a third level qualification
- Non-Irish comprise over 10% of those employed as software engineers and computer analysts/programmers

Figure 7.3.1 Numbers Employed (000s) in IT Professional Occupations, 2006



Source: CSO

Figure 7.3.2 Average Employment Growth in IT Professional Occupations, 2001-2006



Source: CSO

Table 7.3.1 Age and Education Profiles of IT Professional Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Computer analyst/programmers	7%	90%	2%	100%	2%	20%	79%	100%
Computer systems managers	1%	98%	1%	100%	2%	14%	84%	100%
Software engineers	9%	89%	2%	100%	1%	10%	89%	100%

Source: CSO

Shortage indicators

- There are shortages of software engineers and computer analysts/programmers: employers continue to source IT skills from abroad; these shortages are expected to persist into the future: on the demand side, IT employment is projected to grow strongly as highlighted both in the latest reports by Forfás and the ESRI; some of the factors underlying the expected strong demand for IT skills include the economy's increasing dependence on IT, the growing importance of system and network security and the emergence of new security technologies, changing work and home patterns arising from the use of broadband wireless infrastructure; on the supply side, enrolments on computing courses have been declining.

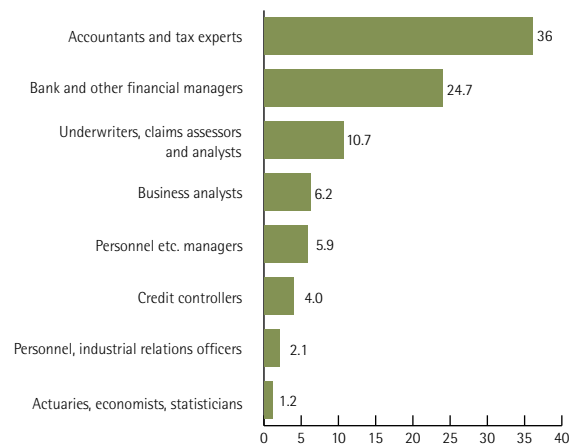
7.4 Business and Financial Occupations

Key points for selected business and financial occupations, 2006

- Just over 90,000 persons are employed in selected business and financial occupations, representing 4.5% of Ireland's workforce
- Employment is primarily concentrated in the financial intermediation sector (one third of the total) and the business sector
- Almost one half of employment is at professional level (mostly accountants); one third at managerial and the remainder at associate professional level

- Over the period 2001-2006, average annual employment growth was above the national average except for bank managers and the group comprising actuaries, economists and statisticians
- Over the period 2001-2006, 18,000 net posts were created in these occupations; almost three quarters at professional level (mostly in accounting)
- A significant majority of employment in each occupation is in the 25-54 age group
- The share of those employed with third level qualifications is above the national average for all occupations; the lowest share is in credit controllers
- Females account for more than 60% of employment at managerial level

Figure 7.4.1 Numbers Employed (000s) in Selected Business and Financial Occupations, 2006



Source: CSO

Figure 7.4.2 Annual Average Growth in Selected Business and Financial Occupations, 2001-2006 (%)



Source: CSO

Table 7.4.1 Age and Education Profiles of Selected Business and Financial Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Accountants and tax experts	12%	82%	6%	100%	1%	8%	91%	100%
Actuaries, economists, statisticians	5%	81%	14%	100%	0%	27%	73%	100%
Bank and other financial managers	5%	87%	8%	100%	6%	47%	47%	100%
Credit controllers	16%	78%	5%	100%	8%	39%	53%	100%
Management consultants and business analysts	1%	86%	13%	100%	2%	18%	81%	100%
Personnel etc. managers	10%	84%	6%	100%	2%	21%	77%	100%
Personnel, industrial relations officers	9%	78%	13%	100%	3%	42%	56%	100%
Underwriters, claims assessors and analysts	7%	85%	8%	100%	2%	28%	69%	100%

Source: CSO

Shortage indicators

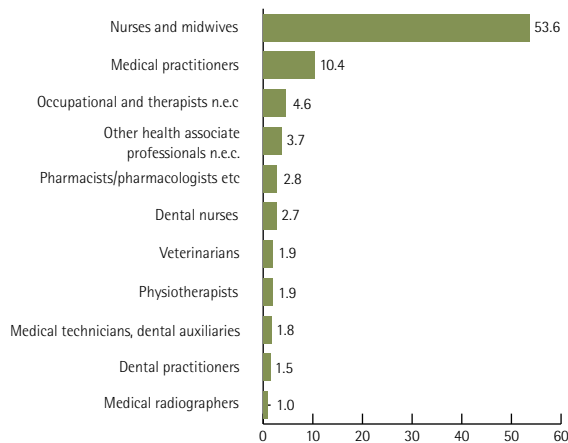
- Current demand for financial skills is strong and the outlook for the future is positive. The demand in the international segment of the sector is driven by two forces: the expansion of back office activities which represent a core platform of the sector and the demand which is arising from the expansion of middle and front office activities which are associated with higher added value and higher skills.
- In terms of specific skills, currently there are shortages in the areas of accounting (financial reporting and audit), quantitative finance (risk and investment analysis) and compliance (regulatory issues).
- In addition, there are significant shortages in some clerical financial occupations; these are dealt with in Section 7.14.

7.5 Healthcare Occupations

Key points for healthcare science occupations, 2006

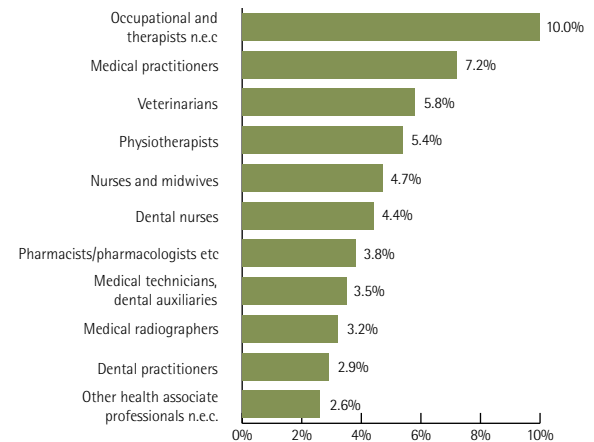
- There are 86,000 persons employed in selected healthcare occupations, representing 4% of total national employment
- Over 77% of employment is at associate professional level; 19% at professional level
- In the workforce as a whole, nurses and midwives are the third largest occupation, after farmers and sales assistants
- Over the period 2001-2006, employment growth was strongest for therapists and medical practitioners, well above the national average
- Over the period 2001-2006, 18,800 net posts were created in these occupations; 23% at professional level and 75% at associate professional level
- Over 70% of employment in each occupation is in the 25-54 age group; dental nurses have the youngest age profile with 22% aged 15-24
- Over 90% of those employed in professional occupations and over 80% of those in associate professional occupations hold a third level qualification; dental nurses is the only occupation where less than 50% hold third level qualifications
- Associate professional occupations are almost 90% female; 70% of pharmacists/pharmacologists are female
- 19% of medical practitioners are sourced from outside Ireland which is one of the highest non-Irish rates within professional occupations, second only to architects

Figure 7.5.1 Numbers Employed (000s) in Healthcare Occupations, 2006



Source: CSO

Figure 7.5.2 Average Employment Growth in Healthcare Occupations, 2001-2006



Source: CSO

Table 7.5.1 Age and Education Profile of Healthcare Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Dental nurses	22%	73%	4%	100%	2%	55%	43%	100%
Dental practitioners	0%	90%	10%	100%	0%	0%	100%	100%
Medical practitioners	2%	82%	16%	100%	2%	5%	93%	100%
Medical radiographers	4%	73%	23%	100%	0%	0%	100%	100%
Medical technicians, dental auxiliaries	10%	86%	4%	100%	6%	23%	70%	100%
Nurses and midwives	6%	80%	14%	100%	1%	15%	84%	100%
Occupational and therapists n.e.c.	8%	80%	12%	100%	2%	8%	89%	100%
Other health associate professionals	12%	74%	14%	100%	7%	26%	67%	100%
Pharmacists/pharmacologists etc	6%	76%	18%	100%	0%	7%	93%	100%
Physiotherapists	9%	78%	12%	100%	2%	5%	93%	100%
Veterinarians	0%	85%	15%	100%	0%	0%	100%	100%

Source: CSO

Shortage indicators

- There is evidence of shortages in many healthcare occupations including medical practitioners, dentists, various types of therapists and radiographers. In 2006 and 2007, the number of university places for medical doctors increased significantly but this will not impact on supply in the short to medium term. Similarly, despite a recent increase in the education and training provision for radiographers, the increase will still not be sufficient to alleviate the shortages experienced in this area.
- The number of dentists being trained annually has not increased in over 20 years leading to shortages in this area. In particular, there appears to be a current lack of dentists in specialist areas such as orthodontics; the 2006 increase in training places for orthodontists will not be sufficient to meet demand in the short term.¹⁴
- There may also be a shortage of pharmacists due to a growth in demand in recent years. Although graduates have begun to emerge from new courses introduced in response to shortages, this is expected to be insufficient to meet both the expansion and replacement demand; the replacement demand is expected to be higher than average due to the older age profile of pharmacists.
- Despite a recent increase in supply from the education system, work permit data indicates that many nurses continue to be sourced from abroad, suggesting difficulties in attracting and retaining staff in the profession.

¹⁴ The Competition Authority. *Competition in Professional Services. Dentists. (2005).*

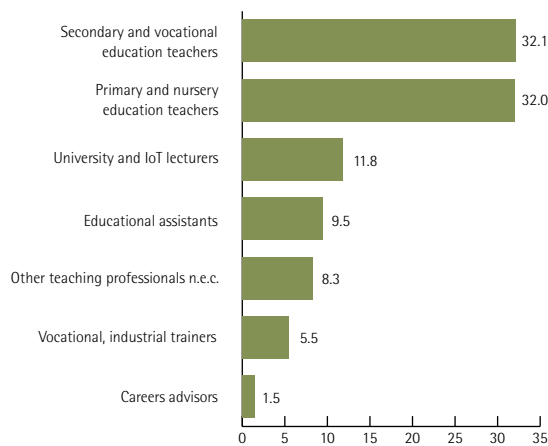
7.6 Education Occupations

Key points for selected education occupations, 2006

- There are approximately 100,000 individuals employed in selected education occupations accounting for 4.7% of total national employment
- Almost 84% are employed in professional occupations, 7% at associate professional level
- Over the period 2001-2006, approximately 20,000 net posts were created in these occupations, 73% of which were at professional level

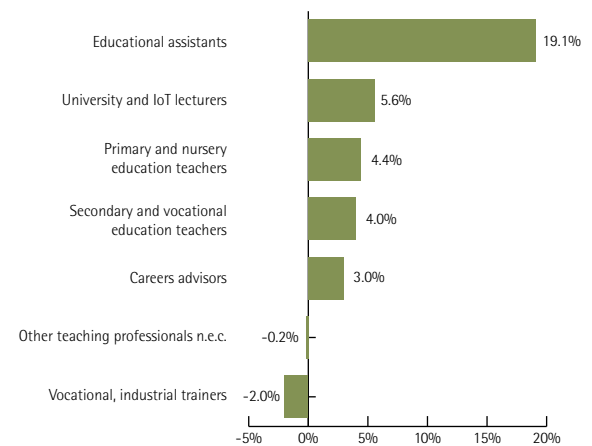
- At 19%, the strongest employment growth over the period 2001-2006 was for educational assistants
- Over 70% of employment in each occupation is in the 25-54 age group; university and IoT lecturers have the highest proportion (17%) of those aged 55+
- The overwhelming majority of education professionals have third level qualifications; educational assistants have the lowest education profile
- The majority of teaching professionals are female

Figure 7.6.1 Numbers Employed (000s) in Education Occupations, 2006



Source: CSO

Figure 7.6.2 Average Employment Growth in Education Occupations, 2001-2006



Source: CSO

Table 7.6.1 Age and Education Profile of Education Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Careers advisors	5%	82%	13%	100%	10%	15%	74%	100%
Educational assistants	8%	79%	13%	100%	16%	46%	38%	100%
Other teaching professionals n.e.c.	14%	71%	15%	100%	2%	19%	79%	100%
Primary and nursery education teachers	9%	79%	11%	100%	0%	3%	97%	100%
Secondary and vocational education teachers	4%	80%	16%	100%	0%	2%	98%	100%
University and IoT lecturers	4%	78%	17%	100%	0%	2%	97%	100%
Vocational, industrial trainers	1%	85%	14%	100%	11%	32%	57%	100%

Source: CSO

Shortage indicators

- There is little evidence of skill shortages in the education sector. There is a large pool of graduates available from teacher training courses. However, this does not preclude shortages in particular subject areas such as mathematics or physical sciences in secondary schools, as well as in the area of special needs.
- Recent increases in birth rates mean that rising numbers of pupils are expected to enter education at primary level. In addition, continuous Government's efforts to reduce class size will result in an increase in demand for education providers.
- There appear to be no issues with the supply of university and IoT lecturers in terms of numbers. However, a report on Irish higher education suggests that for Ireland to produce internationally recognised research, higher education institutions must attract and retain academics with the necessary skills and experience.¹⁵

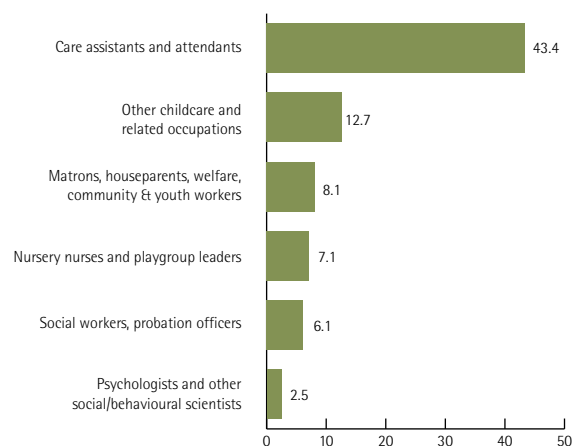
15 Review of National Policies for Education: Review of Higher Education in Ireland. Examiners' Report. OECD (2004).

7.7 Social and Care Occupations

Key points for selected social and care occupations, 2006

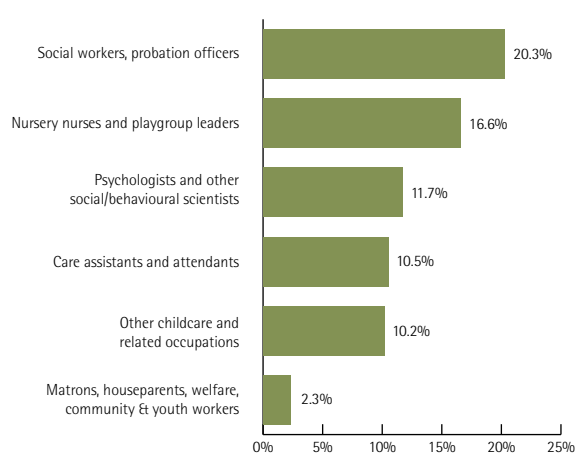
- Approximately 80,000 persons are employed in selected social and care occupations, representing 4% of Ireland's workforce
- Care assistants account for the highest proportion of those employed; professional occupations, including psychologists and social workers, account for under 11%
- Between 2001 and 2006, over 30,000 net posts were created with employment in most of these occupations growing well above the national average; 15% of new posts were at professional level while the highest share was for care assistants
- One third of those in other childcare and related occupations (mostly domestic childminders) are aged 15-24
- Over 90% of those in professional occupations hold a third level qualification; there has been a continuous increase in the share of employment with third level qualifications (14% in 2004 to 21% in 2006) for care assistants
- One fifth of the total employed in other childcare related occupations is non-Irish
- 96% of childminders are female

Figure 7.7.1 Numbers Employed (000s) in Social and Care Occupations, 2006



Source: CSO

Figure 7.7.2 Average Employment Growth in Social and Care Occupations, 2001-2006



Source: CSO

Table 7.7.1 Age and Education Profile of Social and Care Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Matrons, houseparents, welfare, community & youth workers	7%	79%	14%	100%	19%	26%	56%	100%
Nursery nurses and playgroup leaders	22%	72%	6%	100%	21%	55%	25%	100%
Nurses aids and care assistants	11%	71%	18%	100%	37%	42%	21%	100%
Other childcare and related occupations	34%	57%	9%	100%	29%	48%	23%	100%
Psychologists and other social/behavioural scientists	4%	78%	17%	100%	0%	2%	98%	100%
Social workers, probation officers	10%	77%	13%	100%	3%	11%	86%	100%

Source: CSO

Shortage indicators

- Although demand for nursery nurses and playgroup leaders has risen recently, supply has also been increasing and there do not appear to be shortages in this area. The Vocational Education Committees and FÁS provide numerous childcare courses and enrolment on these courses has been increasing steadily in recent years.
- The share of non-Irish domestic childminders has increased significantly indicating that there is a labour shortage for this occupation. The demand, however, is being met primarily from EU member states.
- There also appear to be issues with the high turnover of care assistants.
- The broad nature of the psychologists and other social behavioural scientists occupational group may mask shortages for specific skills, notably in the case of educational and clinical psychologists. Although education provision for clinical psychologists has increased recently, the demand for experienced staff will not be met in the short term.
- The evidence for social workers is inconclusive. Currently, third level qualifications are not a precondition for employment but future regulation may require social workers to hold a relevant degree. Such changes in regulation may have a negative impact on the available supply of qualified social workers.

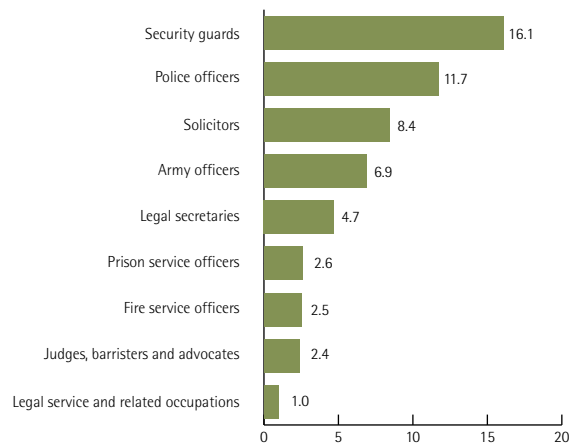
7.8 Legal and Security Occupations

Key points for selected legal and security occupations, 2006

- Just over 56,000 persons are employed in the selected legal and security occupations; this represents 3% of the total national employment
- The majority of persons are employed as security guards, followed by police officers
- Employment of security guards and related occupations was the fastest growing during the period 2001-2006, expanding by 9% per annum; and creating approximately 5,500 extra posts

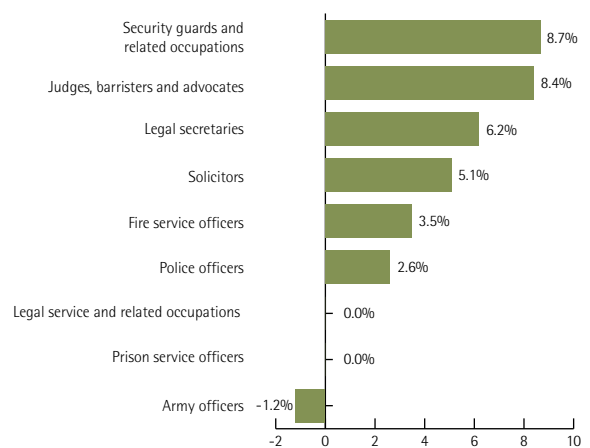
- Most of the occupations have a relatively young age profile
- At 17%, security guards and related occupations had the highest share of non-Irish nationals in employment in this occupational group
- Legal secretaries are all female; females are underrepresented in the police, fire service and army occupations; employment for legal professionals is gender balanced

Figure 7.8.1 Numbers Employed (000s) in Legal and Security Occupations, 2006



Source: CSO

Figure 7.8.2 Annual Average Employment Growth in Legal and Security Occupations, 2001-2006 (%)



Source: CSO

Table 7.8.1 Age and Education Profiles of Legal and Security Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Army officers	12%	82%	6%	100%	36%	44%	20%	100%
Fire service officers	4%	85%	11%	100%	33%	38%	29%	100%
Judges, barristers and advocates	0%	83%	17%	100%	0%	4%	96%	100%
Legal secretaries	24%	71%	5%	100%	9%	62%	29%	100%
Legal service & related occupations	14%	82%	4%	100%	4%	12%	84%	100%
Police officers	10%	85%	4%	100%	3%	42%	54%	100%
Prison service officers	0%	98%	2%	100%	13%	74%	13%	100%
Security guards & related occupations	15%	66%	19%	100%	47%	39%	14%	100%
Solicitors	5%	86%	10%	100%	0%	2%	98%	100%

Source: CSO

Shortage indicators

- At present, labour shortages are experienced with regard to private security occupations, despite the large inflows of non-Irish. Recent regulatory changes, introduced by the Private Security Authority will set a minimum education requirement for entry into this occupation at FETAC level 4. This is likely to affect the supply by prolonging the preparatory period for new entrants and exacerbating existing shortages.

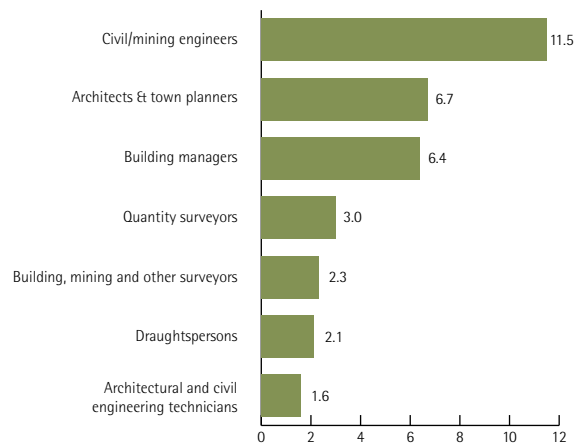
7.9 Construction Professional Occupations

Key points for selected construction professional occupations, 2006

- 33,600 persons are employed in construction professional occupations; an increase of over 5,000 since the year previously
- The majority of those employed in these occupations are civil engineers and architects, employment of which increased above the national average

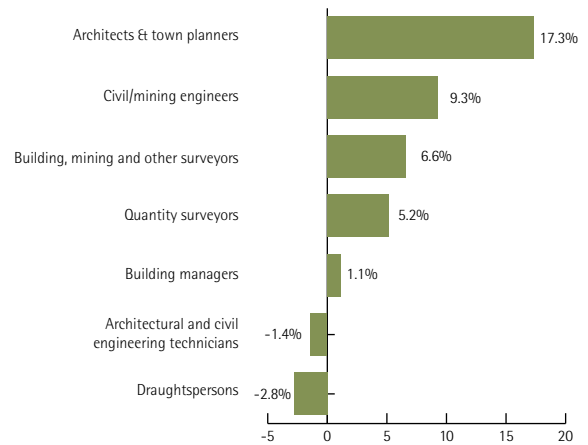
- Architectural and civil engineering technicians, civil/mining engineers, draughtspersons and quantity surveyors have a significant proportion of people aged 15-24, higher than the average for professionals (8%)
- With the exception of building managers, the majority of persons employed in these occupations have third level qualifications
- There is a higher than average share of non-Irish nationals in the employment stock of architects and architectural technicians

Figure 7.9.1 Numbers Employed (000s) in Construction Professional Occupations, 2006



Source: CSO

Figure 7.9.2 Average Employment Growth in Construction Professional Occupations, 2001-2006



Source: CSO

Table 7.9.1 Age and Education Profiles of Construction Professional Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Architects and town planners	6%	84%	10%	100%	0%	10%	90%	100%
Architectural and civil engineering technicians	15%	71%	14%	100%	2%	16%	82%	100%
Building managers	2%	81%	17%	100%	20%	39%	41%	100%
Building, mining and other surveyors	7%	84%	10%	100%	10%	12%	78%	100%
Civil/mining engineers	17%	74%	9%	100%	0%	7%	92%	100%
Draughtspersons	16%	67%	17%	100%	9%	37%	54%	100%
Quantity surveyors	18%	66%	17%	100%	2%	8%	90%	100%

Source: CSO

Shortage indicators

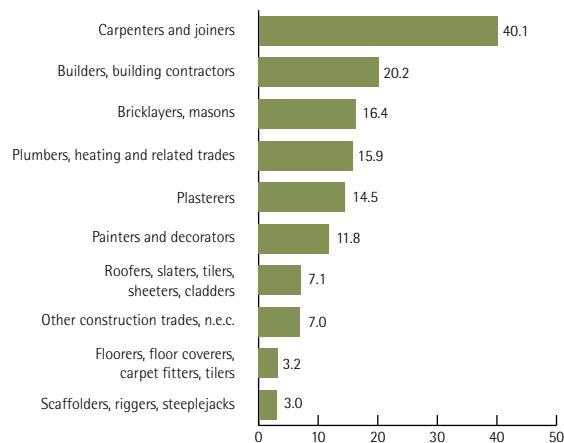
- The education provision for architects has increased significantly in recent years which will assist in easing the shortages in this occupation.
- Construction activity has changed its focus from residential to commercial and infrastructure development (related to the National Development Plan (NDP)) and as a result skills shortages in civil engineering at professional and technician level are expected to persist.
- Significant shortages are occurring for experienced quantity surveyors. They are required in particular for procurement activity and estimation of large projects such as for those relating to the NDP and hospital buildings. Employers frequently cite quantity surveyors as difficult to source.
- Shortages of building managers relate primarily to site managers and construction project managers; regular citings occur in the difficult to fill vacancy survey.

7.10 Construction Craft Occupations

Key points for selected construction craft occupations, 2006

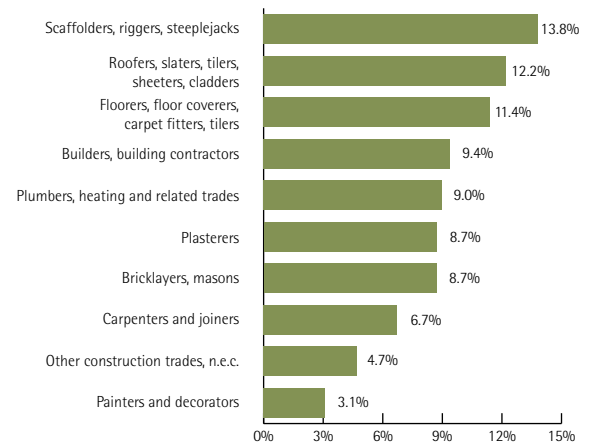
- Almost 138,000 persons are employed in construction craft occupations; an increase of 6,000 since the previous year
- Over the period 2001-2006, employment growth for all but one occupation was significantly higher than the national average
- These occupations have a much younger workforce than the national average with many occupations having over a quarter in the 15-24 age category
- Less than 10% of those employed in construction craft occupations have attained third-level qualifications, with over 50% of floorers, scaffolders and other construction trades having attained a lower secondary education
- The recent shortages in the construction sector have led to significant importing of construction craft skills; the share of non-Irish is significantly higher than the national average

Figure 7.10.1 Numbers Employed (000s) in Construction Craft Occupations, 2006



Source: CSO

Figure 7.10.2 Average Employment Growth in Construction Craft Occupations, 2001-2006



Source: CSO

Table 7.10.1 Age and Education Profiles of Construction Craft Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Bricklayers, masons	26%	68%	6%	100%	38%	54%	7%	100%
Builders, building contractors	7%	80%	13%	100%	44%	46%	10%	100%
Carpenters and joiners	31%	61%	8%	100%	26%	69%	6%	100%
Floorers, floor coverers, carpet fitters, tilers	22%	71%	7%	100%	58%	40%	3%	100%
Other construction trades n.e.c.	13%	75%	12%	100%	52%	43%	4%	100%
Painters and decorators	14%	74%	12%	100%	46%	47%	7%	100%
Plasterers	26%	66%	7%	100%	44%	54%	2%	100%
Plumbers, heating and related trades	35%	57%	8%	100%	24%	68%	8%	100%
Roofers, slaters, tilers, sheeters, cladders	21%	73%	6%	100%	45%	49%	6%	100%
Scaffolders, riggers, steeplejacks	24%	75%	1%	100%	58%	35%	7%	100%

Source: CSO

Shortage indicators

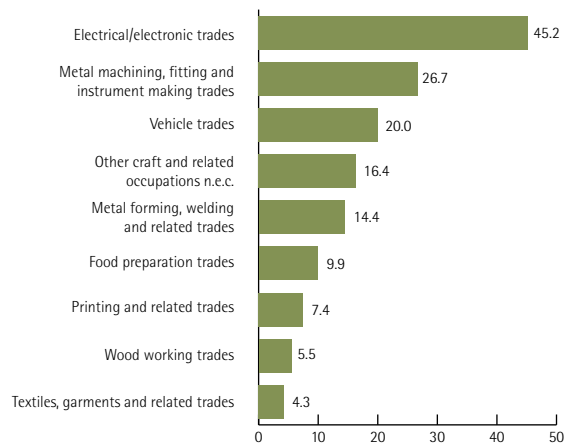
- As residential activity slows the demand for construction craft personnel will decline. In contrast to preceding years, no shortages are expected in these occupations with the exception of fitters (included within other construction trades). Fitters are involved in the maintenance of machinery on infrastructure sites (tunnels etc) and demand for this occupation will increase as the majority of construction activity moves from residential to infrastructure projects.

7.11 Other Craft Occupations

Key points for selected other craft occupations, 2006

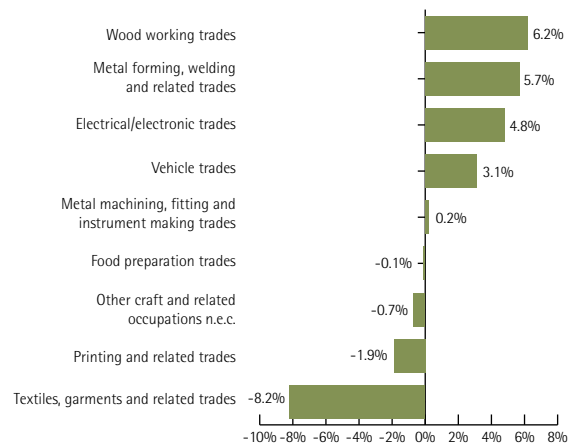
- Approximately 152,000 persons are employed in other craft occupations, almost 8% of the national workforce
- Employment is primarily concentrated in the manufacturing and construction sectors, with a 36% and 22% share respectively
- Employment in electrical/electronic trades accounts for the highest proportion of the total
- Over the period 2001-2006, a negative employment growth was recorded for food preparation, printing and textile related trades
- Most of these occupations have a higher than average share of employment in the 15-24 age category
- Persons employed in these occupations have a lower education profile than the national average: more with lower secondary or less education and fewer with third-level qualifications
- There is a higher than average share of non-Irish nationals in the employment stock of metal forming, wood working and food preparation craftspersons

Figure 7.11.1 Numbers Employed (000s) in Other Craft Occupations, 2006



Source: CSO

Figure 7.11.2 Average Employment Growth in Other Craft Occupations, 2001-2006



Source: CSO

Table 7.11.1 Age and Education Profiles of Other Craft Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Electrical/ electronic trades	28%	66%	6%	100%	11%	64%	25%	100%
Food preparation trades	18%	73%	9%	100%	49%	45%	6%	100%
Metal forming, welding and related trades	20%	72%	8%	100%	41%	51%	8%	100%
Metal machining, fitting and instrument making trades	15%	74%	11%	100%	26%	56%	18%	100%
Other craft and related occupations, n.e.c.	14%	72%	14%	100%	43%	38%	19%	100%
Printing and related trades	12%	80%	8%	100%	35%	58%	7%	100%
Textiles, garments and related trades	9%	75%	16%	100%	51%	44%	5%	100%
Vehicle trades	26%	65%	10%	100%	31%	62%	8%	100%
Wood working trades	26%	63%	11%	100%	30%	62%	8%	100%

Source: CSO

Shortage indicators

- Some current shortages are being experienced in the areas of metal machining, fitting and instrument making; in terms of specific job titles, there are shortages of aircraft mechanics, lift installation engineers and sheet metal mechanics. These skills are being imported from outside of the EU and employers cite them frequently as difficult to source.
- The number of work permits issued for welders and the share of non-Irish nationals in the employment stock suggest that many employers are experiencing difficulties in sourcing welders domestically.
- Food preparation trades, and in particular butchers and de-boners, have one of the highest proportion of non-Irish nationals employed. They appear regularly in the work permit data suggesting employers are having difficulty sourcing workers from the EU.

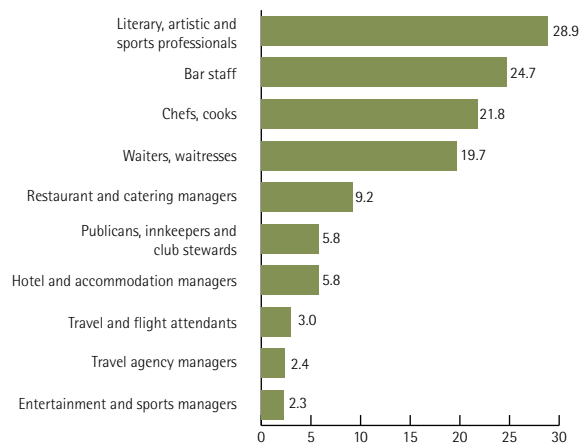
7.12 Arts, Sports and Tourism Occupations

Key points for selected arts, sports and tourism occupations, 2006

- Approximately 120,000 persons are employed in the selected occupations, representing 6% of total national employment
- The hospitality sub-sector, comprising bar and waiting staff, chefs and catering and restaurant managers, employed about 70% of the total

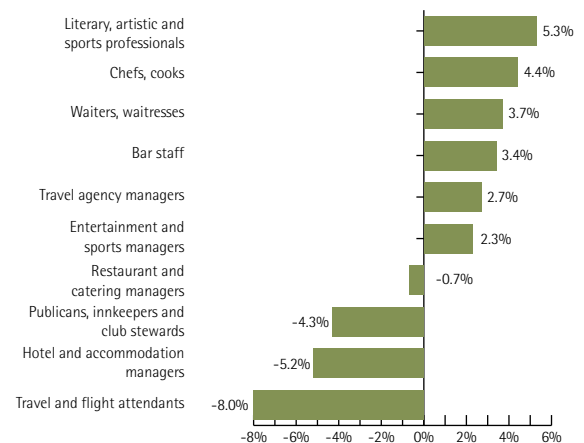
- Literary, artistic and sport professionals are the largest occupational group with approximately 30,000 persons employed; this was also the fastest growing occupation during the period 2001-2006
- With almost one half younger than 25, waiting and bar staff are the youngest occupational groups
- Literary, artistic and sports professionals are more likely to have third level qualifications than others
- Almost one third of all chefs and waiting staff in Ireland is non-Irish; this is the highest across all occupations

Figure 7.12.1 Numbers Employed (000s) in Selected Arts, Sports and Tourism Occupations, 2006



Source: CSO

Figure 7.12.2 Annual Average Growth in Selected Arts, Sports and Tourism Occupations, 2001-2006 (%)



Source: CSO

Table 7.12.1 Age and Education Profiles of Selected Arts, Sports and Tourism Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Bar staff	46%	49%	5%	100%	32%	56%	12%	100%
Chefs, cooks	14%	78%	8%	100%	25%	42%	33%	100%
Entertainment and sports managers	11%	78%	11%	100%	15%	46%	39%	100%
Hotel and accommodation managers	10%	65%	25%	100%	20%	38%	42%	100%
Literary, artistic and sports professionals	12%	77%	10%	100%	8%	33%	59%	100%
Publicans, innkeepers and club stewards	2%	62%	36%	100%	36%	48%	16%	100%
Restaurant and catering managers	8%	85%	7%	100%	22%	55%	23%	100%
Travel & flight attendants	22%	66%	12%	100%	5%	43%	52%	100%
Travel agency managers	16%	74%	11%	100%	8%	53%	39%	100%
Waiters, waitresses	47%	46%	6%	100%	28%	51%	20%	100%

Source: CSO

Shortage indicators

- There is a shortage of chefs: employers are frequently citing vacancies for chefs as difficult to fill, almost one third of chefs are non-Irish with their share in employment increasing markedly and a significant number of chefs are sourced from outside the EEA.
- There is a labour shortage of waiting staff; this occupation has become particularly dependent on non-Irish workers.

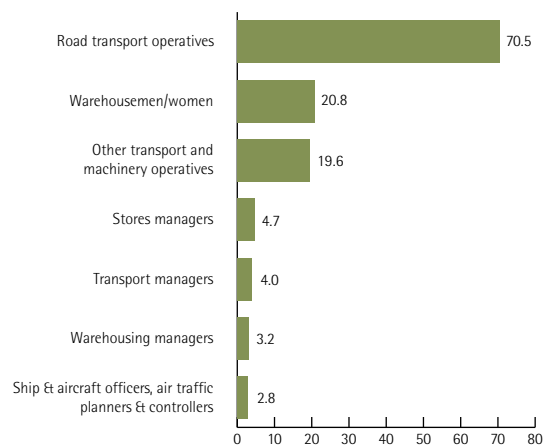
7.13 Transport and Logistics Occupations

Key points for selected transport and logistics occupations, 2006

- Approximately 125,000 persons are employed in the selected transport and logistic occupations, amounting to 6% of total national employment
- The overwhelming majority are employed as transport operatives, with road transport operatives (includes heavy goods vehicle (HGV), bus and taxi drivers) numbering approximately 70,000; following de-regulation in 2000, the number of taxi drivers has increased by approximately 6,000

- Over the period 2001-2006, the number of stores managers increased by 8.2% on average annually, significantly exceeding the average employment growth rate
- Road transport operatives have the oldest age profile, with 1 in 5 being 55 or older, well above the national average; conversely, warehousing persons were relatively the youngest, with 23% younger than 25
- Both road transport and other transport & machinery operatives were almost entirely male – the proportion of females was 2.6% and 2.4% respectively
- Road transport operatives have the lowest education profile: almost two thirds of those employed have lower secondary education or below; conversely, ship and aircraft officers and air traffic controllers have the highest education attainment, with 70% holding third level qualifications

Figure 7.13.1 Numbers Employed (000s) in Selected Transport and Logistics Occupations, 2006



Source: CSO

Figure 7.13.2 Annual Average Growth in Selected Transport and Logistics Occupations, 2001-2006 (%)



Source: CSO

Table 7.13.1 Age and Education Profiles of Selected Transport and Logistics Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Other Transport And Machinery Operative	16%	71%	13%	100%	60%	36%	4%	100%
Road Transport Operatives	3%	76%	20%	100%	60%	35%	5%	100%
Ship/Aircraft Officers, Air Traffic Planners & Controllers	2%	88%	10%	100%	5%	25%	70%	100%
Stores managers	15%	73%	12%	100%	19%	51%	29%	100%
Transport managers	3%	81%	16%	100%	22%	46%	32%	100%
Warehousemen/women	23%	69%	8%	100%	37%	54%	9%	100%
Warehousing managers	5%	85%	10%	100%	35%	39%	26%	100%

Source: CSO

Shortage indicators

- The analysis of quantitative data suggests that skill shortages are occurring for some road transport operatives at present, evident from the reported difficulties in sourcing HGV drivers by some employers. However, it also seems that these difficulties are less manifest than last year.
- There is no evidence of other widespread shortages. It appears the difficulties in sourcing warehouse persons cited by employers during the previous year have abated due to the recruitment of non-Irish nationals – their share in this occupation has increased to 13.3% from 5% in 2004.

7.14 Clerical Occupations

Key points for selected clerical occupations, 2006

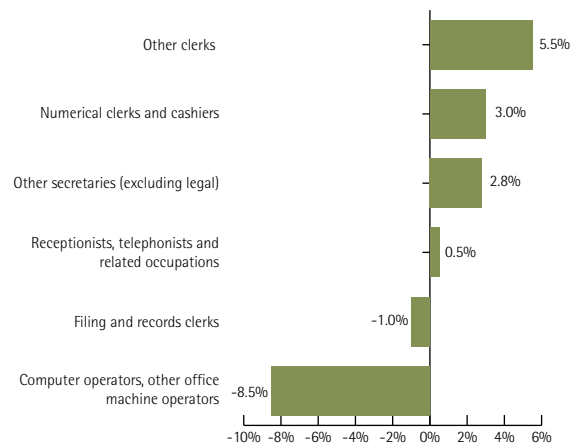
- Just over 190,000 persons are employed in selected clerical occupations, representing 9% of Ireland's workforce
- Employment is scattered across many sectors of the economy, primarily in retail, finance and business, public administration and healthcare
- Over the period 2001-2006, average annual employment growth was below the national average (in some cases negative), except for other clerks, highlighting a general trend in the shift in the job creation from clerical to professional/associate professional
- Over the period 2001-2006, just under 15,000 net posts were created in these occupations
- With the exceptions of secretaries, all clerical occupations have higher than national average share of persons in 15-24 age category; with 17%, filing clerks have the highest share of persons employed over 55
- The share of those employed with third level qualifications is below the national average for all occupations except numerical clerks and computer operators
- Females dominate employment in clerical occupations with in excess of 70% women in the workforce in each occupation (except for computer and office machinery operators)

Figure 7.14.1 Numbers Employed (000s) in Clerical Occupations, 2006



Source: CSO

Figure 7.14.2 Annual Average Employment Growth in Clerical Occupations, 2001-2006 (%)



Source: CSO

Table 7.14.1 Age and Education Profiles of Clerical Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Computer operators, other office machine operators	20%	78%	2%	100%	12%	51%	37%	100%
Filing and records clerks	13%	70%	17%	100%	20%	52%	28%	100%
Numerical clerks and cashiers	19%	74%	8%	100%	8%	53%	39%	100%
Other clerks	17%	75%	8%	100%	13%	59%	29%	100%
Other secretaries (excluding legal)	8%	81%	11%	100%	8%	68%	24%	100%
Receptionists, telephonists and related occupations	23%	66%	11%	100%	15%	65%	20%	100%

Source: CSO

Shortage indicators

In general, there are no shortages of clerical skills in Ireland. However, there are two areas where specific clerical skills are in short supply:

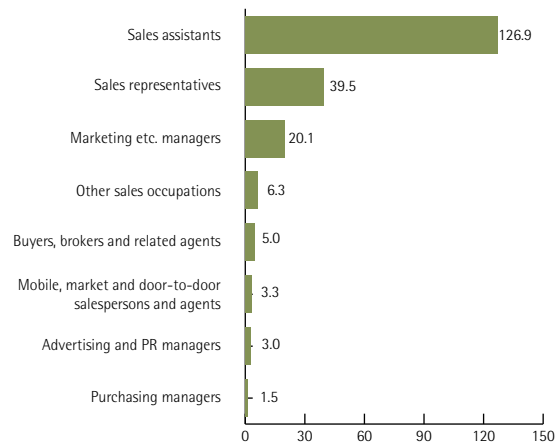
- Funds industry: there is an acute shortage of fund accountants, fund administrators and shareholder services officers; the shortage is mainly due to staff retention issues; this poses a challenge to Ireland's efforts to preserve and expand existing back office activities in the international financial services sector.
- Transport and logistics: there is a shortage of freight forwarding, custom clearance and import/export documentation processing clerks; the shortage is due to the lack of awareness of employment opportunities by potential candidates and the limited training provision in this area.

7.15 Sales Occupations

Key points for selected sales occupations, 2006

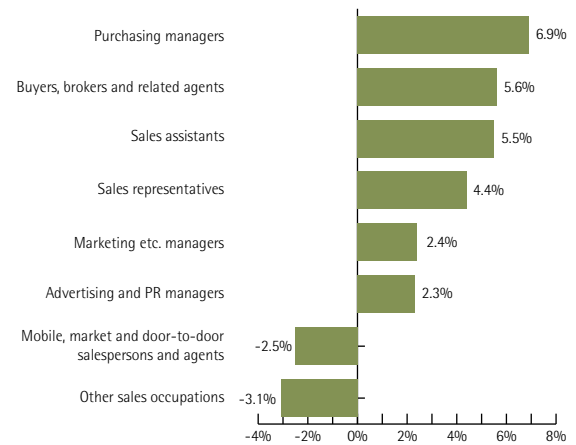
- Approximately 200,000 persons are employed in selected sales occupations, representing 10% of Ireland's workforce
- Employment is concentrated in the retail and wholesale sectors
- Sales assistants, with almost 127,000 employed, is the most populated single occupation in the economy as a whole, accounting for 62% of employment in sales occupations
- Over the period 2001-2006, over 40,000 additional posts were created in these occupations; almost three quarters of these were for sales assistants
- On average, more than 60% of those in management occupations have third level education; more than half of mobile market and door-to-door salespersons and agents hold lower secondary qualifications or less
- Sales assistants are strongly skewed towards the younger age cohorts: 40% are 15-24, 52% are 25-54
- 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

Figure 7.15.1 Numbers Employed (000s) in Sales Occupations, 2006



Source: CSO

Figure 7.15.2 Average Employment Growth in Sales Occupations, 2001-2006



Source: CSO

Table 7.15.1 Age and Education Profile of Sales Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Advertising and PR managers	13%	76%	11%	100%	8%	23%	69%	100%
Buyers, brokers and related agents	3%	84%	13%	100%	16%	40%	44%	100%
Marketing etc. managers	8%	85%	8%	100%	7%	34%	59%	100%
Mobile, market and door-to-door salespersons and agents	9%	81%	10%	100%	51%	42%	6%	100%
Purchasing managers	9%	88%	3%	100%	10%	28%	62%	100%
Sales assistants and check-out operators	40%	52%	8%	100%	33%	54%	13%	100%
Other sales occupations n.e.c.	24%	62%	14%	100%	35%	40%	24%	100%
Sales representatives	15%	75%	11%	100%	19%	43%	38%	100%

Source: CSO

Shortage indicators

- Marketing managers are being increasingly sourced from non-Irish stock indicating a skills shortage in this area.
- There is a shortage of skills in relation to sales representatives with technical, product and sectoral knowledge.
- Addressing shortages in the areas of marketing and sales is important to the development of indigenous companies and their performance in the export markets.
- There is a shortage of sales assistants evident in the continuous increase in the share of non-Irish employed in this occupation. The issue is a labour shortage rather than a skill shortage.

7.16 Operatives

Key points for selected operatives occupations, 2006

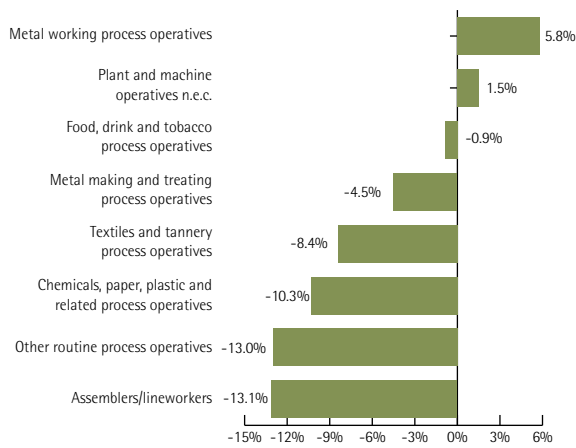
- Approximately 80,000 persons are employed as operatives, accounting for 4% of the overall national employment

- Over the period 2001-2006, employment in this occupational group contracted by almost 40,000, with approximately one half of all jobs lost in the assemblers and line workers occupation

- The education profile of operatives is skewed toward the lower end

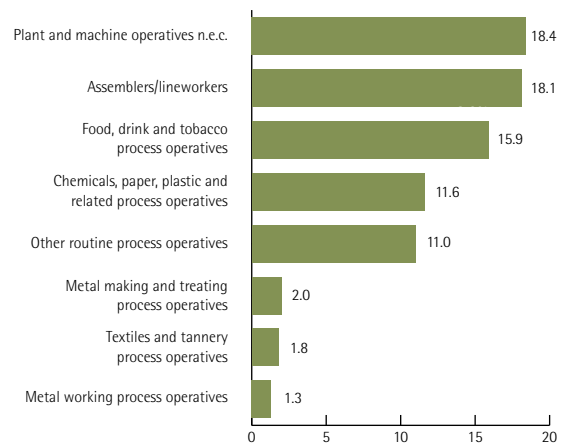
- The share of non-Irish nationals has been increasing in all of these occupations

Figure 7.16.1 Numbers Employed (000s) as Operatives and Related Occupations, 2006



Source: CSO

Figure 7.16.2 Annual Average Employment Growth for Operatives and Related Occupations, 2001-2006 (%)



Source: CSO

Table 7.16.1 Age and Education Profiles of Operatives and Related Occupations, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Assemblers/line workers	19%	75%	6%	100%	34%	53%	13%	100%
Chemicals, paper, plastic and related process operatives	9%	81%	10%	100%	34%	54%	12%	100%
Food, drink and tobacco process operatives	11%	79%	10%	100%	50%	42%	8%	100%
Metal making and treating process operatives	16%	73%	11%	100%	24%	56%	19%	100%
Metal working process operatives	18%	74%	8%	100%	42%	52%	6%	100%
Other routine process operatives	18%	74%	8%	100%	34%	44%	22%	100%
Plant and machine operatives n.e.c.	10%	77%	13%	100%	48%	44%	8%	100%
Textiles and tannery process operatives	19%	63%	18%	100%	48%	40%	12%	100%

Source: CSO

Shortage indicators

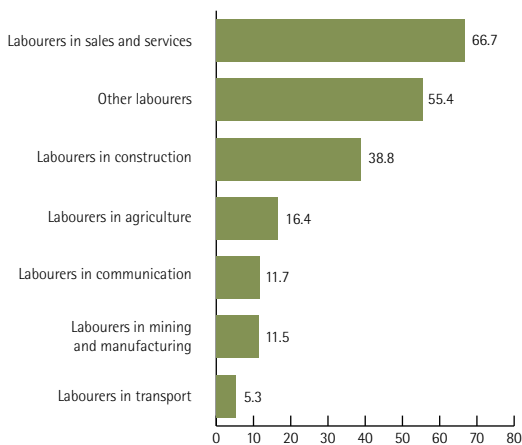
- There are no current or envisaged shortages of operatives.

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

Key points for selected labourers¹⁶, 2006

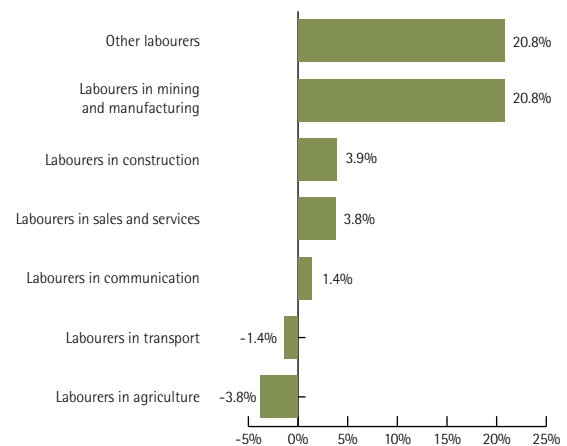
- Just over 200,000 persons in employment are classified as labourers, representing 10% of Ireland's workforce
- One third was employed in sales and services, of which one half in cleaning services and one quarter in catering; one fifth of all labourers are employed in construction
- Over the period 2001-2006, employment in manufacturing more than doubled with the most notable increase in food and medical devices manufacturing; employment contracted for labourers in transport and agriculture
- Over the period 2001-2006, over 55,000 **net** posts were created for labourers of which just under 9,000 were for cleaners, 7,000 for labourers in the manufacturing of food and medical devices, 6,700 for labourers in construction; an estimated 6,000 labouring jobs were lost in transport and agriculture
- One fifth of labourers in agriculture, construction and transport are under 25
- In almost all labourer occupations, a significant majority of those employed have less than secondary level education
- The share of non-Irish labourers, except for labourers in communications, is higher than the national average; one fifth of all labourers in agriculture, construction and services are non-Irish
- Labourers are predominantly male, except for those employed in sales and services where 71% are females (mostly cleaners)

Figure 7.17.1 Numbers Employed (000s) as Labourers, 2006



Source: CSO

Figure 7.17.2 Annual Average Employment Growth for Labourers, 2001-2006



Source: CSO

¹⁶ There is a number of occupations discussed in this section that is for simplicity referred to as labourers; these include cleaners, porters, sorters, various types of mates

Table 7.17.1 Age and Education Profiles of Labourers, 2006

Occupation	Age				Education			
	15-24	25-54	55+	Total	Lower secondary or less	Upper secondary or FET	Third level	Total
Labourers in agriculture	20%	63%	17%	100%	62%	32%	7%	100%
Labourers in communication	6%	75%	20%	100%	46%	45%	9%	100%
Labourers in construction	20%	71%	9%	100%	64%	30%	6%	100%
Labourers in mining and manufacturing	17%	74%	9%	100%	43%	47%	10%	100%
Labourers in sales and services	15%	68%	17%	100%	60%	31%	8%	100%
Labourers in transport	21%	66%	13%	100%	64%	30%	7%	100%
Other labourers	15%	69%	16%	100%	54%	32%	14%	100%

Source: CSO

Shortage indicators

- The changes in the nationality composition of the employment stock and the work permit data suggest that employers continue to source labourers from abroad, particularly in the services, agriculture and construction sectors; currently, Irish persons appear to be reluctant to take up jobs as labourers given the availability of alternative job opportunities.

Section 8 In Focus: Female Employment, 2001-2006

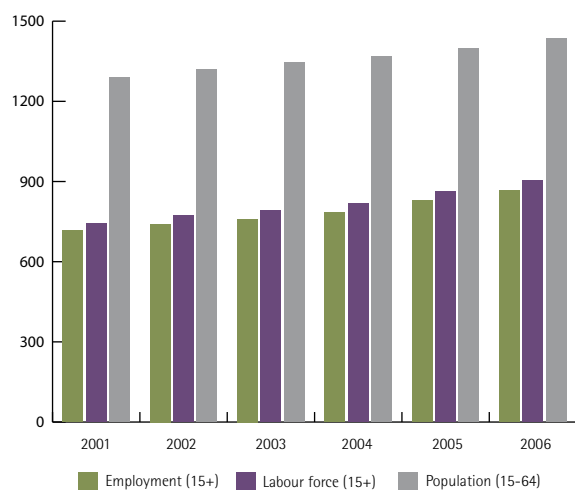
Economic and social changes over the past 30 years have altered the role of women in Irish society. Traditionally, Irish women left employment following marriage or the birth of their first child. However, this has been changing over time whereby an increasing number of mothers remain in employment. The boost to the Irish labour force from the increased female participation was one of the key factors underlying the economic expansion in the late 1990s and onwards.

This section explores the current state of the Irish female workforce. This is done by presenting historic trends for female employment; relevant employment indicators; employment composition by age, education, nationality, sector and occupation. Changes in the female employment composition are examined by comparing employment stocks in 2001 and 2006. Comparisons with male employment are used to illustrate gender differences. Where the data permits, Ireland's performance is compared to other European countries.

Employment trends

In 2006, there were 1.4 million working age (15-64) females in Ireland – almost 150,000 more than 5 years previously (Figure 8.1). In the same year, the female labour force – including those older than 65 – was 900,000.

Figure 8.1 Female population, labour force and employment (000s), 2001-2006



Source: CSO

Female participation in the labour force has increased by almost 5 percentage points over the period 2001-2006; the increase for males was 2 percentage points (Table 8.1). Of those females participating in the labour market, 870,000 were in employment, compared to just over 1,160,000 males.

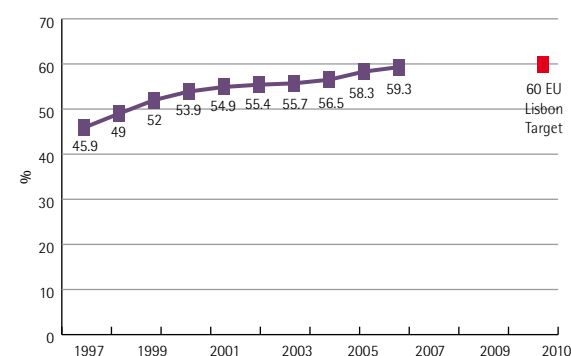
Table 8.1 Labour market participation rates, 2001-2006 (%)

Year	Participation rate	
	Female	Male
2001	48.4	71.7
2002	49.1	71.2
2003	49.6	71.1
2004	50.2	71.6
2005	51.8	72.4
2006	52.9	73.2

Source: CSO

Historical data presented in Figure 8.2 shows that the female employment rate – females in employment as a percent of the population older than 15 – has been increasing continuously over the last 10 years; increasing from 45.9% to 59.3% over the period 1997-2006. If this trend continues, by 2010, Ireland is likely to exceed the 60% EU target set by the Lisbon European Council of 2000.

Figure 8.2 Annual average female employment rates, 1997-2006 (%)



Source: CSO

In 2006, Ireland was placed in the middle of a table of female employment rates for EU countries and just above the EU27 average of 57.2% (Table 8.2). International comparisons reveal that females in Ireland are more likely to be in employment than those living in most Mediterranean and Eastern European countries. However, Ireland lags significantly behind the best performers: in Scandinavian countries the female employment rate is around the 70% mark. By contrast, at 77.7%, the male employment rate in Ireland is one of the highest in the EU27.

Table 8.2 Average annual employment rates for EU27 by gender, 2006

Country	Females	Males	Gender gap (percentage points)	Gap below Lisbon target (60%)
Denmark	73.4	81.2	7.8	*
Sweden	70.7	75.5	4.8	*
Netherlands	67.7	80.9	13.2	*
Finland	67.3	71.4	4.1	*
UK	65.8	77.3	11.5	*
Estonia	65.3	71	5.7	*
Austria	63.5	76.9	13.4	*
Latvia	62.4	70.4	8	*
Germany	62.2	72.8	11.3	*
Portugal	62	73.9	11.9	*
Slovenia	61.8	71.1	9.3	*
Lithuania	61	66.3	5.3	*
Cyprus	60.3	79.4	19.1	*
Ireland	59.3	77.7	18.4	0.7
France	57.7	68.5	10.8	2.3
EU27	57.2	71.6	14.5	2.8
Czech Rep	56.8	73.7	16.9	3.2
Bulgaria	54.6	62.8	8.2	5.4
Luxembourg	54.6	72.6	18	5.4
Belgium	54	67.9	13.9	6
Spain	53.2	76.1	22.9	6.8
Romania	53	64.6	11.6	7
Slovakia	51.9	67	15.1	8.1
Hungary	51.1	63.8	12.7	8.9
Poland	48.2	60.9	12.7	11.8
Greece	47.4	74.6	27.2	12.6
Italy	46.3	70.5	24.2	13.7
Malta	34.9	74.5	39.6	25.1

Source: Eurostat

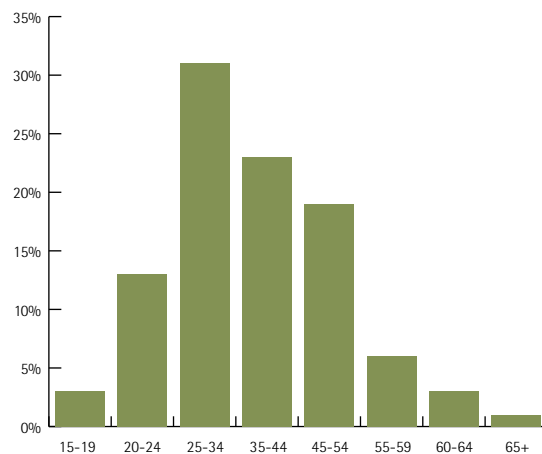
In terms of the disparity between male and female employment rates, with 18.4 percentage points, Ireland has the 6th (out of 27 EU countries) highest gender gap. Only Mediterranean countries (with the exception of Portugal) have a higher difference in male and female employment rates. By comparison, in Sweden both employment rates are in excess of 70%, with a gender gap of less than 5 percentage points.

Employment by age

Figure 8.3 shows the age profile of female employment in Ireland in 2006. The age distribution is skewed towards the younger age cohorts: just under one third of employment is in the 25-34 age category and almost three quarters is 25-54.

There has been a change in the distribution over the period 2001-2006: the share of females over 55 increased from 8% to 11%, while the share of those younger than 25 decreased from 19% to 16%. This illustrates two trends: on the one hand, there has been a greater participation in the labour force of older female workers; on the other hand, females are staying longer in the education process and delaying their entry into the labour market. Another interesting change is a decrease in the share of females aged 35-44, which is likely to be linked with the withdrawal from the workforce due to family commitments.

Figure 8.3 Age distribution of female employment, 2006



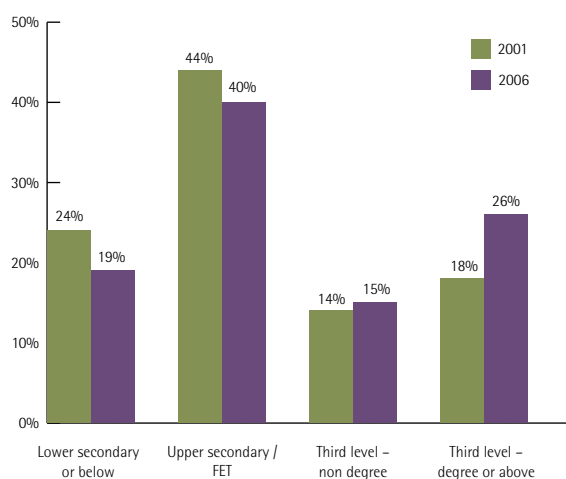
Source: CSO

Females tend to withdraw from the labour force earlier than men: in 2006, the share of female employment in the 55+ category was 11% compared with 14% for men. Similarly, only 1.3% of all females worked beyond the retirement age comprising just over a quarter of all workers aged 65+. However, the gender gap in the older worker population is closing: over the period 2001-2006, the share of females in the total national employment stock aged 55-59 increased from 32% to 39% and in that aged 60-64 from just over one quarter to over one third.

Employment by education

Figure 8.4 shows the education profile of female employment in Ireland. In 2006, the highest share (40%) of employment was in the upper secondary and further education and training category. Over the period 2001-2006, there was a marked shift towards higher education attainment: the share with third level qualifications increased from 32% to 41%. Over the same period, there was a decline in the share of females with less than upper secondary education from just under one quarter to less than one fifth.

Figure 8.4 Education profile of female employment, 2001 and 2006



Source: CSO

Females in employment tend to have a higher level of education than males: in 2006, the share of the female employment stock with third level qualifications was significantly higher than for males – 41% compared to 28%. Importantly, the share of female employment with degrees or above is both higher and increasing faster than for males, resulting in females outnumbering males at this level in 2006. Furthermore, at the lower end of the spectrum, a significantly higher share of males in employment had less than secondary education – 32% compared to 19% of females.

Part-time employment

Females are more likely to engage in part-time work than males: in 2006, 1 in 3 females were employed part-time, while the corresponding ratio for males was 1 in 15. The share of female employment stock working part-time has remained relatively unchanged over the last several years.

Females are more likely to work part-time in the prime of their working life: in 2006, two thirds of female part-timers were aged 25-54, compared to just over one third of male part-timers. On the other hand, males are more likely to engage in part-time employment at the beginning of their working life: 37% of male part-timers are younger than 25, compared to 17% of female part-timers.

In terms of part-timers in the female employment stock, Ireland ranks just above the EU27 average. However, the share of part-time employment is below the EU15 level of 37%. At 75%, the Netherlands has the highest share of part-time workers in its female employment stock. The share for Eastern European countries is low at 10% or less.

Employment by nationality

In 2006, there were approximately 75,000 non-Irish females working in Ireland; over 40,000 more than 5 years previously. They represent 9% of the total female employment – an increase of 4 percentage points since 2001.

In 2006, 38% of all non-Irish females in employment were from the EU15, just over one third from the EU10 (former accession states) and the remainder from outside the EU.

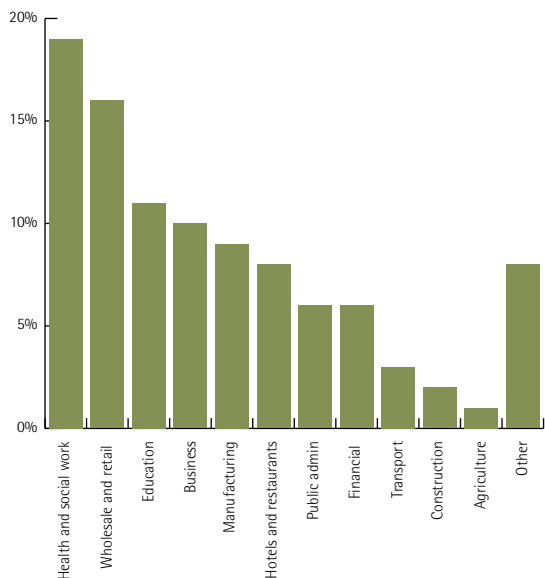
The origin of non-Irish workers differs between genders: most females come from the EU15; males from the EU 10.

Employment by sector

Figure 8.5 presents the sectoral profile of female employment in Ireland. One fifth of all females are employed in health and social work. Together with retail and education, these three sectors account for almost one half of all female employment. Very few females are employed in agriculture and construction.

There has been some change in the sectoral distribution of female employment over the period 2001-2006: the share employed in manufacturing declined from 13% to 10%, while the share in health and social work increased from 17% to 19%. For males, the shift was from manufacturing to construction.

Figure 8.5 Female employment by sector, 2006



Source: CSO

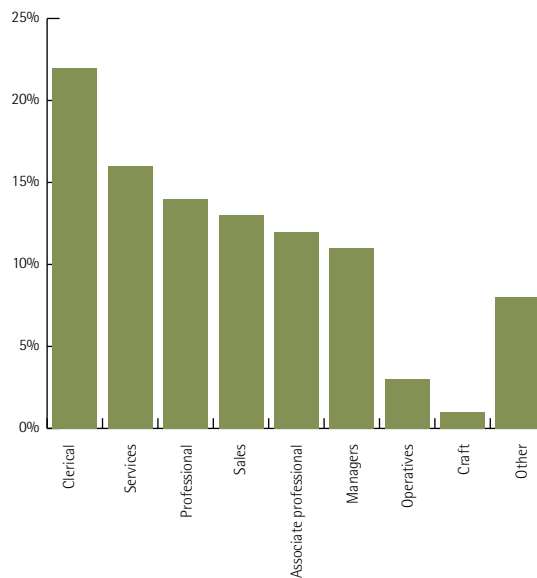
Females comprise a significant majority of the workforce in the health and education sectors – 83% and 71% of the total employment respectively. On the other hand, construction is a male dominated sector with females accounting for less than 5% of its workforce. This is in line with the gender profile of the employment stock in the EU27.

Sectors with a gender balanced workforce are public administration and wholesale and retail.

Employment by occupation

Figure 8.6 shows the occupational profile of female employment. Of the total of 856,000 females in employment, 22% are employed in clerical occupations, compared to 5% of males. Females also tend to be employed in personal services, professional and sales occupations. Very few females are employed as craftspeople or operatives.

Figure 8.6 Female employment by occupation, 2006



Source: CSO

In terms of individual occupations, 15% of the female workforce are employed as clerks and secretaries; 10% as sales assistants, 10% as nurses and carers, and 8% as teachers and education assistants.

In terms of gender balance, clerical occupations are dominated by females – 75% of the workforce is female. On the other hand, less than 5% of the workforce in craft occupations is female. A similar pattern is observed in the EU27 as a whole. Professional occupations are close to a gender balance with the share of females at 49%.

The share of females in high skilled occupations has increased notably in recent years: in 2006, 49% of professionals were female compared to 45% in 2001; 59% of associate professionals compared to 55%; 31% of managers compared to 28%.

The FÁS/ESRI report on occupational employment forecasts¹⁷ projects that the share of females in professional occupations will continue to grow strongly. The most significant increase is expected for business professionals – an excess of 7 percentage points on 2005, so that by 2012, females will comprise the majority of the workforce in this occupational group.

Overall, the analysis reveals that females contribute significantly to Irish human capital and that by increasing female participation and retention rates there is further potential, domestically, for the expansion of the Irish workforce.

17 FÁS/ESRI Manpower Forecasting Studies: Occupational Employment Forecasts 2012, 2007

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Publications by the Expert Group on Future Skills Needs

Report	Date of Publication
Monitoring Ireland's Skills Supply: Trends in Education / Training Outputs 2006	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
Skills at Regional Level in Ireland	May 2006
SME Management Development Report	May 2006
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
Literature Review on Aspects of Training of those at Work in Ireland	June 2004
Financial Skills Monitoring Report	November 2003
Responding to Ireland's Growing Skills Needs - The Fourth Report of the Expert Group on Future Skills Needs	October 2003
The Demand and Supply of Skills in the Biotechnology Sector	September 2003
Skills Monitoring Report - Construction Industry 2003/10	July 2003
Benchmarking Education and Training for Economic Development in Ireland	July 2003
The Demand and Supply of Engineers and Engineering Technicians	June 2003
The Demand and Supply of Skills in the Food Processing Sector	April 2003
National Survey of Vacancies in the Private Non-Agricultural Sector 2001/2002	March 2003
National Survey of Vacancies in the Public Sector 2001/2002	March 2003
The Irish Labour Market: Prospects for 2002 and Beyond	January 2002
Labour Participation Rates of the over 55s in Ireland	December 2001
The Third Report of the Expert Group on Future Skills Needs - Responding to Ireland's Growing Skills Needs	August 2001
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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