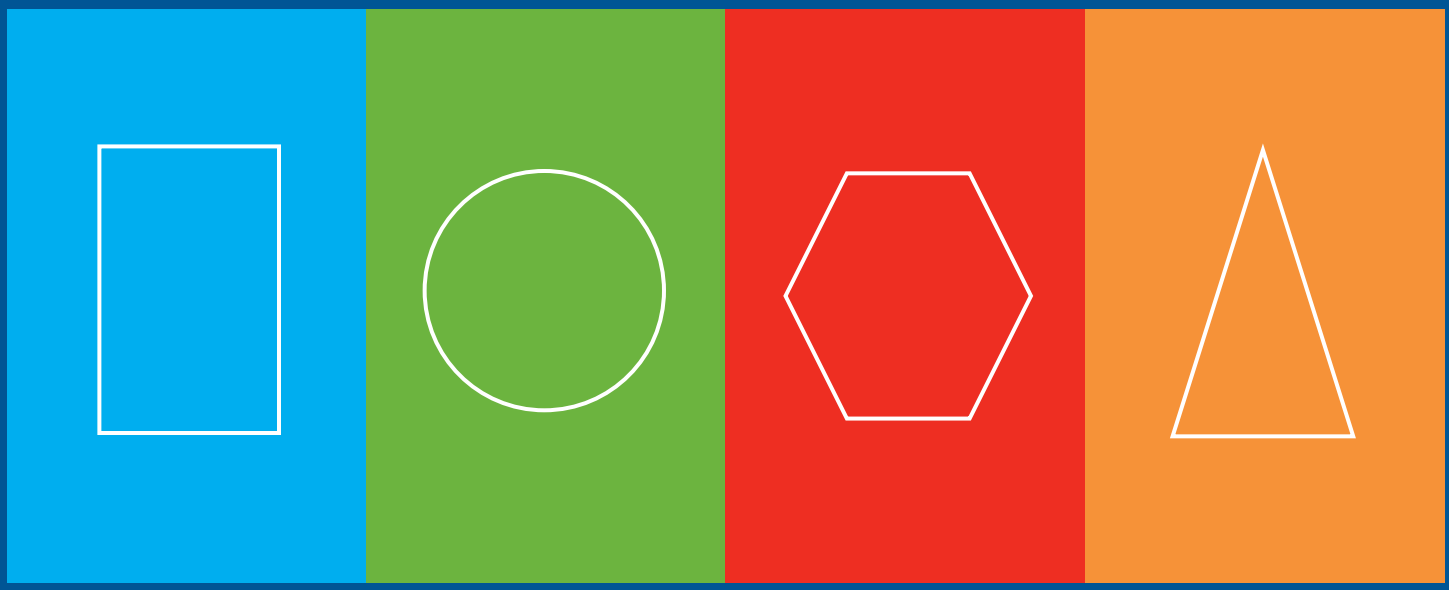

National Skills Bulletin 2015

July 2015

SOLAS
An tSeirbhís Oideachais Leanúnaigh agus Scileanna
Further Education and Training Authority

Expert Group on
Future Skills Needs

National Skills Bulletin 2015

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

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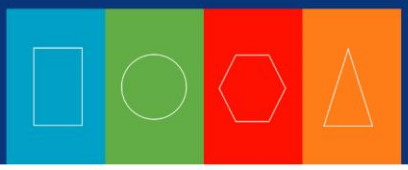

Foreword

The National Skills Bulletin 2015 is the latest in an annual series of reports, which has been produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS on behalf of the Expert Group on Future Skills Needs (EGFSN) since 2005. The Bulletin provides an overview of the Irish labour market at occupational level, drawing on a variety of data sets, which have been systematically gathered in the National Skills Database (NSD) since 2003.

The data presented in this year's Bulletin indicates further improvements in the Irish labour market. During 2014, employment increased, while the number of unemployed, long-term unemployed and underemployed persons declined. However, unemployment rates remained high for persons previously employed in construction and elementary occupations, new entrants to the labour market and persons with less than higher secondary education attainment.

The recovery in construction activity was evident during 2014: employment expanded faster than any other sector of the economy (albeit from a low base), with growth recorded across most construction occupations, particularly skilled trades.

With the economic recovery strengthening, shortages are intensifying in the previously identified areas such as ICT, engineering, sales/customer care, logistic, health, business and finance, and emerging in new areas such as hospitality (chefs) and construction (surveyors and steel erectors/fixers). With improved job prospects across all sectors of the economy, issues with attracting and retaining staff are emerging in some areas (e.g. hospitality, care and meat processing).

Analysis of labour market transitions indicates the continued flexibility of the Irish labour market; however, it also points to high turnover in relation to certain occupations, including care workers, sales workers, general clerks, elementary occupations (e.g. waiters, cleaners, catering assistants, security workers), as well as some highly skilled occupations (e.g. IT professionals).

The information presented in the Bulletin, together with its companion publication, Monitoring Ireland's Skills Supply 2015, aims at supporting policy makers, students, job seekers, persons returning to the labour force, investors and employers in making better labour market decisions.

Una Halligan,

Chairperson, Expert Group on Future Skills Needs

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Executive Summary

The National Skills Bulletin 2015 is the eleventh in an annual series of reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS on behalf of the Expert Group on Future Skills Needs (EGFSN). The Bulletin provides an overview of the Irish labour market at occupational level, by examining a variety of indicators on demand and supply. The objective of the Bulletin is to inform policy formulation in the areas of employment, education/training, career guidance and immigration. The Bulletin also aims to assist students, job seekers, persons returning to the labour force, investors and employers in making labour market decisions.

Irish Labour Market in 2014

During 2014 there were further improvements in a number of labour market indicators:

- employment increased by 33,000 (annual average)
- the employment rate increased by 1.2 percentage points to 61.7% (annual average)
- the unemployment level declined by almost 40,000 (annual average)
- the unemployment rate declined by 1.8 percentage points to 11.3% (annual average)
- the long term unemployment rate declined to 5.7% (quarter 4)
- the broad unemployment measure (combining unemployed and part-time underemployed persons) declined to 15% (quarter 4)
- the number of persons in part-time employment who were underemployed decreased by 28,000 (quarter 4)
- the total number of redundancies declined to 6,883 - half the number observed in 2013.

During 2014, many challenges still remained, as illustrated by the following indicators:

- the labour force declined by 6,500 (annual average)
- net outward migration for Irish nationals was 29,200
- the unemployment rate remained high for certain segments of the labour market (e.g. persons with lower secondary or less education (18%), under 25s (20%), former construction workers (21%)).

Employment and Unemployment by Broad Occupation

Between 2013 and 2014, the strongest absolute employment growth (in annual average terms) was observed for skilled trades (14,500), followed by associate professionals (6,400) and elementary occupations (almost 6,000). In relative terms, the strongest growth was observed for skilled trades (7%).

Between quarter 4 2013 and quarter 4 2014, the unemployment rate declined for all occupational groups, except for managers and professionals, which remained at 5% and 3% respectively. The largest declines were observed for elementary occupations (four percentage points), administrative occupations and skilled trades (three percentage points each).

Sectoral Employment and Unemployment

Between quarter 4 2013 and quarter 4 2014 the strongest employment growth was observed in the construction sector (13%), followed by the financial and education sectors (5% each); over this period, a decline in employment was observed for agriculture.

Compared to five years previously (quarter 4 2009 to quarter 4 2014), employment in the construction sector was still 16% lower, as was employment in the financial sector (5%); however, the numbers employed in ICT and professional, scientific and technical activities were 12% and 13% higher.

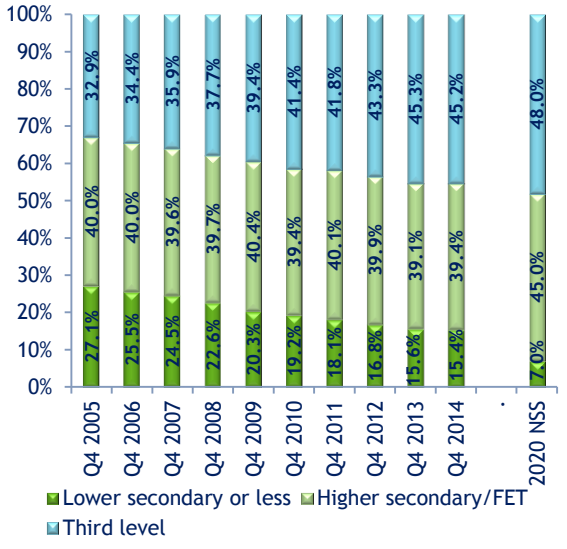
Despite the recent employment growth, the number of unemployed persons previously employed in construction remained above 30,000 in quarter 4 2014.

National Skills Strategy Progress

Figure A.1 presents the educational attainment of the labour force (15-64 years) and the targets set out in the National Skills Strategy (NSS). Recent increases in the share of third level graduates in the working age labour force stalled in 2014, at just over 45%. A marginal improvement has been observed at the lowest level of education, with the share of persons with lower secondary qualifications or less declining by 0.2 percentage points compared to 2013.

As a result, in quarter 4 2014, the gap to the 2020 target remained at less than three percentage points for the third level graduate cohort. However, the gap was over seven percentage points for the cohort with less than higher secondary education (15.4% compared to 7%).

Figure A.1 Labour Force (15-64 years) by Education and the NSS Target



Source: SLMRU (SOLAS) analysis of CSO data

Labour Market Transitions

Based on quarterly flows, it was estimated that over 1.1 million labour market transitions occurred in the Irish labour market in 2014: almost 230,000 between employment and unemployment, almost 275,000 between employment and inactivity and 360,000 between unemployment and inactivity. In addition, almost 250,000 transitions occurred within employment, either due to a change of employer or change of occupation. The distribution of transitions is presented in Table A.1. The share of flows from unemployment to employment increased from 11.8% in 2013 to 13.4% in 2014, illustrating an improvement in the labour market.

Table A.1 Average Quarterly Transitions by ILO Status, 2014 (Persons aged 15+)

	ILO end quarter		
ILO start quarter	Employed	Unemployed	Inactive
Employed	97.0%	1.2%	1.7%
Unemployed	13.4%	68.1%	18.5%
Inactive	2.5%	3.0%	94.5%

Source: SLMRU (SOLAS) analysis of CSO data

Several occupations have been identified as the most frequent movers between all labour market states. These include care workers, sales assistants, general clerks, waiters, cleaners, catering assistants, construction and storage labourers.

Retirement - The highest retirement rates were observed for nurses, teachers, care workers and farmers.

Replacement - The highest replacement rates (exit rates to all forms of inactivity, including retirement) were observed for sales workers (sales assistants, sales executives and customer care), carers (care workers, child-minders), hospitality workers (waiters, catering assistants), farmers, hairdressers, clerks (general, receptionists, payroll), labourers (agricultural, construction, cleaning, packers), operatives (drivers, assemblers, plant and construction operatives), carpenters, gardeners, fitness instructors, IT technicians and educational assistants.

Turnover - Changes of employer were most frequent for sales staff (sales assistants, customer service, contact centre), hospitality workers (waiters, catering assistants, bar staff), labourers (construction, storage, agricultural), clerks (general admin, payroll, financial, receptionists), care workers (including child-care), construction workers (carpenters, plumbers, labourers), hairdressers and food operatives. Amongst professionals, turnover was highest for accountants, doctors, teachers, IT programmers and IT technicians.

Vacancies

In 2014, the volume of vacancies advertised through the Department of Social Protection (DSP) Jobs Ireland databank and IrishJobs.ie increased. Vacancies advertised through IrishJobs.ie were mostly concentrated in professional and associate professional occupations (e.g. IT and engineering professionals, sales, business and finance associate professionals). Vacancies advertised through DSP Jobs Ireland were primarily concentrated in elementary, personal services and skilled trades occupations (e.g. kitchen and catering assistants, security guards, care workers, chefs, butchers and electricians).

The most recent SLMRU Recruitment Agency Survey points to an increase in the number of mentions of difficult-to-fill (DTF) vacancies. Three quarters of all DTF mentions were for professional occupations (mostly IT programmers, but also for engineers, accountants, doctors etc.); mentions for multilingual sales, customer care and technician posts also frequently occurred.

Sourcing of Skills from Outside the European Economic Area (EEA)

During 2014, employers continued to source skills from outside the EEA. Approximately 4,100 new employment permits were issued in the first nine months, an increase of 34% on 2013 and 9% on 2010. The increase in 2013 was mostly due to an increase in the number of permits issued to IT workers, but also due to the reintroduction of medical employment permits.

The IT sector accounted for 43% of all new employment permits issued in 2014, with a further quarter issued to the healthcare sector. In terms of occupations, professionals accounted for 69% of all new permits issued, for positions including IT developers, doctors, nurses, engineers and business analysts.

Shortage[1]

As the recovery in the labour market gathered pace during 2014, shortages were observed in a greater number of occupations and sectors compared to recent years.

Science

Shortages have been identified in relation to the following roles:

- chemical and biological scientists and biochemists in the areas of pharma co-vigilance (drug safety and clinical trials), analytical development and product formulation
- cardiac technicians (production process)
- biotechnology technicians (computerised maintenance (preventive, corrective, predictive), SOPs/EWI and GMP engineering systems, cleanroom).

There is also an issue regarding the availability of persons willing to work as laboratory technicians, as most graduates at technician level (NFQ 6 and 7) stay in education to progress to higher qualifications, while holders of NFQ level 8 qualifications and above seek more challenging roles than those available at technician level.

Engineering

At professional level shortages of the following skills have been identified:

- production and process engineering - process automation and system control (computer numerical control (CNC), computer aided design (CAD), computer aided manufacturing (CAM)), production planning and supply chain management and integration (for medical devices, biotechnology and pharmaceuticals)
- product development and design engineering (for medical devices, biotechnology and pharmaceuticals)
- quality control, assurance and validation engineering (e.g. computer validation systems, regulatory compliance)
- electrical engineering (e.g. electrical safety testing for the medical devices sector)
- electronic engineering
- chemical engineering - specialised roles in the biotech/pharmaceutical industry
- mechanical engineering - waste water and purification treatment, polymer and injection moulding.

At technician level, shortages have been identified in the area of electronic engineering (generic roles and Surface Mount Technology (SMT)/PTH Rework Operators (electronic printed circuit board assembly).

ICT

Shortages of ICT skills have been identified in the following areas:

- programming and software development: programming languages (Java, J2EE, JavaScript, C++, Summit, .net, C#, JSP, JQuery, AJAX, Python, PHP); mobile applications development (iOS and Android); web development (CSS, HTML)
- cloud computing: Software as a Service (SaaS) and virtualisation technologies
- web design (niche areas only): particularly web related applications focusing on enhancing users' online experience (UX) and supporting user interaction (UI)
- IT project management

[1] The term 'shortage' in this report refers only to a situation where the supply of skills or labour from within the Irish labour force is insufficient to meet demand (which does not imply a shortage at the European Economic Area (EEA) level).

- networking and infrastructure: IP (internet protocol) networking and specialist roles such as software quality assurance engineers
- IT business analysis: business intelligence and search engine optimisation
- databases, big data analytics and data warehousing: Oracle, SQL, MySQL, Hadoop and noSQL
- testing, quality assurance and troubleshooting
- technical support: user support with foreign language skills (German, French).

Business and Financial

Shortages of skills have been identified in the following areas:

- risk management
- compliance (ALM, BAEL, MiFID, IAFID, AIFMD)
- accounting (tax, audit, financial restructuring and management)
- business intelligence (e.g. Oracle OBIEE, ERP with SAP)
- data analytics, economics and statistics (big data, predictive analytics, data visualisation/infographics and quantitative modelling)
- financial advisors (banking/insurance)
- fund accounting/trustee roles and transfer agency client servicing roles (especially with AML skills)
- multilingual financial clerks (credit control and debt control).

Many financial companies are sourcing science, maths and computing graduates for roles in big data, quantitative modelling and business intelligence, as technological advances continue to blur the line between IT, finance, maths, science, engineering and other technical roles. This is only intensifying the issue of the availability of technical skills in Ireland and globally.

Construction professionals

Shortages of the following skills have been identified:

- construction and quantity surveyors
- BIM (building information modelling, CAD).

Construction craft

There is still a significant overhang of construction skills in the Irish labour market: in May 2015, there were over 2,000 bricklayers, 1,500 plumbers, 4,000 carpenters, 2,000 plasterers and 2,700 painters/decorators seeking employment through the Public Employment Service (PES). It should be noted, however, that the majority of job seekers in each of these occupations had a Leaving Certificate or lower level of education. As a result, the availability of qualified tradespersons may become an issue as the recovery in the labour market continues. Indeed, despite the excess supply of most construction skills at present, shortages of steel erectors/fixers has been identified.

Other craft

Shortages of TIG/MIG welders continue to exist. The demand for welding skills is expected to be driven by the projected strong performance of high tech manufacturing, utilities and construction.

The demand for tool making skills has been increasing, owing mainly to the strong performance of the high tech manufacturing sector. In response to the growing demand, a new course was introduced by the Sligo,

Mayo, Leitrim Education and Training Board (ETB) in 2014 (16 enrolments). This was in addition to 20 awards made through FET courses in 2014 (an increase from 10 in 2013) and an increase in apprentice intake. Nonetheless, shortages of tradespersons with expertise in making highly complex precision tools are expected to continue in the short run.

Attracting and retaining skilled butchers/de-boners remains a challenge for the meat industry in Ireland. This issue is likely to be exacerbated during the recovery, due to the greater availability of job opportunities across other sectors of the economy.

Arts, Sport and Tourism

The demand for hospitality, sports and leisure services has been increasing with the recovery of the economy. While the supply is sufficient to meet the demand for lower skilled hospitality roles (waiters/bar staff and catering assistants), a shortage of qualified chefs has been identified.

Healthcare

Shortages continue to persist for the following occupations:

- medical practitioners (especially locum and non-consultant hospital doctors, registrars and medical specialists (e.g. general and emergency medicine, anaesthetists, paediatricians, consultant radiologists))
- nurses - advanced nursing practitioners (e.g. intensive care, operation theatre), registered nurses (e.g. general nurse, cardiovascular care, children's care; intellectual disability care, mental health care) and clinical nurses
- radiographers (clinical specialists; MRI and CT radiographers)
- niche area specialists (radiation therapists, audiologists, orthoptists, prosthetists, orthotists)
- health service managers.

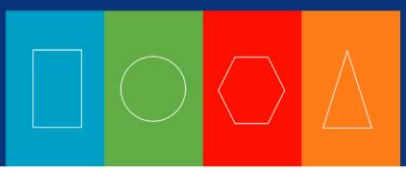
Transport

A shortage of skills relevant to supply chain management has been identified, including inventory control/planning, order receivables and management, ERP skills, supply chain analysis, e-Sourcing solutions, SAP, SharePoint Supplier, Indirect Purchasing, freight forwarding and customs control. Persons holding professional qualifications (e.g. APICS, IIPMM (Irish Institute of Purchasing and Materials Management)) are particulary in demand. In addition to technical skills, a proficiency in foreign languages (EU languages in particular) is frequently required for supply chain roles (spanning administrative to managerial).

A shortage of drivers has also been identified. While there is a large number of job ready drivers seeking employment, some recruitment difficulties are arising due to issues such as age related insurance costs and the lack of experience in relation to new entrants. Difficulty in sourcing has been identified in relation to fork lift and special vehicle driving skills.

Social & Care

Given a large level of movement between employment, unemployment and economic inactivity, as well as within and between occupations, it is recognised that some employers may be experiencing difficulty in attracting and retaining qualified care and childcare workers.



Sales & Customer Service

In the context of international trade, issues with availability of the following skills relevant to sales and customer care have been identified:

- technical and product/service knowledge (e.g. pharmaceutical, medical devices, Software B2B, SaaS products, Salesforce.com)
- communication skills, cultural awareness and foreign languages.

In addition, a shortage of marketing experts required to lead product strategy development and management has also been identified.

Operatives

A shortage of CNC (computer numeric control) operatives has been identified, particularly in high technology manufacturing (e.g. medical devices and pharmaceuticals) and engineering. Many unemployed operatives have been trained in traditional operative skills and are deficient in technical and digital competencies required for high technology automated manufacturing.

Introduction

The National Skills Bulletin 2015 is the eleventh in an annual series of reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS on behalf of the Expert Group on Future Skills Needs (EGFSN). It presents an overview of the Irish labour market at occupational level.

The Bulletin aims to assist policy formulation in the areas of employment, education/training, immigration (particularly the sourcing of skills which are in short supply in the Irish and EU labour market from the EEA), as well as informing career guidance advisors, students and other individuals making career and educational choices.

The analysis presented in the Bulletin is based primarily on the data held in the SLMRU National Skills Database, although it also draws on information from the EGFSN's sectoral studies and other relevant research. The data is classified using the Standard Occupational Classification (SOC 2010). In cases where the number of persons employed in an occupation is too small to allow for meaningful statistical analysis, two or more occupations were merged to form an occupational group. The analysis covers over 130 occupations.

Each occupation is examined in terms of the following:

- employment level and recent employment trends; the analysis is based on the data from the Central Statistics Office (CSO) Quarterly National Household Survey (QNHS); when interpreting the employment data, the following should be borne in mind:
  - the employment level for each occupation is expressed as an annual average (i.e. the average of four quarters in a calendar year)
  - the trend analysis covers the five-year period 2009-2014, unless otherwise specified; growth over this period is calculated in terms of the annualised growth rate, sometimes referred to as the 'average annual growth rate' for ease of reading (although the two terms are not technically identical)
  - unless otherwise stated, annual changes on a year-on-year basis cover the period quarter 4 2013 - quarter 4 2014[2]
- an employment profile (i.e. age, gender, nationality, employment type and education level); the analysis is based on the QNHS data for quarter 4 2014
- expected medium term employment growth (Occupational Employment Projections 2020, SOLAS, February 2014)
- job ready job seekers registered with the Public Employment Service (PES) (Department of Social Protection (DSP)); these are persons seeking employment who were previously employed in a specific occupation and are self-declared as job ready
- unemployment rate; the analysis is based on the QNHS data for quarter 4 2014
- vacancies advertised through JobsIreland (the Department of Social Protection

[2] By examining the change in the level of employment one can assess the net result of total job creation and job losses. If an increase in the employment level was observed between two time points, it implies that more jobs were created than lost over that period – this is referred to as 'net job creation'; conversely, if a decrease in the employment level was observed, it implies that more jobs were lost than created.

(DSP) vacancy portal (i.e. the public employment service) and IrishJobs.ie (a private on-line vacancy advertising service)

- the level of difficulty in filling vacancies; the analysis is based on data from the SLMRU Recruitment Agency Survey conducted in April 2015
- the number of new employment permits issued to non-EEA nationals by the Department of Jobs, Enterprise and Innovation (DJEI)
- recent announcements of job creation and job losses in the media and job creation expected to arise from foreign direct investment supported by the Industrial Development Agency (IDA)
- replacement demand and turnover based on the analysis of labour market transitions (QNHS)
- the current balance between demand and supply[3]; the analysis is based on all of the above data and other available information; the occupations for which shortages[4] have been identified are highlighted and comments are made regarding the nature of the shortage (e.g. a skill shortage or labour shortage, niche area); while the aim is to identify occupations for which shortages exist, further research is necessary to identify the cause and magnitude of these shortages and to recommend the appropriate (if any) policy response.

[3] Forecasts of shortages are not provided, unless implicit in the available data.

[4] The term 'shortage' in this report refers only to the situation where the supply of skills or labour from within the Irish labour force is insufficient to meet demand. It is possible that a sufficient supply of skills or labour for an occupation in question may be found within the European Economic Area (EEA).

The National Skills Bulletin 2015 is structured as follows:

- Section 1: sets the Irish labour market within the context of recent trends and developments in the macroeconomy and presents an overview of the economic and employment outlook for Ireland
- Section 2: examines trends in key labour market indicators (employment, unemployment and the labour force) and the composition of national employment (gender, age, nationality, education etc.)
- Section 3: examines employment trends in economic sectors (the final quarter of 2014 is compared with the same period in the previous year and five years previously)
- Section 4: analyses employment trends by broad occupational group (i.e. employment growth patterns and the composition of employment)
- Section 5: examines recent trends in Irish unemployment (levels and rates); the characteristics of the unemployed population are examined (i.e. gender, age, educational attainment, nationality, occupation and sector)
- Section 6: presents research on labour market transitions between unemployment, employment and economic inactivity
- Section 7: examines the inflow of labour from non-EEA countries through the various employment permit schemes
- Section 8: provides an overview of trends and the types of vacancies advertised through DSP Jobs Ireland and IrishJobs.ie; it also reports the findings of the April 2015 SLMRU Recruitment Agency Survey on difficult-to fill-vacancies
- Section 9: presents labour market indicators for over 130 occupations grouped into 17 occupational groups.

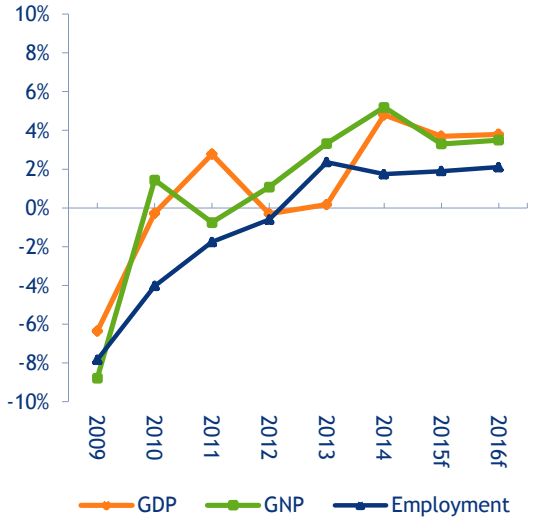
Section 1 Macroeconomic Context

Economic growth

Between 2013 and 2014, the Irish economy grew by 4.8% in GDP terms and by 5.2% in GNP terms. Over this period, employment also increased, by 1.7% (Figure 1.1).

Economic growth is expected to continue over the medium term, with GDP growth projections ranging from 3.5% to 4.4% in 2015 and 3.0% to 3.7% in 2016, depending on the commentator.[5] GNP is also expected to expand, with projected growth of 3.3% in 2015 and 3.5% in 2016.[6] Employment is expected to grow by 1.9% in 2015 and by a further 2.1% in 2016.[7]

Figure 1.1 Economic Growth and Employment, Annual Change, 2009-2016



Source: SLMRU (SOLAS) analysis of CSO data; Central Bank of Ireland, Quarterly Bulletin Q1 2015.

[5] Central Bank of Ireland, Quarterly Bulletin Q1 2015; Department of Finance, Monthly Economic Bulletin, April 2015 (includes forecasts from the ESRI, IMF and EU Commission).
[6] Central Bank of Ireland, Quarterly Bulletin Q1 2015.
[7] *Ibid.*

Growth Components

Ireland's recent economic recovery has been export and investment led, with exports growing by almost 13% between 2013 and 2014 and gross fixed capital formation by 12%.

Growth was also supported by a revival in domestic demand: seasonally adjusted quarterly personal consumption increased continuously throughout 2014, amounting to a 1.2% increase on 2013. During 2014, retail sales value and volume indices increased in each month on a year-on-year basis. At over 90,000, the number of new private cars licenced in 2014 was 30% higher than a year previously, with growth continuing in the first quarter of 2015.[8]

Fiscal Position

Fiscal consolidation has been on target, with the government deficit reduced to less than 6% of GDP in 2013 and further reductions achieved during 2014. In quarter 4 2014, the fiscal deficit was 3.1% of GDP. The debt to GDP ratio also fell during 2014, with the debt measuring 109.7% of GDP in quarter 4 2014, compared to 123.2% one year previously.[9]

Enterprise Sector

In 2014, Ireland continued to be an attractive location for Foreign Direct Investment (FDI). Between 2013 and 2014, total employment in foreign owned firms increased by just over 6,500 (3.8%) to 179,384, with full time jobs accounting for all of the increase.

The indigenous sector also recorded a strong performance in 2014. Between 2013 and 2014,

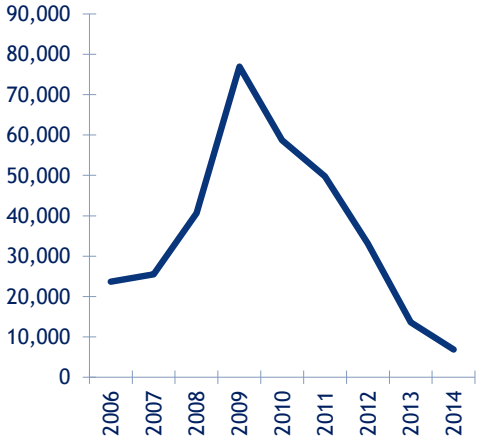
[8] CSO, Vehicles Licensed for the First Time, March 2015.
[9] CSO, Government Finance Statistics, Quarter 4 2014.

total employment in Irish-owned companies increased to 183,031 – an increase of 9,089 (5.2%). Full time employment increased by 7,919, while part time employment increased by 1,170.[10]

Redundancies

The number of redundancies registered annually with the DSP continued to decline. The total number of redundancies in 2014 was 6,800, which was more than ten times less than the number registered in 2009 and less than half that registered in 2013 (Figure 1.2).

Figure 1.2 Redundancies



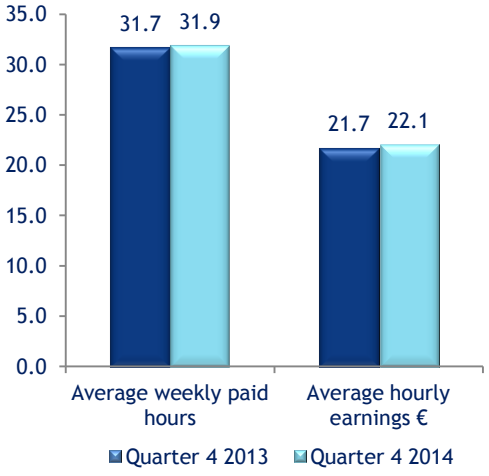
Source: DSP

Hours Worked and Earnings

Average weekly paid hours and average hourly earnings are presented in Figure 1.3. In quarter 4 2014, the number of average weekly paid hours was 31.9, which was 0.2 hours higher than one year previously and close to the level recorded in quarter 4 2009 (32.0).

In quarter 4 2014, average hourly earnings were €22.10, which was 40 cent higher than in quarter 4 2012, although still 31 cent below the levels recorded in quarter 4 2009.

Figure 1.3 Average Weekly Paid Hours & Average Hourly Earnings



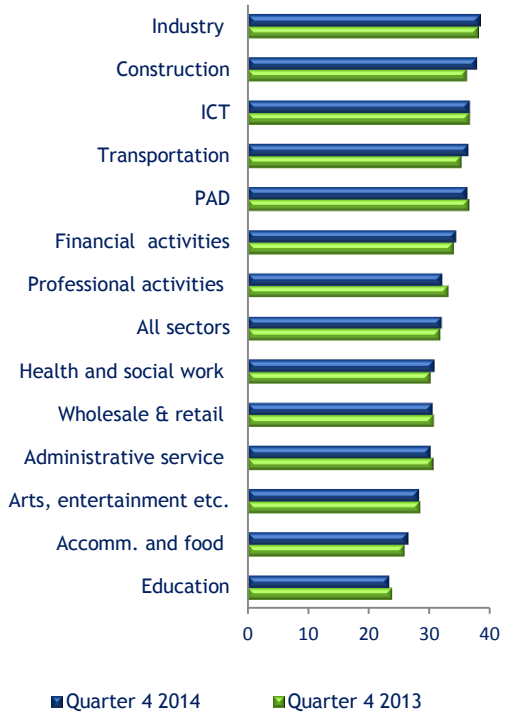
Source: CSO, Earnings, Hours and Employment Costs Survey

Figure 1.4 presents average weekly paid hours by broad economic sector. In quarter 4 2014, the average number of weekly paid hours worked was the highest in industry (38.3) and the lowest in education (23.3).

Between quarter 4 2013 and quarter 4 2014, the average number of weekly paid hours declined in professional services, education, administration, PAD, arts and retail, while it increased in all other sectors, except ICT where the hours remained unchanged. The greatest increase in average weekly paid hours was observed in construction (1.7 hours).

[10] DJEI, *Annual Employment Survey 2014*

Figure 1.4 Average Weekly Paid Hours by Sector (€)



Source: CSO, Earnings, Hours and Employment Costs Survey

Figure 1.5 presents average hourly earnings by sector. In quarter 4 2014, the highest average hourly earnings were recorded in the education sector (€34.40), with the lowest in the accommodation and food sector (€12.40).

Between quarter 4 2013 and quarter 4 2014, average hourly earnings increased in all sectors, except construction, transport, health, PAD and professional services. The largest increase was in the financial and ICT sectors (€2.40 and €1.20 respectively).

Figure 1.5 Average Hourly Earnings by Sector

Source: CSO, Earnings, Hours and Employment Costs Survey

Competitiveness

In 2014, Ireland ranked among the top 20 economies, across a variety of competitiveness measures.[11] Despite recent improvements in competitiveness, challenges remain in the following areas:

- cost competitiveness (labour, energy and property costs)
- macroeconomic issues (high public debt, infrastructure deficits)
- skills shortages
- enterprise development (trade, investment, productivity)
- access to finance
- corporate governance.[12]

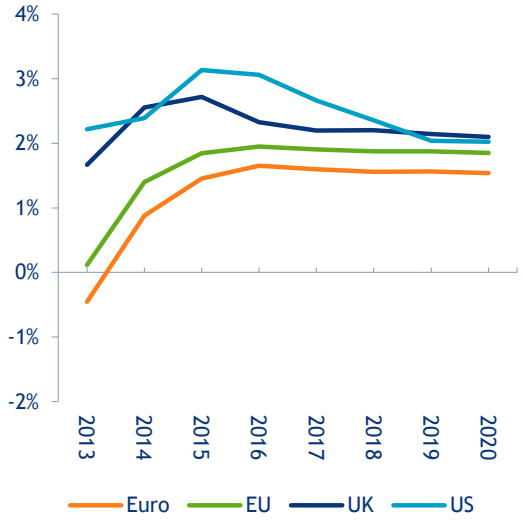
[11] NCC, Ireland's Competitiveness Scorecard 2014, July 2014 (includes the UN Human Development Index, the Transparency International Corruption Perception Index, IMD World Competitiveness, World Bank Doing Business, the FDI Regulatory Restrictiveness Index, the Reputation Institute County Index).

[12] NCC, Ireland's Competitiveness Challenge 2014, December 2014.

Global Outlook

The IMF projects growth of 3.1% and 2.7% for the US and UK respectively in 2015 (Figure 1.6). Such growth should have a positive impact on Ireland, as these two markets account for a large share of Irish exports. However, the EU and the Euro area are projected to grow slower, at 1.8% and 1.5% respectively. The forecast for 2016 is similar, with growth projections of 3.1% and 2.3% for the US and UK and 1.9% and 1.7% for the EU and the Euro area respectively. Growth rates are expected to converge beyond 2017.[13]

Figure 1.6 GDP at Constant Prices



Source: IMF World Economic Outlook, April 2015

The seventh round of negotiations held by the EU and US in October 2014 made further progress in putting in place the Transatlantic Trade and Investment Partnership (TTIP). Given that the US market accounts for a fifth of Irish exports, the impact of such an agreement will be significant (in terms of output, exports and employment). In terms of sectors, most gains are expected to be concentrated in pharmaceuticals, chemicals, electrical and other machinery, agri-food and insurance activities. [14]

Sectoral Outlook for Ireland

Ireland's economic recovery is expected to positively impact on medium-term output and employment growth in most sectors of the economy. Stronger than average employment growth is expected for construction (with growth already spilling over from commercial to residential building), STEM activities (with the IT sector accounting for the strongest growth within STEM) and professional services (legal, business and financial).

Recovery in domestic demand is expected to drive output and employment growth in the retail sector. The transport and accommodation/food sectors are expected to expand in line with overall economic growth.[15]

Manufacturing output is expected to expand (particularly in medical devices and pharmaceuticals) in response to the strong anticipated growth in the main trading partner economies, primarily the US and UK (growth in the EU is expected to continue to stagger in the short term). However, export growth is not expected to result in a proportionate increase in employment due to further automation and leaner manufacturing processes.

Slower than average employment growth is also expected in public administration and publicly funded healthcare and education services. Although economic recovery has resulted in an improvement in the public

[13] IMF, World Economic Outlook 2015, April 2015.

[14] DJEI, TTIP Impact in Ireland, February 2015.

[15] SOLAS, Occupational Employment Projections 2020, January 2014.

finances, a tight fiscal policy is likely to remain in place in the short to medium term.

Despite the removal of milk quotas by the EU in April 2015, the number of farmers is projected to decline by 2020. While the removal of quotas will result in an increased dairy herd and milk output, advances in business processes, technology and yields are expected to hinder employment growth of the agricultural sector overall.[16] [17]

[16] Teagasc, *The End of the Quota Era*, T. Donnellan, T. Hennessy and F. Thorne, April 2015.

[17] For instance, even during the milk quota period Ireland increased its milk output per cow by almost 50% (from 3,500l in 1984 to 5,200l in 2014); during this period the dairy herd declined from 1.52 million to 1.13 million (by 26%). Source: (CSO).

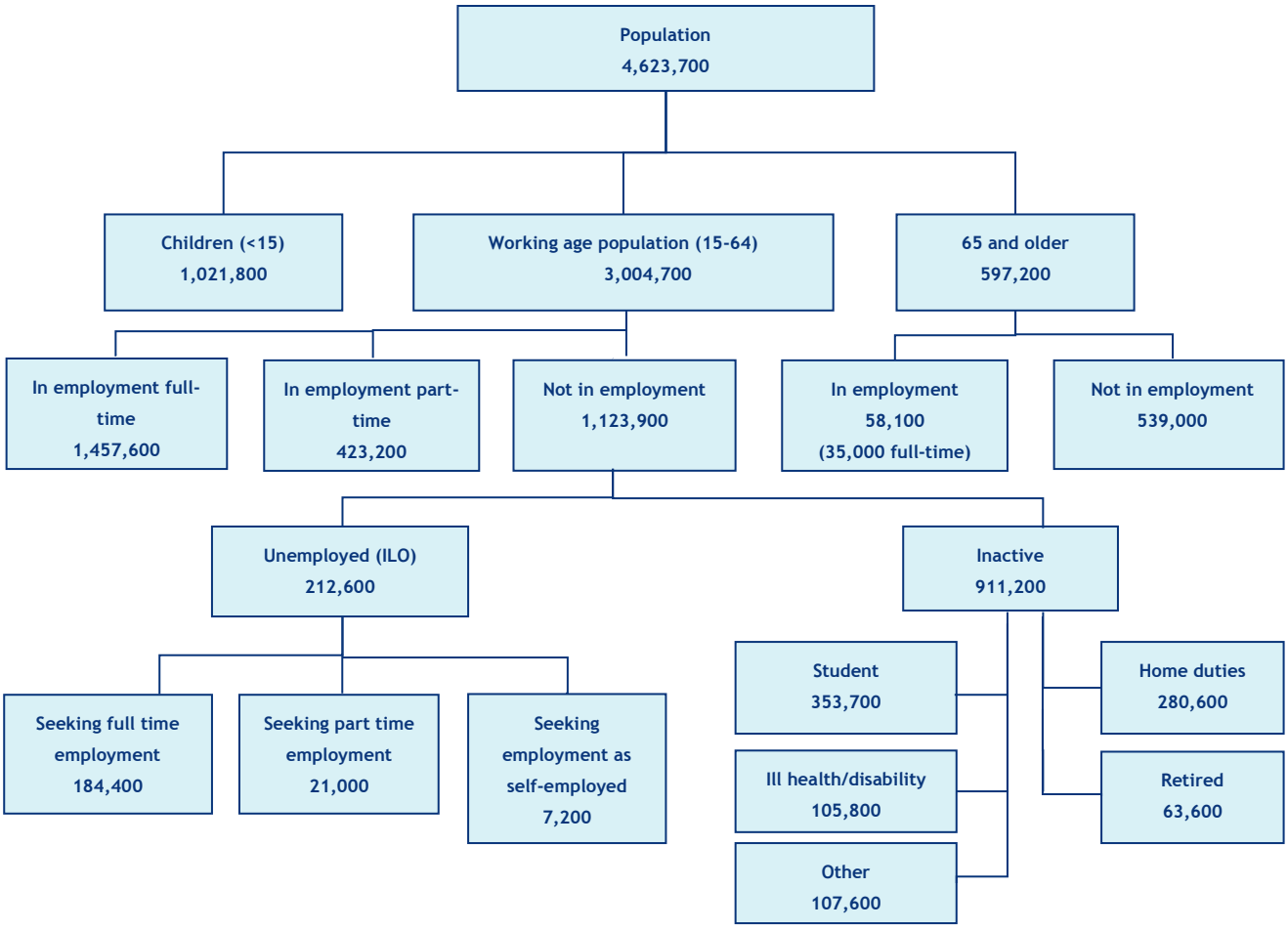
Section 2 Labour Market Overview

2.1 Population: Labour Market Status

In quarter 4 2014, there were an estimated 4.62 million persons living in Ireland, almost 13,000 more than in quarter 4 2013.

Figure 2.1 presents the labour market status of persons living in Ireland. In quarter 4 2014, the working age population (persons aged 15-64) was 3 million, which was almost 15,000 less compared to quarter 4 2013. Meanwhile, the number of children (persons younger than 15) was 1.02 million (an increase of 8,000), while the number of persons aged 65 and over was almost 600,000 (an increase of 19,000). The cohort of persons aged 65 and over was the fastest growing, in both absolute and relative terms.

Figure 2.1 Population by Labour Market Status (ILO defined), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Note: Discrepancies are due to rounding.

In quarter 4 2014, the total age dependency ratio[18] (youth and older age) was 53.9%, which was 1.2 percentage points higher than in quarter 4 2013. Over this period, the youth age dependency ratio increased by 0.4 percentage points to 34.0%, while the older age dependency ratio increased by 0.8 percentage points to 19.9%.

In quarter 4 2014, 1.88 million persons of working age were in employment, which was 30,000 more than in quarter 4 2013. Approximately 1.12 million persons of working age were not in employment, which was 41,000 less than one year previously. Of the working age population not in employment, just over 212,600 were unemployed and 911,200 were economically inactive.[19] Compared to quarter 4 2013, the number of unemployed and economically inactive decreased by 40,000 and 1,200 respectively.

Within the economically inactive group, there were:

- almost 354,000 students – broadly in line with quarter 4 2013
- approximately 280,000 persons engaged in home duties – broadly in line with quarter 4 2013
- almost 64,000 retired persons – almost 5,000 more than in quarter 4 2013
- almost 106,000 persons inactive due to ill health or disability – broadly in line with quarter 4 2013
- 107,600 persons were inactive for other reasons (of which 13,500 were discouraged workers – almost 5,000 less than in quarter 4 2013).

[18] The age dependency ratio compares the non-working age population to those of working age.
[19] Economically inactive are defined as persons who are not in employment or unemployed (actively seeking employment).

In quarter 4 2014, the inactivity rate of the working age population[20] was 30.3% (an increase of 0.3 percentage points compared to quarter 4 2013), while the economic dependency ratio[21] was 1.15 (an increase of 0.02).

2.2 Labour Market and Related Indicators

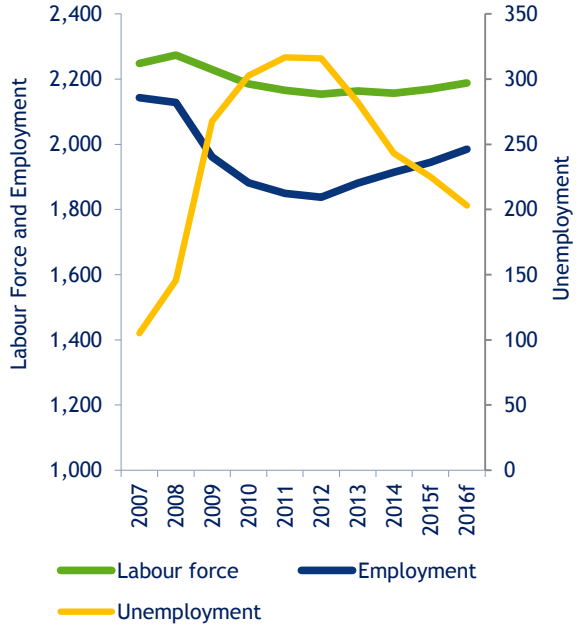
In 2014, the number of persons in the labour force was 2.16 million (annual average), which was a decrease of 6,500 (0.3%) compared to 2013. Over this period, the participation rate decreased by 0.2 percentage points to 60.0% (Table 2.1). Despite this decrease, the labour force is expected to increase in 2015 and 2016, to reach 2.19 million by 2016 (Figure 2.2).

In 2014, there were 1.91 million persons in employment, which was 33,000 higher than the average for 2013. Between 2013 and 2014, the employment rate increased by 1.2 percentage points to 61.7% (Table 2.1). Further increases in the employment level are projected over the short to medium term, with almost 2 million persons in employment by 2016 (Figure 2.2).

In 2014, 243,000 persons were unemployed, which was almost 40,000 or 14% less than in 2013. Unemployment declined to 214,000 in quarter 4 2014. This decline is expected to continue, with unemployment expected to average just over 200,000 by 2016 (Figure 2.2).

[20] The inactivity rate is the proportion of the population that is not in the labour force. The inactivity rate for the 15-64 age group (headline inactivity rate), is lower than the general inactivity rate.
[21] The economic dependency ratio compares the total population not in the labour force to the number of those who are in the labour force.

Figure 2.2 Labour Force, Employment & Unemployment (000s), Annual Averages



Source: Analysis by SLMRU (SOLAS) based on CSO data; Central Bank of Ireland, Quarterly Bulletin (April 2015)

In 2014, the unemployment rate was 11.3% (annual average), which was 1.8 percentage points below the rate recorded in 2013 (Table 2.1). The seasonally adjusted unemployment rate decreased in each quarter of 2014, falling to 10.4% by quarter 4. The broad unemployment measure, which combines unemployed and part-time underemployed declined from 18% in quarter 4 2013 to 15% in quarter 4 2014.

In quarter 4 2014, the long term unemployed accounted for 58% of all unemployed persons (a decrease of three percentage points compared to quarter 4 2013). The long term unemployment rate was 5.7%, 1.5 percentage points lower than in quarter 4 3013. Males accounted for 70% of all long term unemployed persons. The male long term unemployment rate was by 3.4 percentage points higher the female rate (7.3% compared to 3.9%).

Table 2.1 Participation, Employment and Unemployment Rates (Annual Averages)

	Participation rate (%) (15+)	Employment rate (%) (15-64)	Unemployment rate (%) (15+)
2009	62.0	61.9	12.0
2010	60.7	59.7	13.9
2011	60.2	58.9	14.6
2012	59.9	59.1	14.4
2013	60.2	60.5	13.1
2014	60.0	61.7	11.3

Source: CSO

Table 2.2 presents migration estimates for the period 2009 to 2014. In 2014, net migration was negative, with outward migration exceeding inward migration by 21,400. Irish nationals accounted for half of all emigrants and just under a fifth of immigrants. In contrast, non-EU nationals accounted for 42% of immigrants and 18% of emigrants.

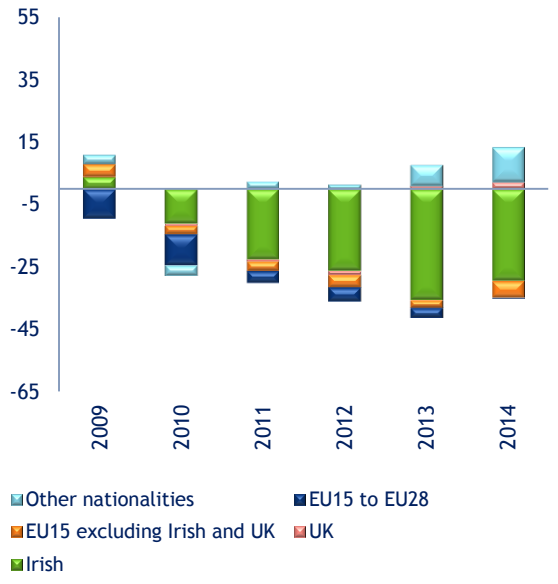
Table 2.2 Migration Estimates (000s)

Year	Inward	Outward	Net migration
2009	73.7	72.0	1.7
2010	41.8	69.2	-27.4
2011	53.3	80.6	-27.3
2012	52.7	87.1	-34.4
2013	55.9	89.0	-33.1
2014	60.6	81.9	-21.4

Source: CSO

Figure 2.3 presents net migration estimates by nationality. In 2014, net migration was positive for non-EU and UK nationals, while it was negative for all other EU nationals. Net outward migration for Irish nationals declined by 6,000 compared to 2013 (from 35,200 to 29,200) – the first decline since 2009.

Figure 2.3 Net Migration Estimates 2009-2014 by Nationality (000s)

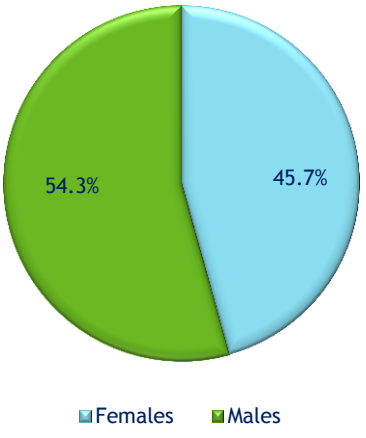


Source: SLMRU (SOLAS) analysis of CSO data

2.3 Employment Composition

In quarter 4 2014, there were 1.94 million persons in employment (aged 15+). Of these, 1.05 million persons (54.3%) were male (Figure 2.4). The gender distribution of employment was broadly in line with that observed in quarter 4 2013.

Figure 2.4 Employment by Gender, Quarter 4 2014



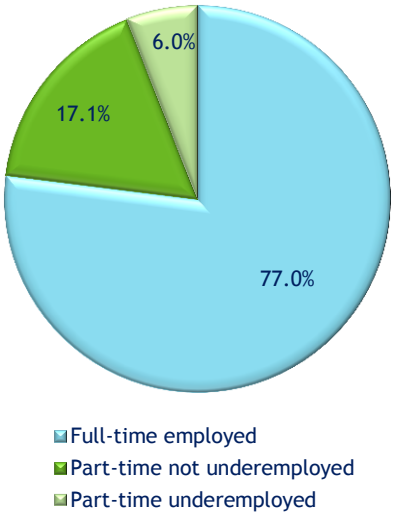
Source: SLMRU (SOLAS) analysis of CSO data

The distribution of employment between full-time and part-time is presented in Figure 2.5. In quarter 4 2014, full-time employment accounted for 77% of employment. Of those working part-time, one quarter was underemployed.

Compared to quarter 4 2013, the share of full-time employment increased by almost one percentage point, while the share of part-time employment declined (due to the decline in the share of part-time underemployed).

Between quarter 4 2013 and quarter 4 2014, the number of persons in full-time and part-time employment who were not underemployed increased (by 40,000 and 17,000 respectively), while the number of persons in part-time employment who were underemployed decreased (by 28,000).

Figure 2.5 Employment by Employment Type, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

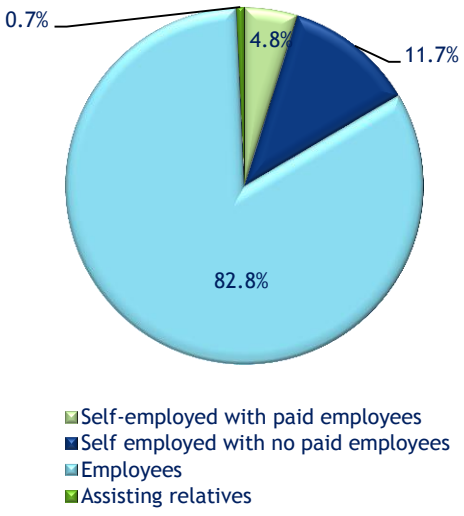
Figure 2.6 presents the distribution of employment by employment status. In quarter 4 2014, 83% of persons in employment were

employees, of which 2.4% were employees on Government supported employment schemes. Self-employment accounted for 17% of total employment, of which 70% were self-employed with no paid employees.

Between quarter 4 2013 and quarter 4 2014, the share of employees increased by half a percentage point, while the share of self-employed without paid employees decreased by 0.7 percentage points.

Employment growth observed between quarter 4 2013 and quarter 4 2014 was due to an increase in the number of employees and self-employed with employees, with employment increasing by 34,000 and 5,000 respectively. The number of persons who were self-employed without employees decreased.

Figure 2.6 Employment by Employment Status, Quarter 4 2014

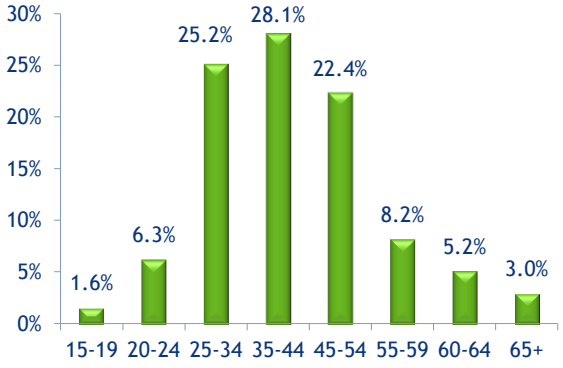


Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2014, just over three quarters of employment was concentrated in the 25-54 age category; those aged under 25 accounted for 7.9% and those aged 55+ for 16.4% (Figure 2.7).

Between quarter 4 2013 and quarter 4 2014, the age distribution shifted towards the older age cohorts, with the share aged under 35 declining and the share aged 35 and over increasing.

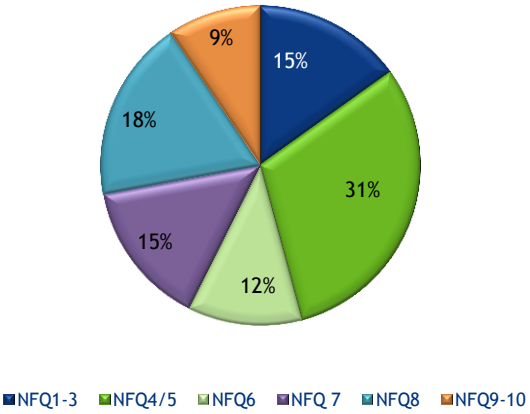
Figure 2.7 Employment by Age, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 2.8 presents the education profile of employment in Ireland. In quarter 4 2014, 15% of persons in employment had at most qualifications at NFQ levels 1-3; 31% had qualifications at NFQ levels 4-5 (e.g. Leaving Certificate); 12% had qualifications at NFQ level 6, while the rest had the equivalent of ordinary degree level or higher (NFQ levels 7+).

Figure 2.8 Employment by Education (NFQ), Quarter 4 2014

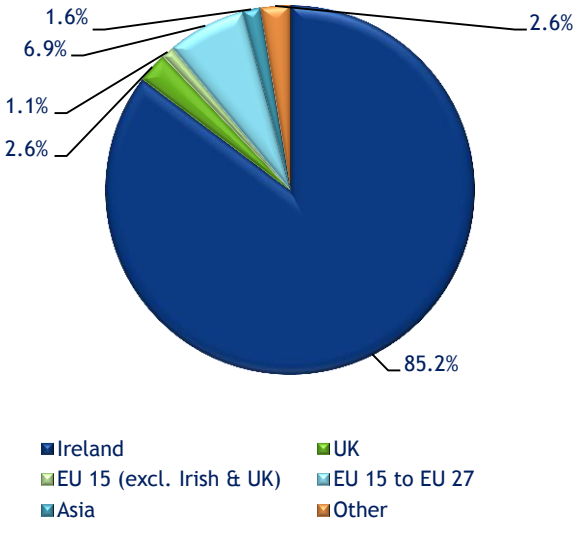


Source: SLMRU (SOLAS) analysis of CSO data

Employment by nationality is presented in Figure 2.9. In quarter 4 2014, non-Irish nationals accounted for 286,000 persons or 14.8% of total employment. EU nationals accounted for over 70% of all non-Irish nationals.

Between quarter 4 2013 and quarter 4 2014, the distribution of employment by nationality remained broadly unchanged.

Figure 2.9 Employment by Nationality, Quarter 4 2014

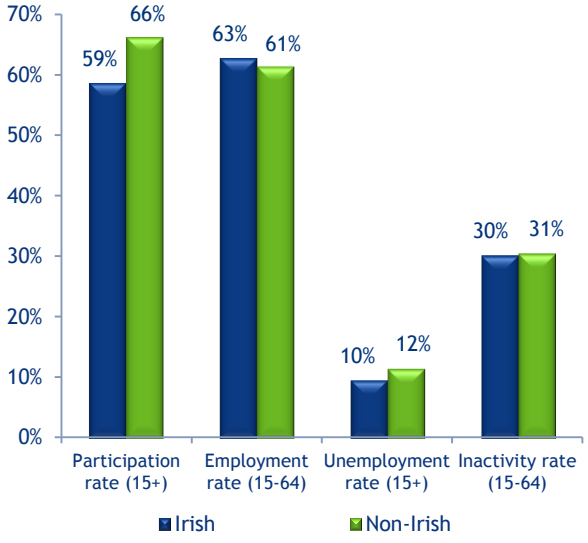


Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2014, non-Irish nationals had higher participation, inactivity and unemployment rates, and a lower employment rate than Irish nationals (Figure 2.10).

Between quarter 4 2013 and quarter 4 2014, the unemployment rate of both Irish and non-Irish nationals declined. Over this period, the participation rate of non-Irish nationals declined, while the inactivity rate increased. The employment rate of Irish nationals increased, while it decreased for non-Irish nationals.

Figure 2.10 Participation, Employment, Unemployment and Inactivity Rates by Nationality, Quarter 4 2014



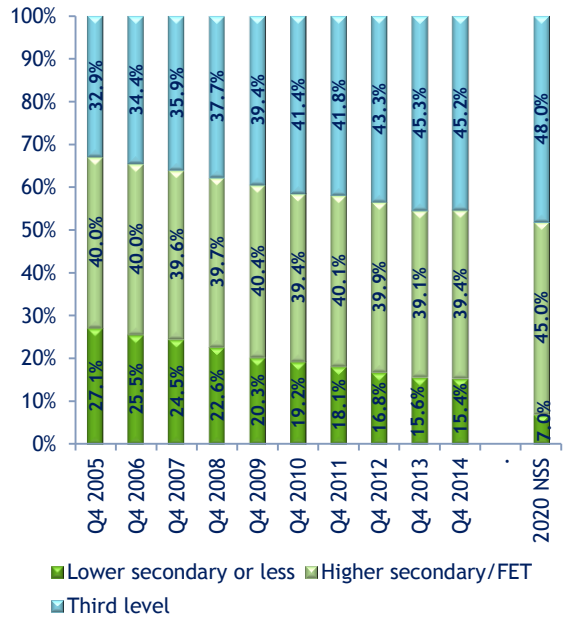
Source: SLMRU (SOLAS) analysis of CSO data

2.6 National Skills Strategy: Progress to Date

Figure 2.11 presents the educational attainment of the labour force (15-64 years) and the targets set out in the National Skills Strategy (NSS). Recent increases in the share of third level graduates in the working age labour force stalled in 2014, at just over 45%. A marginal improvement was observed at the lowest level of education, with the share of persons with lower secondary qualifications or less declining by 0.2 percentage points compared to 2013.

As a result, in quarter 4 2014, the gap to the 2020 target remained less than three percentage points for the third level graduate cohort. However, the gap was over seven percentage points for the cohort with less than higher secondary education (15.4% compared to 7%).

Figure 2.11 Labour Force (15-64 years) by Education and the NSS Target

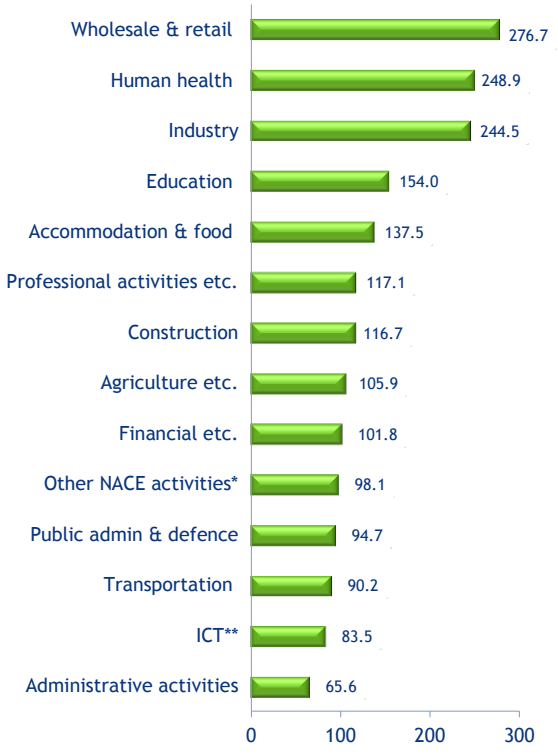


Source: SLMRU (SOLAS) analysis of CSO data

Section 3 Employment by Economic Sector

Figure 3.1 presents national employment by broad economic sector (NACE Rev 2 defined). In quarter 4 2014, with an employment level of 276,700, wholesale and retail was the largest sector, accounting for 14.3% of national employment. This was followed by healthcare (including social care) and industry (manufacturing, mining and utilities), each employing just under a quarter of a million persons, or 12.8% and 12.6% of national employment respectively.

Figure 3.1 Employment by Sector (000s), Quarter 4 2014



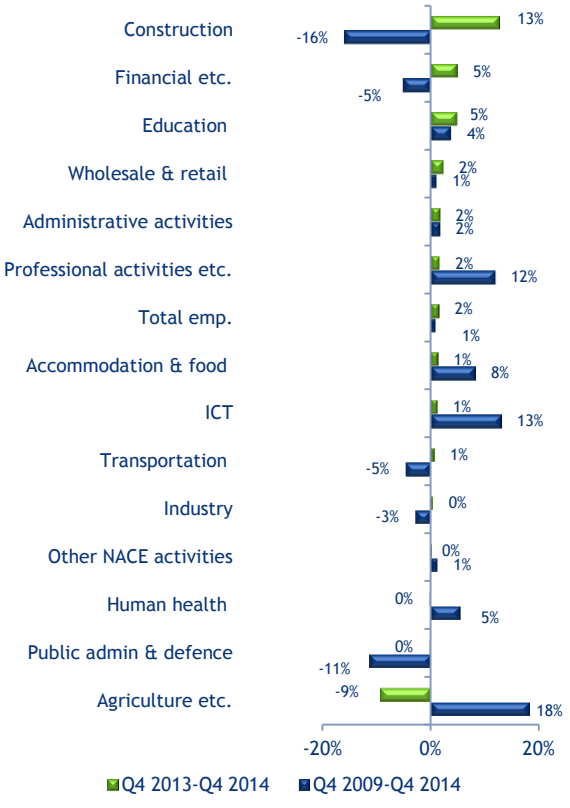
Source: SLMRU (SOLAS) analysis of CSO data

* Other NACE sectors include activities such as entertainment, repair of goods, a range of personal service activities, etc.

**The information and communication sector includes computer programming, telecommunications, information services, publishing and broadcasting; it does not include ICT equipment manufacturing or the wholesale of computers, computer peripheral equipment and software.

Between quarter 4 2013 and quarter 4 2014, employment decreased in agriculture, remained broadly unchanged in healthcare, industry and public administration and defence (PAD) (less than half a percentage change each), while it increased in all other sectors (Figure 3.2). Over this period, growth was the strongest in the construction sector, which accelerated compared to the same period one year previously.

Figure 3.2 Employment Growth by Sector



Source: SLMRU (SOLAS) analysis of CSO data

*Note: Estimates of employment in the agriculture, forestry and fishing sector are sensitive to sample changes over time and growth rates in this sector should be interpreted with caution.

Compared to employment levels recorded in quarter 4 2009, employment in construction was still 16% lower in quarter 4 2014, despite the strong growth recently observed. Lower

levels of employment compared to five years previously were also recorded for the PAD and financial sectors. The strongest growth over the five year period was recorded in agriculture (although the CSO warned about sampling issues for this sector), followed by ICT and professional, scientific and technical activities, as well as the accommodation and food sector (13%, 12% and 8% respectively).

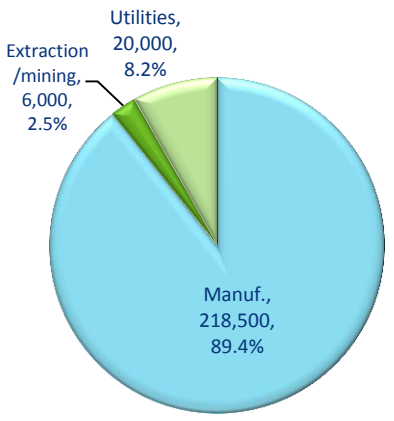
Industry

In quarter 4 2014, 244,500 persons were employed in the industrial sector. This is broadly in line with employment levels recorded in quarter 4 2013. Although the employment level remained almost unchanged between quarter 4 2013 and quarter 4 2014, the share of industry in national employment decreased from 12.8% to 12.6%.

Compared to five years previously, industrial employment was 7,000 or 2.8% lower. In quarter 4 2009, industrial employment accounted for 13.1% of national employment – half a percentage point more than in quarter 4 2014.

In quarter 4 2014, 89.4% of industrial employment was in manufacturing (218,500 persons), with utilities and extraction/mining accounting for 8.2% and 2.5% respectively (Figure 3.3). This was broadly in line with quarter 4 2013.

Figure 3.3 Industrial Employment by Sector, Quarter 4 2014

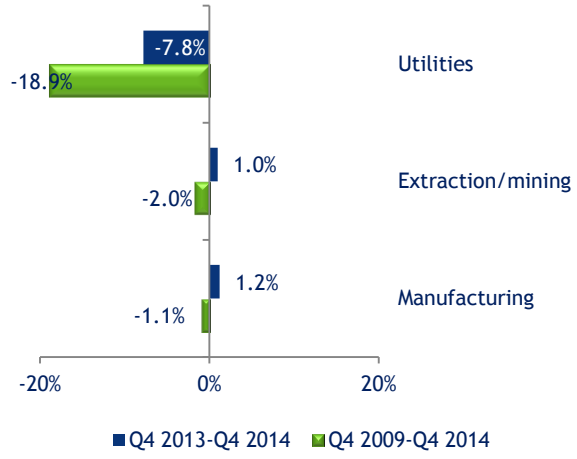


Source: SLMRU (SOLAS) analysis of CSO data

Figure 3.4 presents employment growth in industrial sub-sectors. Between quarter 4 2013 and quarter 4 2014, employment in utilities decreased by 1,700 or 7.8%. Within this sub-sector, employment increased in water supply, while it decreased in electricity, gas, steam and air conditioning and waste collection activities. Over the same period, employment in extraction/mining and manufacturing increased by 1% and 1.2% respectively.

In quarter 4 2014, employment in each of the industry sectors remained below levels recorded in quarter 4 2009. While employment in manufacturing and mining remained 1% and 2% below the quarter 4 2009 levels respectively, employment in utilities was almost a fifth lower.

Figure 3.4 Industrial Employment Growth by Sub-Sector



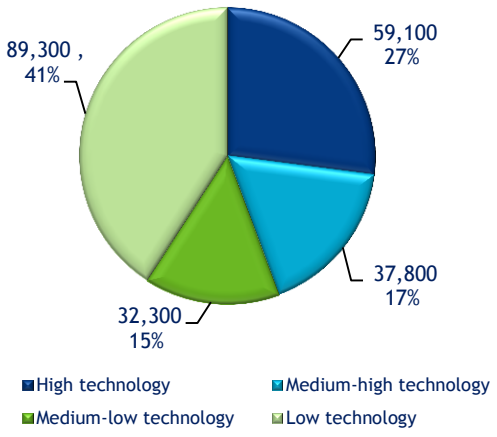
Source: SLMRU (SOLAS) analysis of CSO data

Figure 3.5 presents manufacturing employment by technological intensity. In quarter 4 2014, low technology manufacturing accounted for 41% of manufacturing employment, followed by high technology (27%), medium-high (17%) and medium-low (15%).[22] Compared to quarter 4 2009, the share of employment in high technology manufacturing increased by 2.6 percentage points, while it decreased in medium-low technology manufacturing by 3.1 percentage points.

Figure 3.6 presents employment growth in manufacturing employment by technological intensity. Between quarter 4 2013 and quarter 4 2014, employment increased in the medium-low and high technology manufacturing sectors (by 8.3% and 3.9% respectively), it decreased in medium-high (by 7.2%) and remained broadly unchanged in low technology manufacturing.

[22] High technology: pharmaceuticals, computers, etc. (NACE 21,26); Medium-high: chemicals, electrical equipment, machinery, medical instruments, etc. (NACE 20,27-30); Medium-low: petroleum products, rubber and plastic, other non-metallic mineral products, fabricated metal products etc. (NACE 19,22-25,33); Low technology: food, beverages, textiles, leather, wood, paper, printing, etc. (NACE 10-18,31,32).

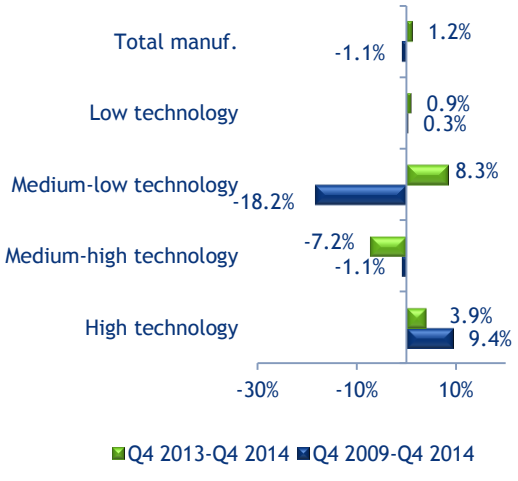
Figure 3.5 Manufacturing Employment by Technological Intensity, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

When compared to quarter 4 2009, employment was 9.4% (or 5,100) higher in high technology manufacturing, while it was 18.2% (or 7,200) lower in medium-low manufacturing. In quarter 4 2014, employment in medium-high and low technology manufacturing remained broadly in line with the levels recorded five years previously.

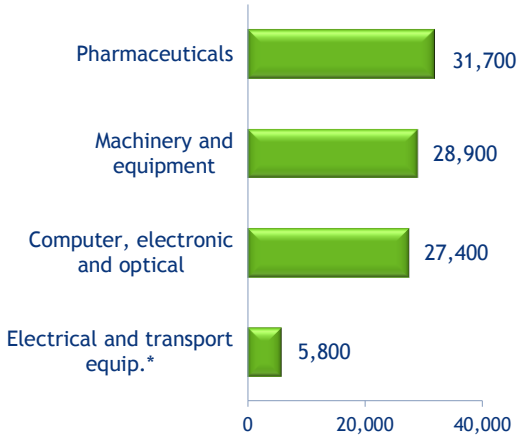
Figure 3.6 Manufacturing Employment Growth by Technological Intensity



Source: SLMRU (SOLAS) analysis of CSO data

Figure 3.7 presents employment in the high and medium-high technology manufacturing sub-sectors.[23] In quarter 4 2014, 44% of manufacturing employment (almost 97,000 persons) were employed in high or medium-high technology manufacturing. Of this, employment in pharmaceuticals accounted for one third (31,700), followed by machinery and equipment and computer, electronic and optical equipment manufacturing, each accounting for almost 30,000 persons.

Figure 3.7 High & Medium-High Tech Manufacturing Employment, Quarter 4 2014

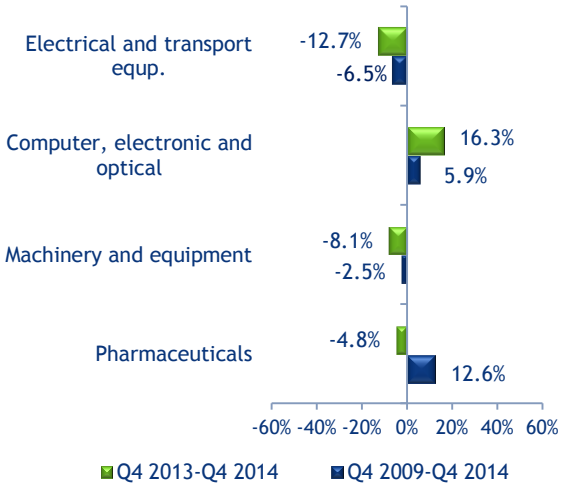


Source: SLMRU (SOLAS) analysis of CSO data

*NACE 27,29,30

Between quarter 4 2013 and quarter 4 2014, employment decreased in all high and medium-high technology manufacturing activities, with the exception of computer, electronic and optical equipment (Figure 3.8). Compared to quarter 4 2009, employment in quarter 4 2014 was higher in pharmaceuticals and computer, electronic and optical products manufacturing (by 3,500 and 1,500 respectively).

Figure 3.8 High and Medium-High Technology Intensive Manufacturing Employment



Source: SLMRU (SOLAS) analysis of CSO data

Construction

In quarter 4 2014, 116,700 persons were employed in the construction sector, accounting for 6% of national employment. Between quarter 4 2013 and quarter 4 2014, construction was the strongest growing sector of the economy, growing 13% and adding 13,000 persons in employment. Over this period, employment increased in the construction of buildings and specialised construction activities (e.g. bricklaying, scaffolding, construction equipment renting), by 9,100 and 3,600 respectively, while it remained broadly unchanged in civil engineering.

In quarter 4 2014, employment levels in the construction of buildings and specialised construction activities remained below the quarter 4 2009 levels, by 19% and 16% respectively. Employment in civil engineering remained broadly in line with the employment level recorded five years previously.

[23] Manufacturing of chemicals is not presented because figures are too small for statistical inference.

Agriculture

In quarter 4 2014, 105,900 persons were employed in agriculture, representing 5.5% of national employment. Of the total agricultural employment, 95% was in crop and animal production, with the remainder in forestry, fishing and aquaculture.

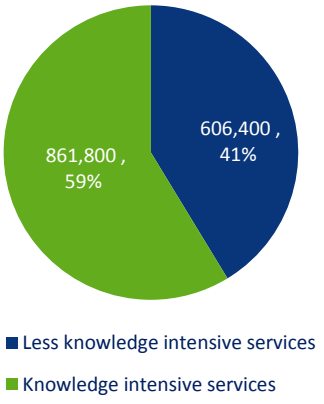
Between quarter 4 2013 and quarter 4 2014, agricultural employment contracted by 10,900 or 9.3%. Despite this decrease, the employment level in agriculture remained above the quarter 4 2009 level, by 18% or 16,200.[24]

Services

In quarter 4 2014, 1.47 million persons were employed in the services sector, accounting for three quarters of national employment. Between quarter 4 2013 and quarter 4 2014, employment in the services sector increased by 1.6% (or 23,600), while it was 2.4% (or 34,100) higher compared to quarter 4 2009.

Of total services sector employment, 59% (861,800) was in knowledge intensive services - KIS (ICT, financial, legal, accounting, engineering, R&D, education, health and arts),[25] and the remainder was in less knowledge intensive services – LKIS (wholesale & retail, warehousing & transport, accommodation & food, office administration, real estate, travel, etc.)[26] (Figure 3.9). The distribution of employment between KIS and LKIS has not changed markedly when compared to quarter 4 2013, and indeed quarter 4 2009.

Figure 3.9 Services Sector Employment, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Between quarter 4 2013 and quarter 4 2014, employment increased in both sub-sectors, rising somewhat faster in knowledge intensive services (1.7% compared to 1.5% for LKIS) (Figure 3.10). Over this period, an additional 14,600 persons were in employment in the KIS sub-sector, while 9,100 were in the LKIS sub-sector. In absolute terms, most of employment increases in LKIS were in wholesale/retail, motor trade and real estate, while in KIS in education and engineering activities.

In quarter 4 2014, the employment level in both sub-sectors was higher than that observed five years previously: it was 2.2% higher in LKIS and 2.5% in the KIS sub-sector. Over the five-year period (quarter 4 2009 to quarter 4 2014), the greatest absolute increase in LKIS was in wholesale/retail (6,800), accommodation (5,600) and food services (4,800). The greatest increase in KIS was in computer programming and information services (11,400), health/care/social work (12,800), engineering

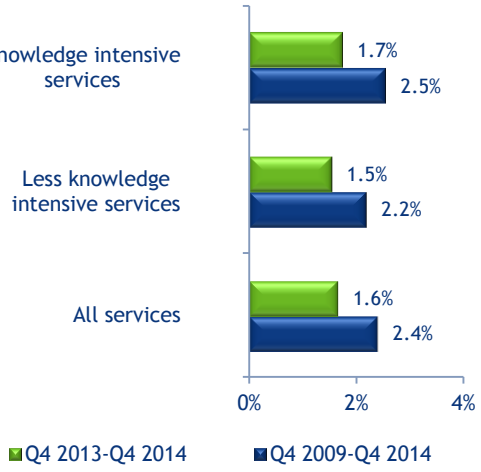
[24] Estimates of employment in the agriculture, forestry and fishing sector have been subject to sample changes over the last several years and growth rates in this sector should be interpreted with caution.

[25] NACE Rev. 2 50, 51, 58, 59, 60, 61, 62, 63, 64, 65, 66, 69, 70, 71, 72, 73, 74, 75, 78, 80, 84, 85, 86, 87, 88, 90, 91, 92, 93.

[26] NACE Rev. 2 45, 46, 47, 49, 52, 53, 55, 56, 68, 77, 79, 81, 82, 94, 95, 96, 97, 98, 99.

activities (6,000) and education (5,600), while the greatest decline was in public administration (12,100).

Figure 3.10 Services Sector Employment Growth by Knowledge Intensity



Source: SLMRU (SOLAS) analysis of CSO data

Wholesale and Retail Trade

In quarter 4 2014, 276,700 persons were employed in the wholesale and retail trade sector, accounting for 14.3% of national employment. Of these, 188,900 persons were employed in retail trade, 48,900 in wholesale and 38,900 in motor trade.

Over the period quarter 4 2013 to quarter 4 2014, the strongest growth was recorded in the motor trade sub-sector, which expanded by 16% (adding a net 5,400 persons). Employment in the retail sub-sector also increased over this period, expanding by 5% (8,800 persons). In contrast, employment in the wholesale sub-sector contracted by 14% (almost 8,000 persons).

While the recent employment increases brought the level of employment in the motor trade sub-sector above the levels recorded five years previously, employment levels in retail trade in quarter 4 2014 remained below the level recorded in quarter 4 2009.

Accommodation and Food Services

In quarter 4 2014, 137,500 persons were employed in accommodation and food services, accounting for just over 7% of national employment. Of this, food and beverage services accounted for 62%.

Between quarter 4 2013 and quarter 4 2014, there was a small increase in employment levels in the accommodation and food sector of 1.3% (or less than 2,000). All of the increase was in the accommodation services sub-sector.

Over the period quarter 4 2009 to quarter 4 2014, employment increased by 8.2% or just over 10,000. The employment increase was evenly distributed between sub-sectors, although in relative terms growth was stronger in the accommodation sub-sector (12% compared to 6% in the food sub-sector).

Professional, Scientific and Technical Activities

In quarter 4 2014, 117,100 persons were employed in professional, scientific and technical activities, accounting for 6% of national employment. Of this, 29% was in engineering activities (including architectural activities and technical testing), 23% was in legal and accounting services, with the remainder spread across other services such as scientific R&D, market research and management consultancy.

Between quarter 4 2013 and quarter 4 2014, employment in engineering/architectural services increased by 17% or 5,800 persons, while scientific R&D activities increased by

24% or just over 1,000. In contrast, employment contracted in legal/accounting, advertising/marketing and veterinary services.

Over the five-year period, quarter 4 2009 to quarter 4 2014, employment increased in all professional services sub-sectors, except for management consultancy. In absolute terms, the strongest growth over this period was observed for engineering/architectural services (6,000), followed by legal/accounting (3,500). In relative terms, employment growth was the strongest in scientific R&D (it almost doubled over this period).

Financial, Insurance and Real Estate Services

In quarter 4 2014, 101,800 persons were employed in the provision of financial, insurance and real estate services. This represented 5.3% of national employment. Of the total sectoral employment, 62% was in financial services (e.g. banking), 20% in insurance, with the remainder in auxiliary and real estate activities. The share of real estate activities in the sectoral employment increased from 8% in quarter 4 2009 to 12% in quarter 4 2014.

Between quarter 4 2013 and quarter 4 2014, employment increased by 4.9% (4,800 persons). Over this period, growth was concentrated in real estate (an increase of 3,200) and activities auxiliary to financial services (an increase of 1,300).

When compared to employment levels recorded five years previously, employment in all financial and insurance activities was still below quarter 4 2009 by quarter 4 2014, while it was a third higher in real estate activities.

Transportation and Storage

In quarter 4 2014, 90,200 persons were employed in transportation and storage related activities, accounting for 4.7% of national employment. Just over half of this employment was in land, 18% was in postal and courier activities, 14% in warehousing and support activities for transportation, while air and water transport accounted for 13% and 2% respectively.

Between quarter 4 2013 and quarter 4 2014, employment in air transport increased by 21% or 2,000, while it contracted by 17% or 2,200 in warehousing and support activities. In other sectors it remained relatively unchanged.

In quarter 4 2014, overall transportation employment remained 5% below levels recorded five years previously. With the exception of air transport (which expanded by 17% (1,800)), employment levels in all transport sub-sectors remained below levels recorded in quarter 4 2009.

Information and Communications (ICT)

In quarter 4 2014, 83,500 persons were employed in the ICT sector, accounting for 4.3% of national employment. Of the total employment in the ICT sector, computer programming accounted for 56.4%, while telecommunications for a fifth. The remainder was spread across other ICT services, such as broadcasting, publishing and motion picture production.

Between quarter 4 2013 and quarter 4 2014, employment in the ICT sector increased marginally (by 1.2%). Within the ICT sector, employment in computer programming activities increased by 4% (1,900), while it decreased in telecommunications by 7%

(1,300). There was very little change in other sub-sectors.

Over the five-year period, quarter 4 2009 and quarter 4 2014, employment in the ICT sector increased by 13% (9,600). During this period, employment in computer programming increased by 32% (11,400), while employment in motion picture, video and TV programming increased by 62% (1,600). Over the same period, employment in telecommunications contracted by 16% (3,200), while it remained relatively unchanged in other sub-sectors.

Administrative and Support Service Activities

In quarter 4 2014, there were 65,600 persons employed in administrative and support services, accounting for 3.4% of national employment. Just over one third of employment in this sector was in buildings and landscape services, followed by 19% in office administrative activities, 18% in security, 10% in employment activities, 9% in travel services and 8% in renting and leasing.

Between quarter 4 2013 and quarter 4 2014, employment in the administrative and support services sector as a whole increased by 1.7%. Within the sector, employment in office administrative activities decreased by 2,400, while it increased marginally or remained the same in all other sub-sectors.

Over the five-year period, quarter 4 2009 to quarter 4 2014, employment in administrative and support services increased by 1.7%. Employment in all sub-sectors remained relatively unchanged over this period, with marginal increases observed in security and office administration activities.

Healthcare and Social work

In quarter 4 2014, almost a quarter of a million persons were employed in human health and social work activities, accounting for 12.8% of national employment. Employment in human health activities accounted for 61%, social work activities for 28% and residential care activities accounted for the remaining 11%.

Between quarter 4 2013 and quarter 4 2014, the employment level in the health and social care sector remained unchanged. Over this period, employment in human health activities declined by 2% (3,300), while employment in residential care activities increased by 8% (2,100).

Compared to five years previously, the employment level recorded in quarter 4 2014 in the healthcare and social care sector was 5% (or 12,800) higher. Over this period, employment increased in each sub-sector, with the strongest growth recorded in residential care (13%).

Education

In quarter 4 2014, 154,000 persons were employed in the education sector, accounting for 7.9% of national employment.

Between quarter 4 2013 and quarter 4 2014, employment increased by 4.8% (7,100). Compared to five years previously, employment in quarter 4 2014 was 3.8% or 5,600 higher.

Public Administration and Defence (PAD)

In quarter 4 2014, there were 94,700 persons employed in PAD, accounting for 4.9% of national employment. Between quarter 4 2013 and quarter 4 2014, employment

remained relatively unchanged. However, compared to five years previously, employment levels in quarter 4 2014 were 11% or 12,100 lower.

Other Sectors

In quarter 4 2014, employment in all other sectors of the economy was 98,000, representing 5.1% of national employment. Almost one third of employment was in personal services activities, followed by one fifth in sports activities, 12% in arts activities, with the remainder distributed between other activities, such as cultural, gambling etc. There was almost no change in employment levels of the sector as a whole when compared with levels recorded one and, indeed, five-years previously.

Within this composite sector, employment increased in sports activities, repair of computers, while it declined in personal services activities over the period quarter 4 2013 and quarter 4 2014. Compared to quarter 4 2009, employment was higher in the repair of computers, while lower in activities of membership organisations and personal services activities.

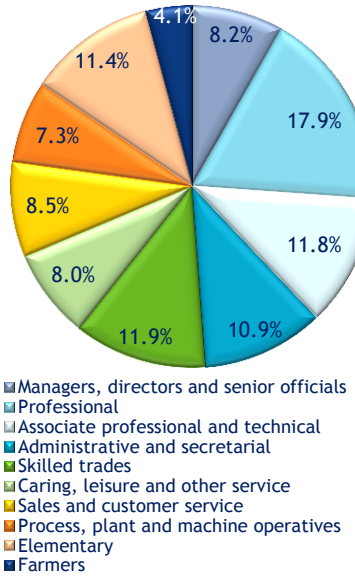
Section 4 Employment by Broad Occupation

4.1 Employment

Employment by broad occupational group is presented in Figure 4.1, with farmers separated from other skilled trades. In quarter 4 2014, 'white collar' workers (managers, professionals, associate professionals and clerks) accounted for almost half of employment nationally. Skilled tradespersons and elementary workers accounted for almost 12% each.

Between quarter 4 2013 and quarter 4 2014, the share of managers, elementary workers and skilled tradespersons increased by 0.3 percentage points each. The share of professionals decreased by 0.7 percentage points.

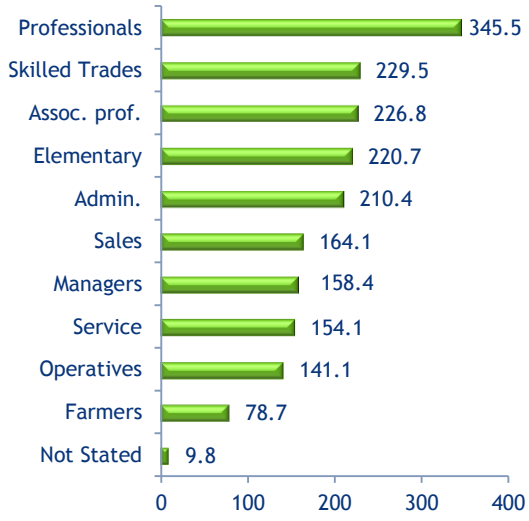
Figure 4.1 Employment by Broad Occupational Group (%), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 4.2 presents employment levels by occupational group. In quarter 4 2014, there were 346,000 persons employed in professional occupations, with a further 227,000 employed in associate professional occupations. There were almost 230,000 persons employed as skilled tradespersons, with a similar number employed in administrative and elementary occupations.

Figure 4.2 Employment by Broad Occupational Group (000s), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

4.2 Employment Growth

The employment growth by broad occupational group is presented in Figure 4.3. Between quarter 4 2013 and quarter 4 2014, the number of farmers and professionals in employment declined. Over the same period, the employment level remained broadly unchanged for operative and administrative occupations, while it increased in all other occupational groups. The strongest employment growth was recorded for managers, services occupations, skilled trades and elementary occupations.

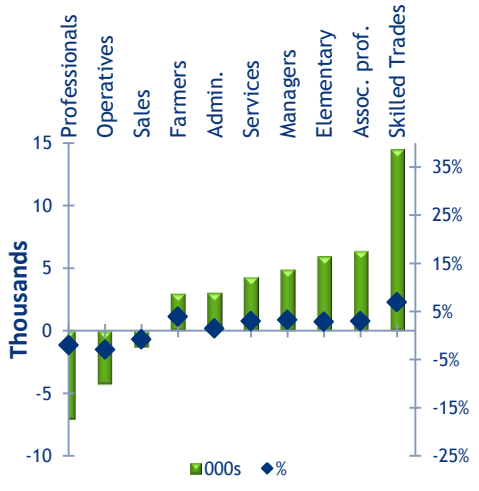
In quarter 4 2014, the employment levels were above those recorded in quarter 4 2009 for all occupations, except administrative, skilled trades and elementary.

Figure 4.3 Employment Growth by Broad Occupational Group

Source: SLMRU (SOLAS) analysis of CSO data

Figure 4.4 presents the absolute and relative change in employment by broad occupational group. Between 2013 and 2014 (annual average data), the strongest absolute employment growth was observed for skilled trades (14,500), followed by associate professionals (6,400) and elementary occupations (almost 6,000). At almost 7%, the strongest growth rate was observed for skilled trades.

Figure 4.4 Employment Growth by Broad Occupational Group, Annualised Data, 2013-2014



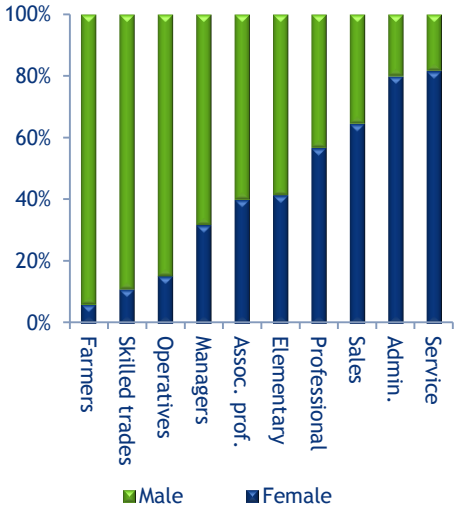
Source: SLMRU (SOLAS) analysis of CSO data

4.3 Employment by Gender

The distribution of employment in broad occupational groups by gender is presented in Figure 4.5. In quarter 4 2014, services, administrative and sales workers were mostly female, while males were predominant amongst farmers, skilled tradespersons and operatives. Employment was most evenly distributed in professional occupations: 43% male and 57% female.

Between quarter 4 2013 and quarter 4 2014, the share of females employed in managerial and professional occupations decreased by one percentage point each, while the share of female associate professionals increased by one percentage point.

Figure 4.5 Employment by Gender and Broad Occupational Group (%), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

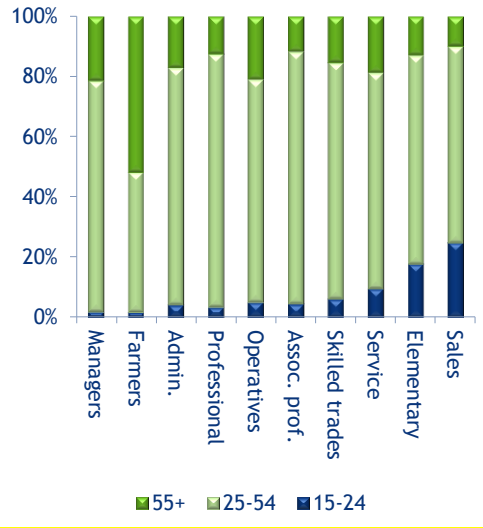
4.4 Employment by Age

Figure 4.6 presents the age distribution of employment in broad occupational groups. In quarter 4 2014, employment in all occupational groups, except farmers, was concentrated in the 25-54 age cohort. The highest share of employment in the 15-24 age

cohort was observed for sales and elementary occupations. Half of all farmers were in the over 55 age cohort.

Between quarter 4 2013 and quarter 4 2014, the share of employment in the 15-24 age cohort remained broadly unchanged or decreased for most occupational groups, while it increased for sales workers and associate professionals (by two and one percentage points respectively). The most pronounced shift towards older age cohorts was observed for services workers, operatives and farmers, with the share of persons aged 55 and over increasing by over one percentage point each.

Figure 4.6 Employment by Age and Broad Occupational Group (%), Quarter 4 2014



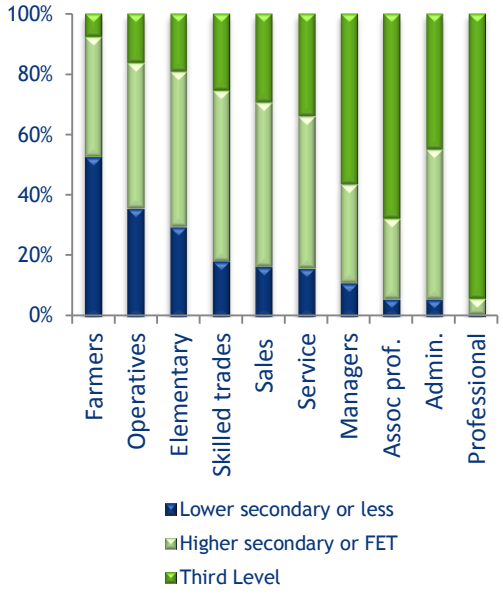
Source: SLMRU (SOLAS) analysis of CSO data

4.5 Employment by Education

The educational distribution of employment in broad occupational groups is presented in Figure 4.7. In quarter 4 2014, the greatest share of third level graduates was observed for professionals (93%), associate professionals (66%) and managers (55%). The occupations with the greatest share of persons with less than higher secondary education was observed for farmers, operatives and elementary workers.

Between quarter 4 2013 and quarter 4 2014, the share of third level graduates increased in almost all occupations. However, the share of persons with less than higher secondary education increased in elementary and skilled trades occupations (by three and two percentage points respectively).

Figure 4.7 Employment by Education and Broad Occupational Group (%), Quarter 4 2014



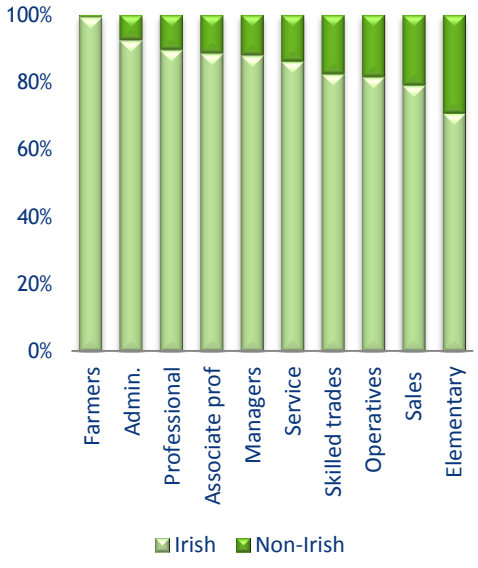
Source: SLMRU (SOLAS) analysis of CSO data

4.6 Employment by Nationality

Figure 4.8 presents the distribution of employment in broad occupational groups by nationality. In quarter 4 2014, the share of non-Irish nationals was the highest in elementary (29%), sales (21%), skilled trades (18%) and operative (18%) occupations. In contrast, the share of non-Irish nationals was the lowest for farmers (1%) and administrative occupations.

Between quarter 4 2013 and quarter 4 2014, the share of non-Irish nationals working in professional and elementary occupations decreased, while it increased in managerial (two percentage points) and sales (one percentage point) occupations.

Figure 4.8 Employment by Nationality and Broad Occupational Group (%), Quarter 4 2014



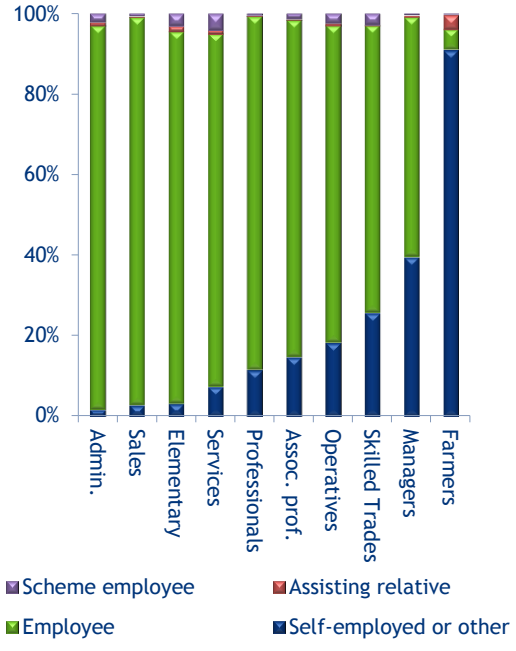
Source: SLMRU (SOLAS) analysis of CSO data

4.7 Employment Status

Employment in broad occupational groups by employment status is presented in Figure 4.9. In quarter 4 2014, the greatest share of self-employed persons was observed for farmers (91%), managers-proprietors (40%) and skilled tradespersons (26%). Almost all sales (96%), administrative (95%) and elementary (92%) workers were employees. At 4%, the share of persons with the employment status 'assisting a relative' was the greatest in farming.

Between quarter 4 2013 and quarter 4 2014, the share of self-employed increased in sales occupations (by one percentage point), while a decrease of a similar magnitude was observed for professionals.

Figure 4.9 Employment by Employment Status and Broad Occupational Group (%), Quarter 4 2014



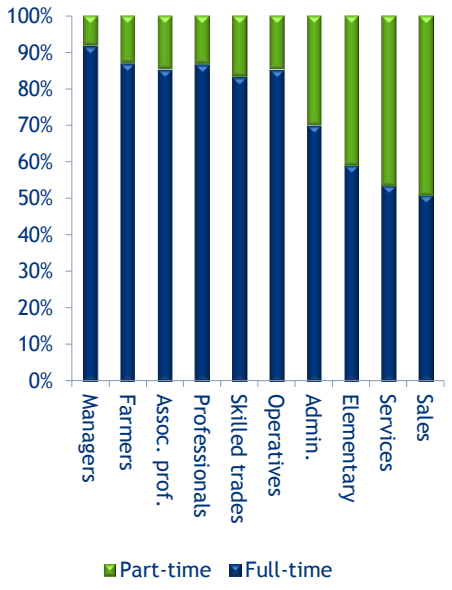
Source: SLMRU (SOLAS) analysis of CSO data

Note: The scheme employee refers to employees on community employment schemes (CES) and other employment schemes (e.g. Job Bridge and Work Placement) based on the CSO's standard employment status classification.

Figure 4.10 presents the breakdown of employment in broad occupational groups by full-time and part-time work. In quarter 4 2014, the majority of workers in all occupational groups worked full-time. With a share of over 40%, part-time workers were prevalent in low-skilled occupations (sales, services and elementary).

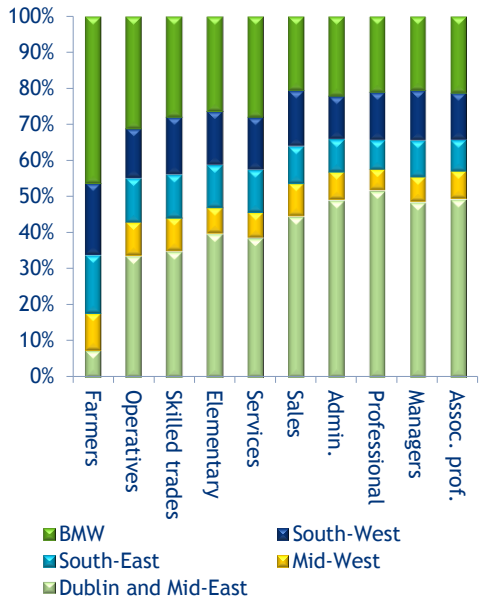
Between quarter 4 2013 and quarter 4 2014, the share of full-time employment in skilled trades, sales and elementary occupations increased by three percentage points each. In contrast, the share of part-time professionals increased by one percentage point.

Figure 4.10 Full-Time and Part-Time Employment by Broad Occupational Group (%), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 4.11 Employment by Region and Broad Occupational Group (%), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

4.8 Employment by Region[27]

Figure 4.11 presents the regional distribution of employment in broad occupational groups. In quarter 4 2014, the greatest share of white collar employment (managers, professionals, associate professionals and administrative workers) was located in Dublin and the Mid-East. Nearly 50% of farmers and over 30% of operatives were located in Border, Midlands and West.

Between quarter 4 2013 and quarter 4 2014, the share of labourers, professionals and sales persons located in the Dublin and Mid-East region increased by three percentage points each. In contrast, the share of tradesperson located in the Dublin and Mid-East region declined by one percentage point. The share of farmers located in the South West region declined by one percentage point.

[27] While regions are defined by NUTS3, for presentation purposes the Border, Midlands and Western Regions were grouped into the BMW region while the Dublin region and the Mid-East region were grouped to form the Dublin and Mid-East region.

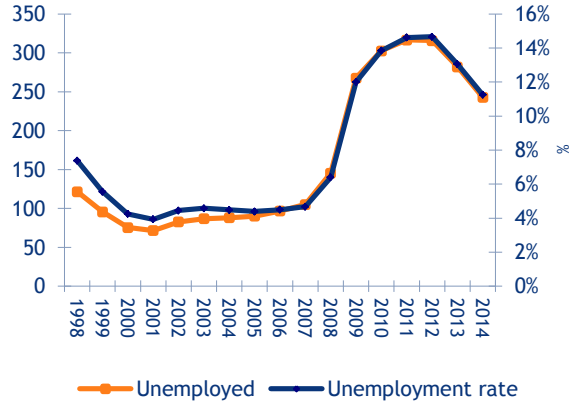
Section 5 Unemployment

5.1 Unemployment and Unemployment Rate

Figure 5.1 presents average annual unemployment levels and unemployment rates for the period 1998-2014. Following several years of sharp increases in unemployment, the levels declined in 2013 and 2014. Between quarter 4 2013 and quarter 4 2014, the number of people seeking employment declined by almost 40,000, to 213,600.

The average annual unemployment rate in 2014 was 11.3%. This was a decrease of 1.8 percentage points on the annual average in 2013. By quarter 4 2014, the unemployment rate decreased to 9.9% (or seasonally adjusted 10.4%).

Figure 5.1 Annual Average Unemployment Level (000s) and Unemployment Rate (%)



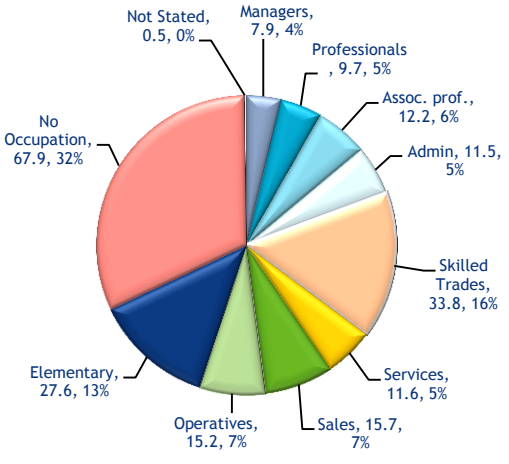
Source: SLMRU (SOLAS) analysis of CSO data

5.2 Unemployment by Occupation

The distribution of unemployment by broad occupational group is presented in Figure 5.2. In quarter 4 2014, 16% of unemployed persons were previously employed in skilled trades (including farmers), while 13% in elementary occupations. In contrast, 4% of unemployed persons previously worked as managers and 5% as professionals. Almost one third of all unemployed persons did not state their previous occupation (e.g. looking for work for the first time, entering employment from inactivity).

Between quarter 4 2013 and quarter 4 2014, the share of those previously employed as elementary workers decreased by two percentage points, while the share of those previously employed as skilled tradespersons decreased by one percentage point. The share of all other occupations changed by less than one percentage point each.

Figure 5.2 Unemployment by Occupation (000s; %), Quarter 4 2014

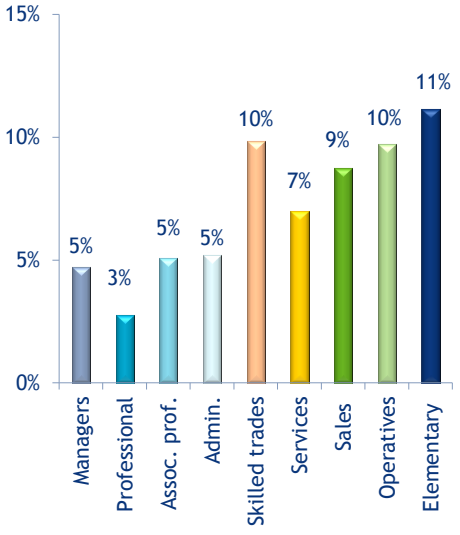


Source: SLMRU (SOLAS) analysis of CSO data

Figure 5.3 presents the unemployment rate by broad occupation. In quarter 4 2014, the highest unemployment rates were recorded for elementary occupations (11%), operatives (10%) and skilled trades (10%). The lowest unemployment rates were observed for white collar occupations (5% or less).

Between quarter 4 2013 and quarter 4 2014, the unemployment rate declined for all occupational groups, except for managers and professionals. The largest decline was observed for elementary occupations (four percentage points) and administrative occupations and skilled trades (three percentage points each).

Figure 5.3 Unemployment Rate by Occupation, Quarter 4 2014



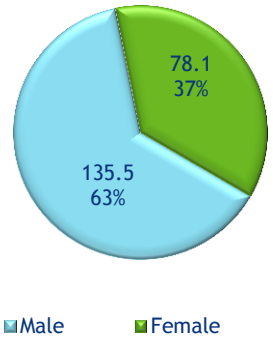
Source: SLMRU (SOLAS) analysis of CSO data

Note: Excludes persons who did not state their previous occupation.

5.3 Unemployment by Gender

Figure 5.4 presents the gender distribution of unemployed persons. Of the 213,600 persons unemployed in quarter 4 2014, 63% were male. Between quarter 4 2013 and quarter 4 2014, there was no change in the gender distribution of unemployment.

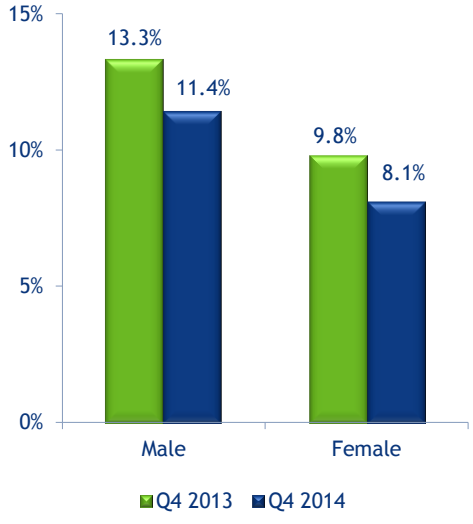
Figure 5.4 Unemployment by Gender, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2014, females remained at a lower risk of unemployment than males, with an unemployment rate of 8.1% compared to 11.4%. Between quarter 4 2013 and quarter 4 2014, the unemployment rate declined for both females and males (by 1.7 and 1.9 percentage points respectively).

Figure 5.5 Unemployment Rate by Gender, Quarter 4 2013 & Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

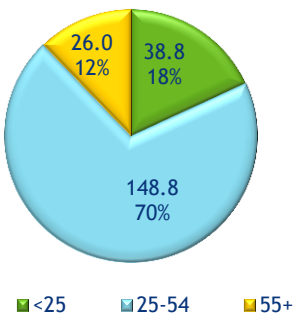
5.4 Unemployment by Age

The age distribution of unemployed persons is presented in Figure 5.6. In quarter 4 2014,

almost one fifth of unemployed persons was younger than 25, while 70% was aged 25-54.

Between quarter 4 2013 and quarter 4 2014, the share of unemployed persons aged under 25 decreased by one percentage point. In contrast, the share of those aged 55 increased by one percentage point. The share of those aged 25-54 remained static, at 70%.

Figure 5.6 Unemployment by Age, Quarter 4 2014

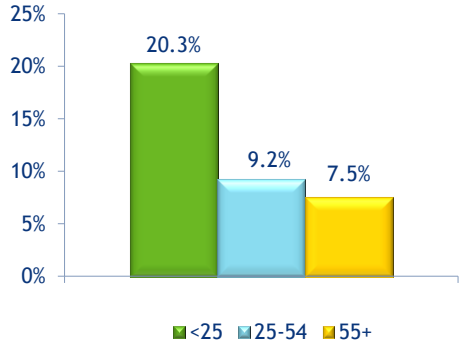


Source: SLMRU (SOLAS) analysis of CSO data

Unemployment rates by age are presented in Figure 5.7. In quarter 4 2014, those aged under 25 continued to be at the greatest risk of unemployment, with an unemployment rate of 20.3%. In contrast, the unemployment rate for those aged 55 and over was 7.5%.

Between quarter 4 2013 and quarter 4 2014, the unemployment rate declined for all age groups, with the most pronounced decline observed for those younger than 25 (four percentage points).

Figure 5.7 Unemployment Rate by Age, Quarter 4 2014



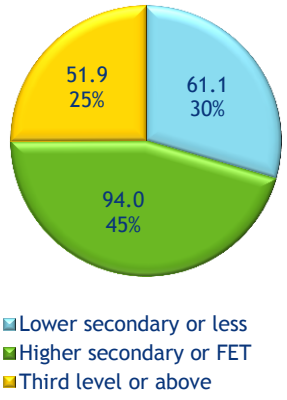
Source: SLMRU (SOLAS) analysis of CSO data

4.5 Unemployment by Education

Figure 5.8 presents unemployment by education level. In quarter 4 2014, 45% of unemployed persons had higher secondary or FET qualifications, while 30% had attained lower secondary or less qualifications and 25% had third level qualifications.

Between quarter 4 2013 and quarter 4 2014, the share of unemployed person with a lower secondary or less qualifications increased by four percentage points, while the share with higher secondary education decreased by four percentage points. The share of unemployed third level graduates remained the same.

Figure 5.8 Unemployment by Education, Quarter 4 2014

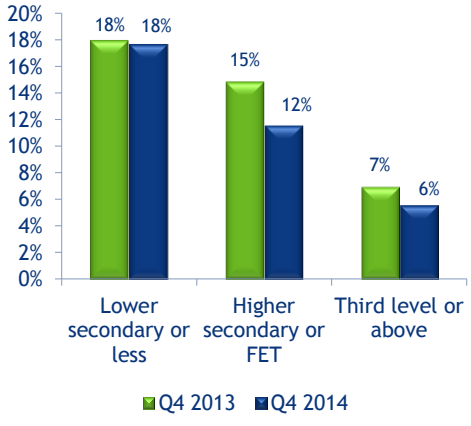


Source: SLMRU (SOLAS) analysis of CSO data

Figure 5.9 presents unemployment rates by education level. In quarter 4 2014, third level graduates had the lowest unemployment rate (6%). In contrast, the unemployment rate for persons with lower secondary or less s remained the highest (18%).

Between quarter 4 2013 and quarter 4 2014, the unemployment rate remained at 18% for persons with lower secondary education or less. The unemployment rates decreased for both third level graduates and persons with higher secondary or FET qualifications (one and three percentage points respectively).

Figure 5.9 Unemployment Rate by Education, Quarter 4 2013 & Quarter 4 2014

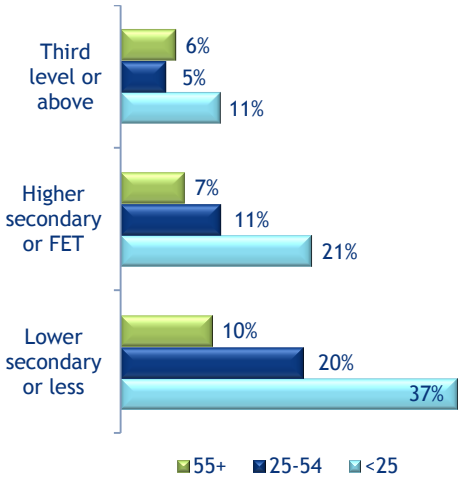


Source: SLMRU (SOLAS) analysis of CSO data

Figure 5.10 presents the unemployment rates by education and age. In quarter 4 2014, persons aged under 25 with less than higher secondary education were at the greatest risk of unemployment. The unemployment rate was the highest for under-25s across all education levels. Third level graduates remained at the lowest risk of unemployment.

Between quarter 4 2013 and quarter 4 2014, the unemployment rate decreased in almost all cohorts. The greatest declines were observed for those with higher secondary or FET education, regardless of their age. There was very little or no improvement in relation to unemployment rates for persons with less than higher secondary education.

Figure 5.10 Unemployment Rate by Education and Age, Quarter 4 2014

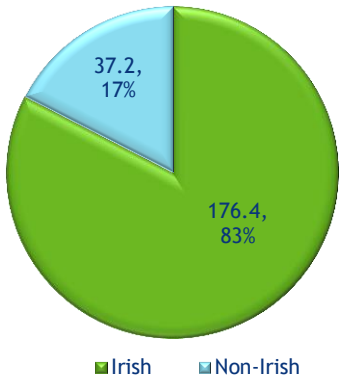


Source: SLMRU (SOLAS) analysis of CSO data

5.6 Unemployment by Nationality

Figure 5.11 presents the distribution of unemployment by nationality. Over 80% of unemployment persons were Irish nationals. Between quarter 4 2013 and quarter 4 2014, the share of Irish nationals in unemployment increased by two percentage points.

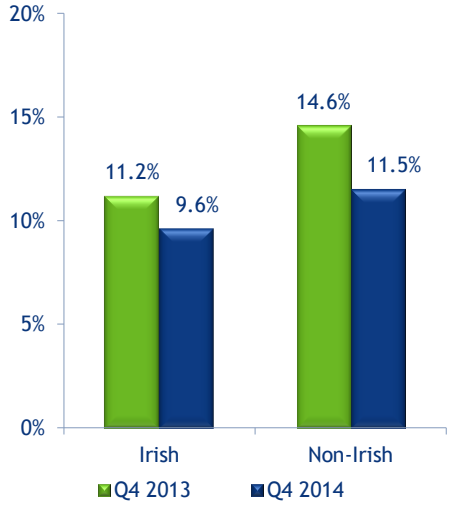
Figure 5.11 Unemployed by Nationality (%), Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 5.12 presents the unemployment rates for Irish and non-Irish nationals. In quarter 4 2014, the unemployment rate for Irish nationals was lower than for non-Irish nationals (9.6% compared to 11.5%). Between quarter 4 2013 and quarter 4 2014, the unemployment rate for both Irish and non-Irish nationals decreased (by 1.6 and 3.1 percentage points respectively).

Figure 5.12 Unemployment Rate by Nationality, Quarter 4 2013 & Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

5.7 Unemployment by Sector

Table 5.1 presents the unemployment levels and unemployment rates by sector. In quarter 4 2014, the largest number of unemployed persons were previously employed in construction, wholesale/retail and industry.

In quarter 4 2014, the unemployment rate was the highest for persons previously employed in construction (21.3%). In contrast, the unemployment rate was the lowest for persons previously employed in PAD, health and agriculture.

Between quarter 4 2013 and quarter 4 2014, unemployment rates decreased for all sectors, except for PAD. The unemployment rate of persons previously employed in construction declined by 8.3 percentage points, the most pronounced decline of all sectors.

Table 5.1 Unemployment by Sector, Quarter 4 2014

Sector	Unemployed	Unemployment rate
Agriculture	2.5	2.3%
Industry	20.0	7.6%
Construction	31.5	21.3%
Wholesale/retail	20.9	7.0%
Transportation	4.8	5.1%
Accomm./food	13.8	9.1%
ICT	4.4	5.0%
Finance	4.4	4.2%
Prof. services	5.5	4.5%
Admin. service	7.8	10.6%
PAD	3.4	3.5%
Education	6.6	4.1%
Health	9.7	3.7%
Other	10.0	9.2%
Total	**213.6**	**9.9%**

Source: SLMRU (SOLAS) analysis of CSO data

Section 6 Labour Market Transitions

6.1 Overall Transitions

Labour market transitions refer to the change in the labour market status of individuals between two points in time. The labour market status is ILO defined and expressed in three categories: employed, unemployed and economically inactive. To examine labour market transitions in the Irish context, QNHS data is used, with focus on survey participants who remain on the survey panel in two subsequent quarters. On average, just over 70% of respondents reappeared from one quarter to another during the 2014 survey cycle.[28]

Table 6.1 presents average quarterly transitions for 2014. As observed in the preceding years, most individuals do not change their labour market status between successive quarters: in 2014, on average, 97% of individuals who were in employment, remained employed; 94.5% of those economically inactive, continued to be outside the labour force and 68.1% of those unemployed remained unemployed. Nonetheless, some individuals changed their labour market status between quarters: 3% of individuals transitioned out of employment – 1.7% to inactivity and 1.2% to unemployment; over 30% of individuals transitioned out of unemployment – 18.5% to inactivity and 13.4% to employment.

While the distribution of movements remained broadly in line with 2012 and 2013, there was an increase in the share of flows from unemployment to employment, from 11.8% to 13.4%.

Table 6.1 Average Quarterly Transitions by ILO Status, 2014 (Persons aged 15+), 2014

	ILO end Q		
ILO start Q	Employed	Unemployed	Inactive
Employed	97.0%	1.2%	1.7%
Unemployed	13.4%	68.1%	18.5%
Inactive	2.5%	3.0%	94.5%

Source: SLMRU (SOLAS) analysis of CSO data

Figure 6.1 shows estimated annual transitions for 2014. Annual transitions represent the sum of quarterly transitions.[29] Because a person can change their labour market status several times in a year, the term 'transitions' is used, rather than 'persons'.

Based on quarterly flows, it is estimated that over 1.1 million transitions occurred in the Irish labour market in 2014, which is broadly in line with 2013. Quarterly transitions represent an underestimation of the true volume of activity, because transitions can occur more frequently than on a quarterly basis.[30] Nonetheless, even quarterly transitions indicate a significant volume of movements in the Irish labour market during 2014.

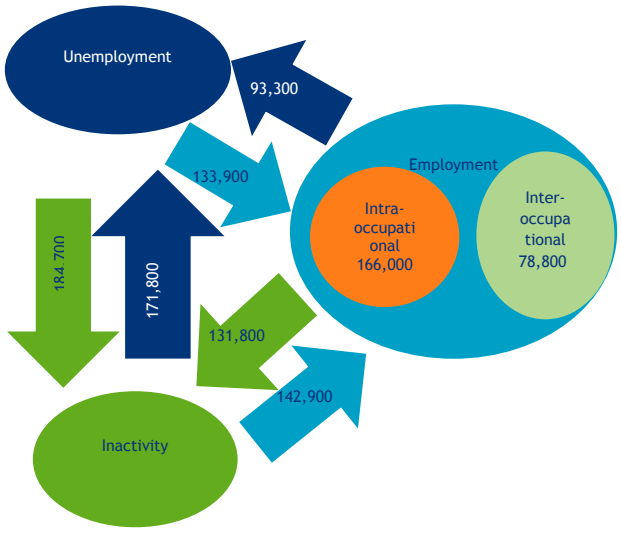
[28] Each repeat respondent's weight was inflated proportionately, so that the sum of all repeat respondents corresponds to the population estimate of the starting quarter; given that only repeat respondents can be observed, there is an implicit assumption of zero population growth and net migration; as a result, employment, unemployment and inactivity levels derived from transitions analysis do not equate to the actual levels reported by the CSO QNHS.

[29] Sum of transitions between quarter 4 2013 to quarter 1 2014, quarter 1 2014 to quarter 2 2014, quarter 2 2014 to quarter 3 2014, quarter 3 2014 to quarter 4 2014.

[30] CSO Job Churn analysis estimated 570,000 hirings for 2013, while the estimated number of transitions to employment from all three ILO states (employment, unemployment and inactivity) was 480,000; although the difference would be expected given the differences in methodology and focus of measurement, the discrepancy indicates the that transitions are likely to underestimate the true volume of job finds.

There were almost 230,000 transitions between employment and unemployment; almost 275,000 between employment and inactivity and 360,000 between unemployment and inactivity. In addition, almost 250,000 transitions occurred within employment, either due to a change of employer (intra-occupational transitions) or change of occupation (inter-occupational transitions).

Figure 6.1 Labour Market Transitions, 2014 (Sum of Four Quarters)



Source: SLMRU (SOLAS) analysis of CSO data

The number of transitions into employment, from both unemployment and inactivity exceeded transitions out of employment. There were almost 40,000 more transitions from unemployment to employment than the other way around. Similarly, there were over 10,000 more transitions from inactivity to employment than in the opposite direction.

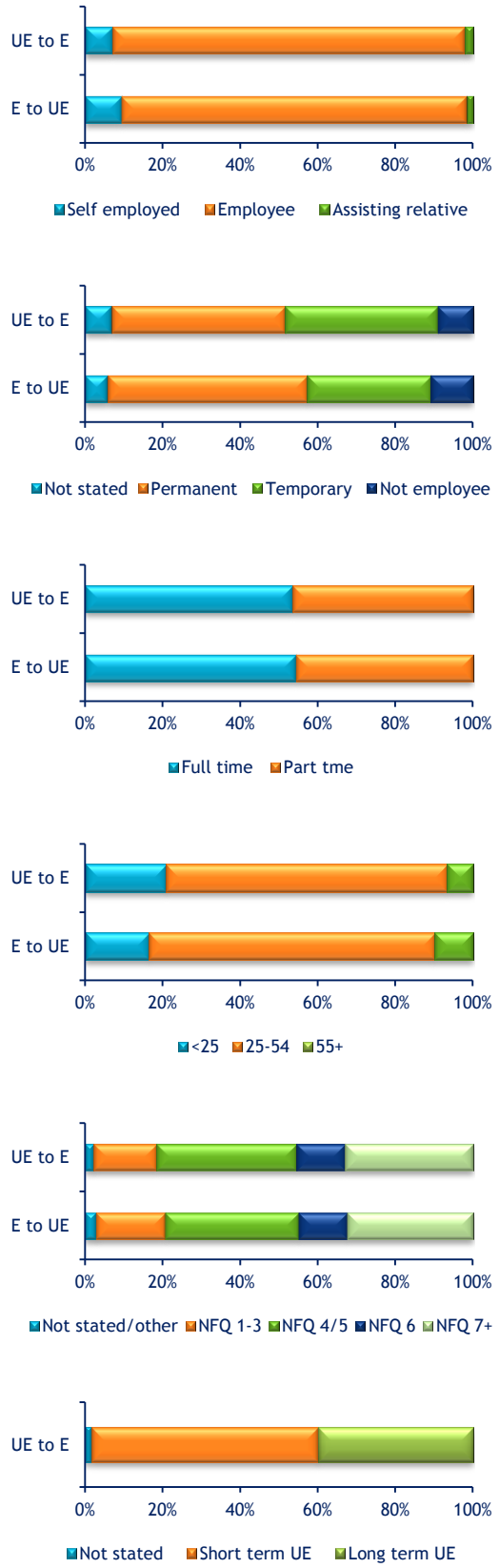
The volume of transitions between employment, unemployment and inactivity remained broadly in line with 2013. However, there was an increase in the volume of intra and inter occupational transitions compared to the previous year.

6.2 Transitions between Employment and Unemployment

The composition of transitions between employment and unemployment is presented in Figure 6.2.

- Approximately 90% of transitions between employment and unemployment were within the employee category; the share of employees in transitions was greater than their share in the national employment stock (just over 80%), suggesting that employees tend to move somewhat more than those self-employed; of those transitioning from unemployment into employment as an employee, 13% were associated with State-sponsored employment schemes, which is one percentage point above the 2013 share.
- In terms of permanency of tenure, 51% of exits to unemployment were from permanent jobs, compared to 45% of entries into permanent employment, which is in line with the pattern observed in 2013.
- Similar to the previous years, the distribution of part-time and full-time jobs in exits from and entries to employment was very similar, with full-time employment accounting for just over a half of flows in each direction.
- As in 2013, the share of persons under 25 was greater in entries to employment compared to their share in exits to unemployment (21% compared to 17%).

Figure 6.2 Transitions between Employment and Unemployment, 2014



Source: SLMRU (SOLAS) analysis of CSO data

- Approximately one third of transitions between employment and unemployment was associated with holders of NFQ4/5 qualifications; while a third of transitions was associated with holders of qualifications at NFQ level 7 or above, NFQ 8 accounted for half of them.
- 40% of transitions from unemployment to employment were from long-term unemployment; the share of long term unemployed in transitions from unemployment to employment was 6 percentage points higher than in 2013.

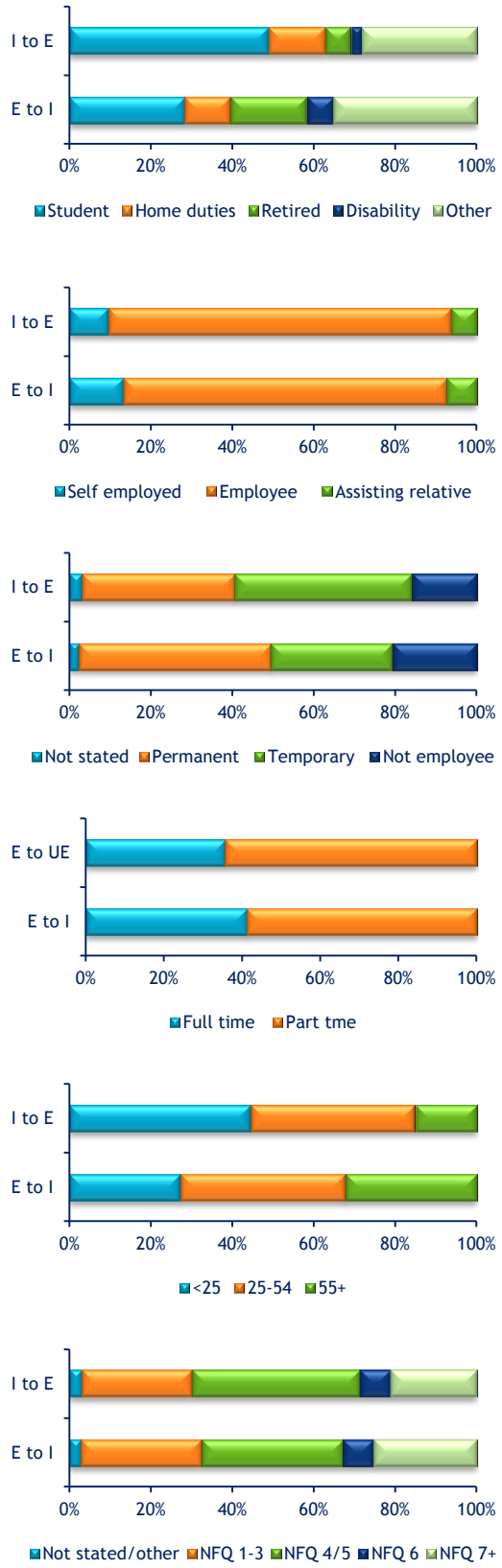
6.3 Transitions between Employment and Inactivity

The composition of transitions between employment and inactivity is presented in Figure 6.3.

- Of total transitions from employment into inactivity, 28% was to study, 19% to retirement[31], 12% to home duties, 7% was accounted for by exits due to disability and the remainder was for other reasons; in terms of transitions from inactivity to employment, almost a half (49%) was from study, 14% from home duties, with the remainder from other forms of inactivity; the distributions were broadly in line with those observed in 2013.
- The significant majority (80% or more) of transitions between employment and inactivity were in the employee category; this is in line with the distribution observed in 2013.

[31] Total transitions to retirements were estimated at 41,000; however, not all retired persons became inactive (some continued to be employed, others were still actively looking for work (unemployed)).

Figure 6.3 Transitions between Employment and Inactivity, 2014



Source: SLMRU (SOLAS) analysis of CSO data

- 47% of transitions from employment to inactivity were from permanent employment, compared to 34% of transitions from inactivity into permanent employment; this is in line with the distribution of transitions observed in 2013.
- While the majority of transitions between employment and unemployment were associated with part time employment, this was more pronounced in transitions from inactivity to employment, where almost two thirds of transitions were into part time employment.
- The share of persons aged under 25 in transitions from inactivity to employment was greater than to their share in exits from employment (44% compared to 27%); the opposite was the case for persons aged 55 and over (32% compared to 15%); The share of over 55s transitioning to inactivity increased from 29% in 2013.
- More than two thirds of transitions between employment and inactivity occurred at NFQ level 5 or below; the share transitioning from employment into inactivity at NFQ level 7 and above was higher than the share transitioning from inactivity to employment at this education level (24% compared to 21%), while the opposite was the case for transitions at NFQ level 4/5 (35% compared to 41%).

6.4 Transitions between Unemployment and Inactivity

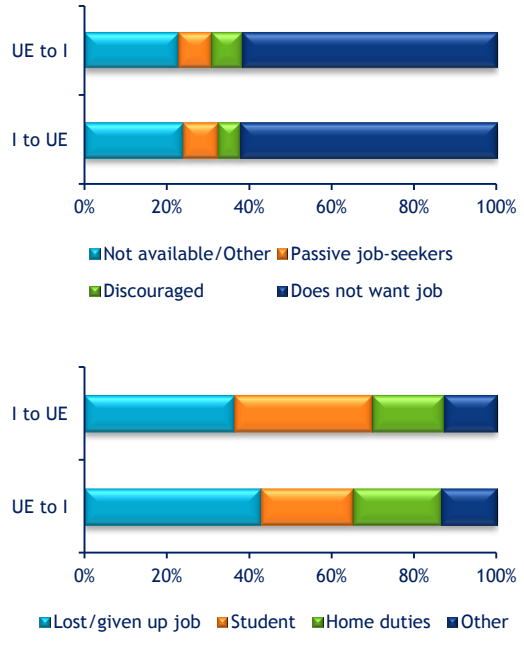
The composition of transitions between unemployment and inactivity is presented in Figure 6.4.

- Over 60% of flows between unemployment and inactivity was associated with persons who did not want a job for various reasons; however, a further 16% was

associated with persons who did want a job but were passive in job search or discouraged; the share of discouraged workers and passive job seekers was 4 percentage points lower than in 2013.

- 43% of transitions from unemployment to inactivity was associated with persons who had lost or given up employment; the share transitioning in the opposite direction was 36%; 22% of transitions from unemployment to inactivity were in the student category, compared to 33% of transitions from inactivity to unemployment; transitions to home duties accounted for 21% of flows from unemployment to inactivity, compared with 17% of flows in the opposite direction; the distributions were broadly in line with those observed one year previously.

Figure 6.4 Transitions between Unemployment and Inactivity, 2014



Source: SLMRU (SOLAS) analysis of CSO data

6.5 Transitions by Occupational Group

Table 6.2 presents labour market transitions by broad occupational group in 2014. In absolute terms, the highest number of transitions between employment and unemployment was observed for skilled trades and elementary occupations. With the exception of managerial, services and elementary occupations, the number of transitions from unemployment to employment exceeded exits to unemployment in all occupational groups. In addition, there were 28,500 transitions from unemployment to employment related to persons with no previous occupation. Persons with no previous occupation most frequently transitioned into employment as elementary and sales workers, accounting for 31% and 16% of transitions for those with no previous occupation respectively.

Table 6.2 Labour Market Transitions by Occupational Group, 2014 (All Quarters)

	E to UE	UE to E*	E to I	I to E*	Inter out	Inter in	Intra
Managers	5,300	4,900	6,800	2,800	6,000	6,700	6,800
Professionals	9,400	11,600	14,100	7,400	8,900	8,200	30,400
Assoc. prof.	9,900	13,100	11,400	5,900	9,100	9,400	16,600
Admin.	10,100	11,700	13,300	5,800	11,400	9,100	17,400
Trades	17,700	21,400	17,400	7,900	6,800	8,300	19,400
Services	7,700	6,600	16,200	4,700	5,000	3,600	16,300
Sales	8,700	10,000	16,100	6,100	8,300	9,700	18,600
Operatives	7,800	10,500	8,800	3,600	11,000	8,700	12,200
Elementary	17,000	15,100	27,800	8,900	12,200	15,200	28,600
No occup.		28,500		89,500			
Total	93,600	133,900	131,900	142,900	78,700	78,900	166,300

*Refers to previous occupation and excludes persons with no previous occupation (e.g. new entrants into the labour market).

Source: SLMRU (SOLAS) analysis of CSO data

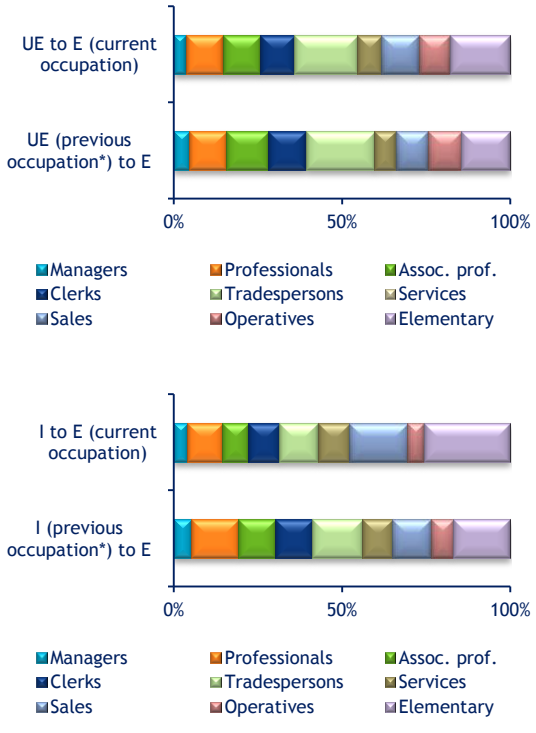
The highest number of transitions from employment to inactivity was for elementary occupations. Transitions from employment to inactivity exceeded transitions from inactivity into employment in all occupational groups, however, there were almost 90,000 transitions from inactivity to employment related to persons with no previous occupation. Of those, transitions to elementary and sales occupations accounted for 31% and 21% respectively.

The occupational distributions of flows between employment and unemployment were broadly similar, although the share of professionals, associate professionals, clerks, tradespersons and operatives was greater in transitions from unemployment (previously held occupation) to employment than in transitions in the opposite direction (Table 6.2). This was also the case when occupational distributions of transitions between employment and inactivity were compared: there was a greater share of professionals, associate professionals, clerks and tradespersons in transitions from inactivity (previously held occupation) to employment, when compared to their share in the flows from employment to inactivity.

However, when observing occupational distributions of transitions into employment (both from unemployment and inactivity) there was a difference depending on whether the previously or currently held occupation was considered. For instance, the share of elementary occupations in transitions into employment (from both unemployment and inactivity) was greater when the current rather than the previous occupation was considered (Figure 6.5), while the share of professional and associate professionals was smaller.

Table 6.2 also presents inter-occupational transitions[32] by occupational group for 2014. In absolute terms, most of the inter-occupational movements were observed in elementary occupations. Transitions in were greater than transitions out for clerical, services and operative occupations, resulting in net gains, while net losses were observed for trades, sales and elementary occupations. For other occupational groups, inter-occupational movements were broadly neutral.

Figure 6.5 Transitions by Previous and Current Occupation, 2014



* excludes persons with no previous occupation

Source: SLMRU (SOLAS) analysis of CSO data

Most frequent changes of employer (intra-occupational transitions[33]) were observed for

[32] Persons who remained in employment between the two quarters, but changed occupation.

[33] Persons who remained employed in the same occupation between the two quarters, but who changed employer during the months of the starting quarter.

professional and elementary occupations, accounting for 18% and 17% of intra-occupational transitions respectively (Table 6.2).

6.6 Transitions by Occupation

Table 6.3 lists individual occupations within each broad occupational group for which the highest number of transitions across the different labour market states was observed.

Occupations with the highest number of transitions between employment and unemployment included elementary occupations (cleaners, waiters, catering assistants, construction and storage labourers), carpenters, salespersons (sales assistants and business sales executives), services occupations (carers and child-care workers), truck drivers, general administrators, teachers and accountants. Unlike one year previously, chefs and hairdressers featured among those with the highest level of transitions into employment, not in the opposite direction.

Occupations most frequently transitioning in and out of inactivity included sales assistants, elementary occupations (waiters and cleaners), services workers (care workers, child-minders and hairdressers), general administrators and teachers. Occupations with the highest number of transitions from employment to inactivity due to study were: general admin, sales assistants, child-care workers, waiters, catering assistants, construction and farm labourers. Those most frequently exiting employment to engage in home duties included clerks (payroll and general) and care workers. Nurses, farmers and care workers were associated with the highest number of transitions into inactive retirement.

The highest number of inter-occupational transitions were observed for functional and retail managers, general clerks, sales occupations (sales assistants and business sales executives), administrators (general and Government), waiters, catering assistants construction and storage labourers. Occupations which featured amongst those with the highest number of inter-occupational transitions in, but not the other way around included financial and IT technicians, payroll clerks, customer care workers, taxi drivers and carers.

A high number of intra-occupational transitions was observed for many elementary occupations (waiters, cleaners, catering assistants, labourers in construction, storage, security and farming); clerical occupations (general and financial administrators, personal assistants and receptionists, payroll clerks); skilled trades (chefs, carpenters, IT engineers, plumbers and electricians); sales and customer care workers; technicians (IT and finance); services occupations (care and child-care workers, hairdressers, educational assistants); amongst professionals, teachers, nurses, doctors, programmers and accountants had the highest number of transitions between employers; amongst operatives for assemblers, food operatives, and truck drivers.

In summary, several occupations have been identified as the most frequent movers in all directions and between all labour market states. These include care workers, sales assistants, general clerks, waiters, cleaners, catering assistants, construction and storage labourers. The list of occupations with the highest number of transitions in 2014 is broadly in line with that observed in 2013.

Table 6.3 Occupations with Most Frequent Transitions, 2014 (All quarters)

	Managers	Professionals	Associate prof.	Clerks	Tradespersons	Services	Sales	Operatives	Elementary
E to UE	Retail	Teachers Accountants	Sales exec.	General Payroll	Carpenters Electricians Farmers Painters Construction	Care Child-minders	Sales assistants	Machine drivers Truck drivers	Storage Cleaners Catering Bar staff Waiters
UE to E prev occ		Teachers Accountants	Sales exec. Fin. accounts	General PA	Carpenters Construction Plumbers Gardeners Chefs Plasterers	Care Child-minders Hairdressers	Sales assistants	Construction Assemblers Truck drivers	Construction Waiters Storage Cleaners Bar staff
E to I	Functional	Nurses Teachers	Sales exec.	General Payroll PA Receptionist	Farmers Mechanics	Care Child-minders. Hairdressers Ed assistants	Sales assistants		Construction Waiters Cleaners Catering Bar staff Farm workers Packers
I to E prev occ		Teachers		General		Care Hairdressers	Sales assistants		Waiters Cleaners Bar staff
E to study				General		Child-minder	Sales assistants		Waiters Bar staff Farm workers Catering Construction
E to home duty				Payroll General		Care			
E to retirement		Nurses			Farmers	Care			
Inter out	Retail Functional		Sales exec.	General Government Receptionist			Sales assistants	Truck drivers	Catering Bar staff Cleaners Storage Construction Waiters
Inter in	Functional Retail		Sales exec. IT technicians Financial	General Payroll Government		Care	Sales assistants Customer care	Taxi drivers Assemblers Food Process	Construction Waiters Catering Storage
Intra	Functional	Doctors Teachers Accountants Programmers Nurses	Sales exec. Sales accounts IT technicians Fin. accounts	General Payroll PA Financial Receptionist	Chefs Plumbers Electricians Carpenter IT engineer	Care Child-minders Hairdressers Ed assistants	Sales assistants Customer care. Contact centre	Assemblers Food Truck drivers	Construction Waiters Bar staff Catering Cleaners Storage Farm workers Security

6.7 Replacement and Turnover

Table 6.4 presents estimates of replacement and turnover rates for broad occupational groups based on the labour market transitions.

Two estimates of replacement rates are presented: one based on transitions to inactive retirement and one based on all exits to economic inactivity (retirement, home duties, study, disability etc.) adjusted for net losses arising from inter-occupational movements.[34] While for some occupations, the inclusion of net losses from inter-occupational transitions increases replacement demand (transitions out of an occupation are greater than transitions in), for others it decreases replacement demand (transitions in are greater than transitions out).

Table 6.4 Employment, Replacement and Turnover Rates by Occupational Group, 2014 (All quarters)

		Replacement		Turnover	
	Emp.	Retirement	Exits to inactivity (including retirement) and net exits due to inter-occup. movement	Intra-occupational	Intra-occup. and neutral inter-occup. movement
Managers	150,200	1.7%	4.8%	4.4%	8.3%
Professionals	354,700	1.4%	4.3%	8.8%	11.1%
Assoc. prof.	216,600	0.9%	5.2%	7.5%	11.5%
Admin.	208,500	1.2%	7.4%	8.2%	12.5%
Trades	285,400	1.8%	6.2%	6.4%	8.7%
Personal serv.	144,600	1.2%	11.8%	11.0%	13.4%
Sales	166,100	0.8%	11.0%	11.7%	16.9%
Operatives	144,900	1.1%	7.9%	8.7%	14.8%
Elementary	210,100	1.1%	13.7%	12.7%	18.1%
Total	1,881,200	1.3%	6.9%	8.7%	12.8%

In 2014, economically inactive retirements accounted for just over 25,000 or 1.3% of total employment. Exit rates from employment due to economically inactive retirements were close to 1% for most occupations. The rates were the highest for managers and tradespersons (close to 2%) and the lowest for sales occupations (0.8%). In terms of individual occupations, the highest retirement rates were observed for nurses, teachers, care workers and farmers (Table 6.5).

When all exits to inactivity (adjusted for net losses from inter-occupational movements) (Table 6.4, column 4) were considered, the replacement rate was estimated at 6.9%. Above average replacement rates were observed for elementary, sales and services occupations; below average rates were observed for managers, professionals, associate professionals and tradespersons. At occupational level, the highest replacement rates were observed for sales workers (sales, assistants, sales executives and customer care), carers (care workers, child-minders), hospitality workers (waiters, catering assistants), farmers, hairdressers, clerks (general, receptionists, payroll), labourers (agricultural, construction, cleaning, packers), operatives (drivers, assemblers, plant and construction operatives), carpenters, gardeners, fitness instructors, IT technicians and educational assistants.

In addition to replacement rate estimates, labour market transitions were used to estimate turnover rates in 2014. Two turnover rates are presented: one based on intra-occupational transitions (change of employer) and another based intra-occupational transitions, as well as neutral inter-occupational transitions.

[34] It is recognised that this approach has limitations: it overestimates demand where there is no intention to replace those who leave; it underestimates demand as it ignores emigration and deaths and assumes that exits to unemployment arise due to job closures only, rather than dismissals or voluntary exits.

The turnover rate based on the intra-occupational movements was estimated at 8.7%. A higher than average rate of intra-occupational movements was observed for sales, services and elementary occupations; turnover rates were the lowest for managers and tradespersons. In terms of individual occupations, change of employer was the most frequent for sales staff (sales assistants, customer service workers, contact centre workers), hospitality workers (waiters, catering assistants, bar staff), labourers (construction, storage, agricultural), clerks (general admin, payroll, financial, receptionist), care workers (including child-care), construction workers (carpenters, plumbers, labourers), hairdressers and food operatives. Amongst professionals, turnover was the highest for accountants, doctors, teachers, IT programmers and IT technicians.

When the turnover estimates were adjusted to account for neutral inter-occupational transitions (transitions between occupations where exits from an occupation were compensated in full by entries to that occupation), the average turnover rate increased to 12.8%. Deviation from the average remained similar to those observed for intra-occupational movements alone, with rates typically lower for white collar occupations and trades. Individual occupations with the highest estimated turnover were very similar to the list based on change of employer only.

Table 6.5 Occupations with Above Average Replacement and Turnover Rates, 2014

Replacement		Turnover	
Retirement	Inactivity plus net inter occupational	Intra-occupational	Intra-occupational plus neutral inter-occupational
Farmers	Sales assistants	Sales assistants	Sales assistants
Nurses	Care workers	Waiters	Elementary construction
Care workers	Waiters	Elementary construction	General admin
Teachers	Farmers	General admin	Waiters
	General admin	Care workers	Care workers
	Elementary construction	Accountants	Child-minders
	Catering assistants	Child-minders	Catering assistants
	Cleaners	Carpenters	Elementary storage
	Child-minders	Payroll clerks	Bar staff
	Taxi drivers	Catering assistants	Payroll clerks
	Bar staff	Bar staff	Carpenters
	Functional managers	Elementary storage	Programmers
	Farm workers	Programmers	Food operatives
	Truck drivers	Hairdressers	Customer service
	Payroll clerks	Doctors	Receptionists
	Hairdressers	Customer service	Educational professionals
	Sales exec.	Plumbers	Financial admin
	Packers	Ed. professionals	Security guards
	Educational assistants	Food operatives	Financial accounts
	Ed. professionals	Financial admin	Plumbers
	Receptionists	IT technicians	Farm workers
	Assemblers	Educational assistants	Assemblers
	Bus drivers	Receptionists	Machine drivers
	Customer service	Farm workers	IT technicians
	Carpenters	Financial accounts	Contact centre
	IT technicians	Contact centre	Construction operatives
	Elementary process plant	IT engineers	HR officers
	Construction operatives		Van drivers
	Retail managers		IT engineers
	Fitness instructors		Housekeepers
	Gardeners		
	Elementary agricultural		

Section 7 Employment Permits

7.1 Introduction

All non-EEA nationals who wish to take up employment in Ireland are required to attain an employment permit. By examining the occupations for which employment permits have been issued, areas where employers are having difficulty in sourcing suitably qualified candidates from the Irish and EU labour market can be ascertained.

In order to attain an employment permit, an individual must have a valid job offer from a prospective Irish employer who has proved that there were no Irish or EEA nationals available to fill the post. The Employment Permits (Amendment) Act 2014 was signed into law on 27 July 2014 and came into effect in October 2014. The Act introduced nine classes of employment permits, however the analysis presented here covers the period January to Septmber 2014 and pertains to the four pre-Act permit schemes:[35]

- **Work permit scheme** – permits issued for occupations which were identified as being difficult to source in the Irish labour market and for which the annual salary on offer is above €30,000.
- **Green card scheme** – permits issued for all occupations, except those on the ineligible occupations list and those contrary to public interest, with an annual salary of €60,000 or more; they were also issued to a restricted list of occupations (where high level strategic skills shortages exist) with an annual gross salary of €30,000 or more.
- **Training/Intra company transfer** (ICT) **scheme** – permits issued to facilitate the transfer of senior management, key personnel or trainees who were non-EEA nationals from an overseas branch of a multinational corporation to its Irish branch.
- **Spousal/dependant permit scheme** - permits issued to the spouses/dependants of green cards holders, certain work permit holders and third country researchers.

7.2 Overall Trends

There were approximately 4,100 new employment permits issued in the first nine months of 2014[36], an increase of 34% on 2013, and 9% on 2010 (Figure 7.1). The number of green cards more than doubled between 2010 and 2013, while the number of new work permits issued declined over the same period.[37] The two fold increase in the number of new work permits issued since 2013 relates to both an increase in the number of permits issued to IT workers and the reintroduction of medical employment permits[38].

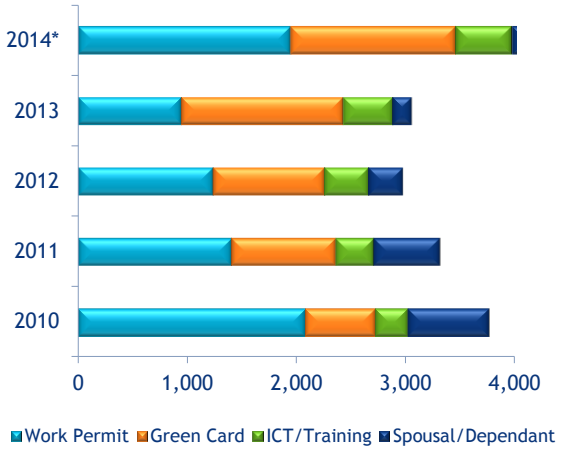
[35] Data for the new nine permit classes was available for Nov and Dec 2014 only.

[36] Figure 7.1 refers to the first nine months of 2014 as the type of permit changed subsequent to this; for all other data referring to 2014, the full year is examined.

[37] The decline in the number of work permits issued was due in part to the lifting of restrictions on labour market access for Romanian and Bulgarian nationals in 2012.

[38] Over the period 2010 to 2013, doctors entered the Irish labour market through channels other than the employment permit scheme.

Figure 7.1 New Permits by Type, 2010-2014*



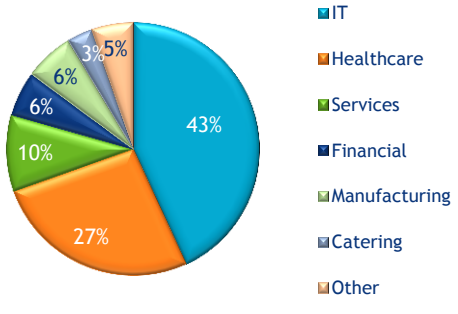
Source: DJEI

*2014 refers to January-September only

7.3 Employment Permits by Sector

A breakdown of employment permits by sector[39] is detailed in Figure 7.2. In 2014, 43% of all new employment permits were issued for the IT sector, with a further 27% for the healthcare sector.

Figure 7.2 New employment permits by sector, 2014



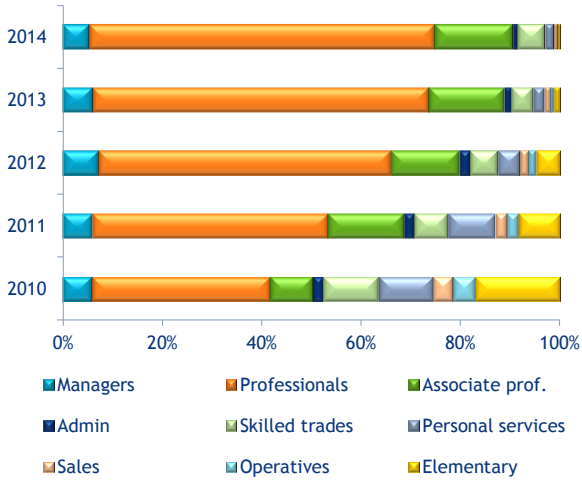
Source: DJEI

Between 2013 and 2014, the number of new employment permits issued to the IT sector increased by 31%, whereas the number issued to the healthcare sector grew by almost 300% (due to the reintroduction of medical permits). There were also gains, although to a lesser extent, for the remaining sectors listed above.

7.4 Permits by Occupation

Figure 7.3 details all new employment permits issued by occupation. Over the period 2010 to 2014, the number of new permits issued increased for all occupational groups excluding sales, operatives and elementary occupations. The growth was particularly strong for professional occupations, for which the number of permits increased almost three fold. More recently, between 2013 and 2014, there was a decline observed for all occupations excluding managers, professionals and associate professionals, again with growth most evident for those in professional occupations.

Figure 7.3 New Employment Permits by Broad Occupation, 2010-2014



Source: DJEI

Managers

- **Overall:** new employment permits for managerial positions accounted for 5% of all permits issued in 2014
- **Type (refers to Jan-Sept 2014 only):** these consisted primarily of green cards

[39] Sectors are defined by the DJEI.

(45%) and intra-company transfers (41%); indeed, new employment permits for managers accounted for 19% of all intra-company transfers

- **Sector:** employment permits for managers were primarily issued for positions in services, manufacturing, financial services and IT
- **Nationality:** over half (55%) of all permits issued for managers were for those originating from the USA
- **Occupations:** new employment permits were most frequently issued for:
    - operations managers
    - vice presidents
    - CEOs/CFOs
    - directors of supply chain
    - general managers in manufacturing.

Professionals

- **Overall:** new employment permits for professionals accounted for 69% of total permits issued in 2014
- **Type (refers to Jan-Sept 2014 only):** permits were primarily green cards (44%) and work permits (48%); indeed, permits for professionals accounted for the majority of green cards and work permits issued, at 82% and 70% respectively
- **Sector:** permits were mainly issued for positions in IT (47%) and healthcare (36%)
- **Nationality:** almost 60% of all new permits for professionals were issued to persons from India, Pakistan and the US
- **Occupations:** new employment permits were most frequently issued for:
    - IT: multilingual account strategists/managers; analysts (systems, test, data), software developers (with Oracle, Javascript, PHP etc.), systems architects/ engineers
    - healthcare: medical doctors (registrars (primarily general but also in specialities including anaesthetics, cardiology, oncology, psychiatric, paediatric, ophthalmology and emergency medicine), senior house officers), nurses
    - manufacturing: engineers (project, process, electronics, field service)
    - business: business analysts, auditors.

Associate Professionals & Technical

- **Overall:** new employment permits for associate professionals accounted for 16% of total permits issued in 2014
- **Type (refers to Jan-Sept 2014 only):** over half (51%) of all permits issued to associate professionals were work permits, with the remainder equally divided between intra-company transfers and green cards; in fact, intra-company transfers for this occupational group accounted for almost a third (29%) of all intra-company transfers issued
- **Sector:** permits were primarily issued for the IT sector (56%), services (16%), financial services (10%) and manufacturing (8%)
- **Nationality:** half of all permits were issued to persons from the US, India and Israel
- **Occupations:**
    - business and financial: account strategists/managers (with languages) including online sales, business development, inside sales representatives, marketing

executives, analysts (financial and risk)

- IT: systems analysts, testers, IT support, localisation, database administrators
- science/engineering: manufacturing technicians, customer/commissioning engineers, mechanical, quality assurance.

Administrative and Secretarial

- **Overall**: with 45 permits, administrative positions accounted for 1% of total new permits issued in 2014
- **Type (refers to Jan-Sept 2014 only):** almost two thirds of permits were work permits
- **Sector:** permits were primarily for the services, IT and financial services sectors
- **Occupations:** fund accounting, multilingual associate account strategists.

Skilled trades

- **Overall**: new employment permits issued for those in skilled trades accounted for 5% of total permits issued in 2014
- **Type (refers to Jan-Sept 2014 only)**: over two thirds of permits were work permits; 15% of permits were intra-company transfers, accounting for 8% of all intra-company transfer permits issued
- **Sector:** over half of the permits were issued for the catering sector
- **Occupations:** permits were most frequently issued for:
  - chefs: 57% of new employment permits issued for skilled trades was for chefs, many in ethnic cuisine
  - electrical and electronic trades: field service engineer, telecoms test engineer, customer engineer
  - butchers, boners, slaughter house operatives.

Caring, Leisure and Other Services

- **Overall:** new employment permits issued for those in caring occupations accounted for 2% of total permits issued in 2014
- **Type (refers to Jan-Sept 2014 only):** almost two thirds (63%) of permits issued for this occupational group were spousal/dependant permits, accounting for a third of the overall spousal/ dependant permits issued
- **Occupations:** permits were most frequently issued for care assistants, and to a lesser extent, for barbers and childcare workers.

Sales and Customer Services

- **Overall:** new employment permits issued for those in sales related occupations accounted for 1% of total permits issued in 2014; permits were most frequently issued for customer care workers, service representatives and sales assistants.

Operatives

- **Overall:** at 8 permits issued, new employment permits for operatives accounted for 0.2% of total permits issued in 2014.

Elementary Occupations

- **Overall:** at 24 permits issued, new employment permits for elementary occupations accounted for 0.5% of total permits issued in 2014.

Section 8 Vacancies

The analysis covers Public Employment Service (PES) vacancy data (from Department of Social Protection's (DSP) vacancy portal Jobs Ireland) and IrishJobs.ie (a private recruitment agency). There is also an analysis of the Recruitment Agency Survey conducted by the SLMRU in April 2015, which aims to identify difficult-to-fill vacancies. [40]

Several issues arise with vacancy data, including the following:

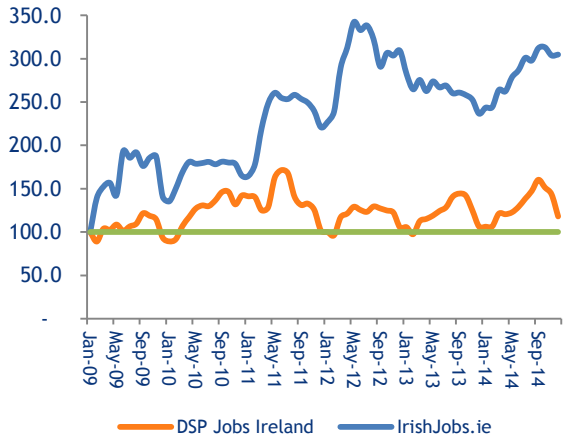
- vacancies may be advertised through channels not captured in the analysis leading to an underestimation of the true demand
- vacancies may be advertised simultaneously through several channels leading to double-counting and therefore an overestimation of the true demand
- the extent to which each vacancy arises due to expansion demand (the creation of a new position by an employer), replacement demand (a person leaving an existing position) or turnover is unclear.

8.1 Notified Vacancies

Figure 8.1 shows the vacancy index for the vacancies advertised through DSP Jobs Ireland and IrishJobs.ie. For the most part of the observed period the DSP Jobs Ireland vacancy index has been at or above the base level (January 2009). The IrishJobs.ie vacancy index has exhibited an overall upward trend. However, the number of DSP Jobs Ireland vacancies are more than twice that of IrishJobs.ie in absolute terms (on average 5,700 DSP Jobs Ireland vacancies per month compared to 2,500 for IrishJobs.ie in 2014).

[40] Detailed analsyis of the vacancy data is published in the Vacancy Overview 2014, SOLAS/EGFSN 2015.

Figure 8.1 New Notified Job Vacancies Index, (January 2009 = 100), 2009-2014

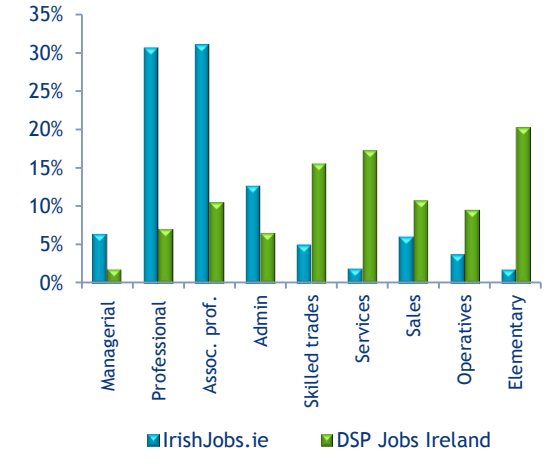


Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

8.1.1 Vacancies by Occupation

In 2014, vacancies advertised through IrishJobs.ie were mostly concentrated in professional and associate professional occupations (Figure 8.2). Newly advertised vacancies through DSP Jobs Ireland were concentrated in elementary, personal services and skilled trades occupations.

Figure 8.2 Vacancies by Occupational Group (%), 2014



Source: IrishJobs.ie and DSP Jobs Ireland

Managers

- In 2014, vacancies were most frequent for managers in
  - hospitality (in restaurants, bars, hotels and catering)
  - financial, HR (across all sectors)
  - logistics (procurement, supply chain, purchasing, warehouse)
  - sales and marketing
  - IT (in areas such as infrastructure and development)
  - production (in manufacturing and construction) and operations across all sectors
  - services (in retail, banking and facilities).
- A high level of experience was expected for managerial posts, with a much higher than average share of vacancies requiring six or more years' experience (28% compared to 12% overall).
- **Recruitment Agency Survey (Apr 2015)**: 2% of all difficult to fill vacancy mentions were for managers in
  - IT
  - sales (with industry specific knowledge and experience)
  - marketing (product strategy development and management)
  - supply chain.

Professionals

- Vacancies for professionals accounted for 31% of all IrishJobs.ie vacancies in 2014 and were most frequent for
  - IT professionals (accounted for almost a third of all professional vacancies)
    - programmers and software developers in application development, database/enterprise development and operating systems
    - IT business analysts, architects and systems designers in areas such as platform and user operations
    - web designers/developers
    - network engineers and test engineers with some testing jobs in localisation requiring language skills
    - IT project managers (e.g. for desktop/helpdesk support, business systems, service delivery)
  - business and finance professionals
    - chartered accountants (qualified and part-qualified)
    - management consultants and business analysts (e.g. funds industry, banking)
    - other business professionals (risk analysts, project managers, actuaries and quantity surveyors)
  - engineers and scientists
    - process engineers in scientific, medical and manufacturing sectors
    - product development and design engineers (electrical, mechanical, R&D)
    - project managers (in construction, pharmaceuticals, manufacturing)
    - civil/structural engineers
    - technologists (food, process, product development, R&D, technical solutions)
    - scientists (chemical scientists (e.g. analytical, organic), biological scientists (e.g. microbiology) and R&D scientists)

- health professionals
  - nurses (e.g. general and staff nurses, clinical nurses, nurse managers in oncology, anaesthetics and orthopaedics)
  - doctors, clinical psychologists, pharmacists (mainly retail), radiographers
  - therapists (occupational, speech and language, physiotherapist)
  - other healthcare professionals (e.g. dieticians).

- A third level degree qualification was stated as a requirement in almost two thirds of IrishJobs.ie vacancies for professionals - the highest share for any of the occupational groups and above the overall share of 50%.
- In over two thirds of IrishJobs.ie vacancies for professionals, 2-6 years' experience was stated as a requirement; with a further 17% specifying at least six years' experience.
- **Recruitment Agency Survey (Apr 2015):** Professional occupations accounted for almost three quarters of all difficult to fill (DTF) mentions, with the following occupations identified as difficult to source:
  - IT professionals
    - programmers and software developers (one quarter of all DTF mentions) with skills in Java, .Net, C++ etc.
    - web/mobile applications developer, web design, publishing, user online experience (UX) and user interaction (UI) related
    - quality assurance - system performance & reliability testing (with demand for both senior and middle ranking posts)
    - IT business analysts (big data, IT and business resource planning (ERP with SAP, Azure, CRM), database/data warehouse architecture)
    - network engineers (internet protocol with Open Source, LINUX)
  - engineers and scientists
    - Production and process engineers, in contract manufacturing (requiring regulatory/compliance skills), commissioning engineers (overseeing the installation of systems/plants), lean manufacturing and specialist engineers in niche areas (e.g. water treatment, electrical grid infrastructure, electrical safety)
    - quality assurance and validation engineers
    - chemical engineers (production process roles in biopharma, food, medical devices)
    - design and development engineers (especially for medical devices industry and R&D)
    - scientists - chemists, biological scientists and biochemists/ biotechnologists in niche areas such as pharma co-vigilance (clinical trials and drug safety), analytical development and product formulation
  - business and financial professionals
    - accountants with expertise in taxation, auditing, financial restructuring, regulatory compliance and financial management

- credit and risk management (e.g. risk analysts and actuaries) and regulatory compliance
- business analysts (especially business intelligence solutions and resources
- financial advisors (banking/ insurance)

- healthcare professionals
  - medical practitioners especially locum and non-consultant hospital doctors, registrars and medical specialists (in general and emergency medicine, anaesthetists, paediatricians, consultant radiologists)
  - nurses - advanced nursing practitioners in intensive care and operation theatre nursing; general nurses, especially for roles in cardiovascular care and in older people care; intellectual disability nurses
  - radiographers (clinical specialists; MRI and CT radiographers)
- construction professionals (limited to positions in niche areas (e.g. experienced quantity surveyors)).

Associate professionals

- Vacancies for associate professionals accounted for 31% of all IrishJobs.ie vacancy notifications in 2014 and were most frequent for
  - business associate professionals
    - sales and marketing (inside sales specialists with languages, sales representatives, field sales executives, account executives with languages, marketing executives, business developers, fundraisers, mystery shoppers, procurement agents/buyers)
    - financial advisors/analysts, audit managers, account managers, multilingual claims officers
    - compliance officers
  - science, engineering and technology technicians
    - IT technicians (technical support agents and customer service executives with languages, data analytics managers, helpdesk technicians, systems administrators)
    - laboratory technicians (medical, quality control, food, microbiology, chemistry)
    - engineering technicians (manufacturing, mechanical, electrical/electronic, process)
    - CAD technicians
  - other associate professionals
    - interpreters
    - vocational trainers/instructors (e.g. in the areas of retail sales, childcare, customer service), recruitment consultants
    - designers (UI/UX, graphic, fashion, visual), technical writers.
- Foreign language skills were frequently stated as a requirement in vacancies for associate professionals; languages, particularly German, French, Dutch, Spanish and Italian, were required for roles in IT technical support, fraud analysis, risk management, claims and collections.
- Of the vacancies which specified education, 50% stated a third level degree as a minimum requirement (in line with the average for all IrishJobs.ie vacancies).

- **Recruitment Agency Survey (Apr 2015)**: approximately 12% of all difficult to fill mentions were at associate professional level, primarily in the areas of:
  - IT technical support roles, often with both technical and language skills for supporting multinational operations; IT platforms including network and server infrastructure
  - science technicians in niche areas (e.g. biotech)
  - construction-related technicians in BIM (building information modelling), CAD
  - supply chain management (junior roles)
  - financial (business banking operation analysts with EU language skills, fund accounting, including compliance and transfer agency client servicing roles)
  - technical sales (Software B2B, SaaS products, Salesforce).

Administrative/secretarial

- Administrative and secretarial vacancies in 2014 were most frequent in
  - finance
    - primarily fund accountants but also cost, treasury, management, corporate and commercial
    - accounts payable/receivable clerks with language skills
    - payroll coordinators/administrators
    - credit controllers, some with language skills
    - multilingual financial/banking administrators
  - HR, pensions and claims administrators
  - logistics and distribution
    - freight clerks (air, ship and road freight forwarding)
    - purchasing administrators, inventory analysts, stock controllers
    - logistics co-ordinators
  - other (receptionists, company secretaries, personal assistants, legal secretaries, sales support administrators, mystery shoppers).
- Of the vacancies which stated an education requirement, 32% stated a minimum of a third level degree qualification (compared to 65% for professional vacancies and 50% overall).
- **Recruitment Agency Survey (Apr 2015)**: administrative occupations that were reported as being difficult to fill were limited to the following job titles:
  - financial clerks (credit control, accounts payable and debt recovery), with many posts requiring a foreign language
  - supply chain support roles often requiring EU languages.

Skilled trades

- Vacancies for skilled tradespersons accounted for 16% of all DSP Jobs Ireland vacancies and 5% of IrishJobs.ie vacancies in 2014 and were most frequent for
  - food preparation trades
    - chefs accounted for a third of all vacancies in this group
    - butchers/boners/slaughterline operatives and to a lesser extent, bakers
  - electricians (included both qualified and apprentice electricians in industrial and commercial activities and for field service engineering)

- construction trades (plumbers and carpenters accounted for both the largest share of construction trades notifications and the largest increase in notifications since 2013; there was also increased activity for painters, bricklayers and roofers)
- welders (TIG/MIG, arc, orbital, coded, electric and butt fusion); fabricators (steel, metal) and pipe fitters
- vehicle trades (mechanic, HGV mechanic, panel beater, NCT vehicle tester)
- fitters (maintenance, mechanical, plant and pipe fitters and toolmakers)
- other trades (including landscape gardeners, tailors/seamstress/ dressmakers and cabinet makers).

- At 60%, this occupational group had the highest share of DSP Jobs Ireland vacancies with a requirement for fully experienced staff.
- **Recruitment Agency Survey (Apr 2015)**: limited difficulties were reported in sourcing
  - TIG & MIG welders
  - steel erectors/fixers
  - motor mechanics (niche areas – HGV maintenance)
  - chefs.

Caring, leisure and other service

- Vacancies for caring, leisure and other service occupations accounted for 17% of all DSP Jobs Ireland vacancies in 2014 and were most frequent for
  - care workers and home carers (accounting for over two thirds of DSP Jobs Ireland vacancies in this occupational group); over a half of these vacancies were for part-time positions
  - childcare workers
  - barbers/hairdressers
  - beauty/massage therapists/nail technicians
  - other service occupations including housekeepers, caretakers, cleaning supervisors/managers, dog groomers, dental nurses, leisure centre attendants and sports instructors.
- Almost two thirds of vacancies advertised through DSP Jobs Ireland required candidates to have some experience, with a further 19% required to be fully experienced.
- **Recruitment Agency Survey (Apr 2015)**: there were no difficult to fill mentions for this occupational group.

Sales and customer service

- Vacancies for sales and customer service occupations in 2014 were most frequent for
  - door-to-door representatives in sales and fundraising for charities
  - sales/retail assistants and customer advisors
  - field sales agents
  - lead generators in telemarketing
  - customer services occupations (primarily multilingual contact centre agents)
  - other sales/customer services (beauty advisors, telesales, merchandisers, collection agents, pharmacy assistants).
- At 9%, this occupational group had the lowest share of vacancies notified through DSP Jobs Ireland which required candidates to be fully experienced and

the highest share of vacancies which required no minimum level of experience (primarily for positions as door-to-door salespersons, field sales representatives and sales assistants).

- **Recruitment Agency Survey (Apr 2015)**: sales and customer services positions accounted for approximately 4% of difficult to fill mentions in:
  - customer service (contact centre customer support roles, with many posts requiring foreign languages (especially German and Nordic languages) and relevant product knowledge)
  - sales (telesales, technical sales representatives for the pharmaceutical and medical device industries).

Operatives

- Vacancies for operatives in 2014 were most frequent for
  - articulated and rigid truck drivers and to a lesser extent for HGV, deliveries, bus and coach drivers
  - process operatives (e.g. in the food industry, quality control)
  - mobile machine drivers: fork-lift truck drivers (e.g. for reach, counterbalance), crane, teleporter, excavator
  - construction operatives (e.g. scaffolders, groundworkers, pipe layer/fitter)
  - plant and machine operatives (e.g. CNC machine operators/machinists/ programmers).
- Experience was required for the majority of vacancies advertised through DSP Jobs Ireland for positions as operatives.
- **Recruitment Agency Survey (Apr 2015)**: difficult to fill mentions for operatives were limited to
  - CNC operators
  - drivers (fork-lift drivers, special vehicles drivers)
  - process operatives in high tech manufacturing.

Elementary

- In 2014, 20% of all DSP Jobs Ireland vacancies were for elementary occupations. Vacancies were most frequent for
  - kitchen and catering assistants; almost half of these vacancies were for part time positions
  - cleaners (almost three quarters of these vacancies were for part time positions)
  - security guards (Loss Prevention Officers, store detectives, retail/door security)
  - elementary operatives (sign lighting and guarding operatives/flag persons (roadworks), ground workers/block layers in construction)
  - baristas, waiters/waitresses and bar staff
  - elementary storage (warehouse assistant, banksperson, retail stock scanning).
- **Recruitment Agency Survey (Apr 2015)**: experienced waiting staff were the only elementary positions which were mentioned as difficult to fill.

Section 9 Occupational Employment Profiles

This section provides a statistical analysis of occupational employment. Most of the indicators used in the analysis are presented in Table 9.1. Employment profiles are provided for over 130 occupations, which are grouped into 17 broad groups.

Column 1 (Table 9.1) contains occupational titles; the list of occupations was based on the Standard Occupational Classification (SOC) 2010. In cases where estimated employment was less than 3,000, two or more occupations were merged to form an occupational group. This was done in order to ensure that a sufficiently large number of observations was used for statistical inference.

Column 2 presents the employment level for each occupation. Employment figures represent the annual average of four quarters in 2014. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 1 to quarter 4 2014.

Column 3 shows the percentage of females employed in an occupation. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2014.

Column 4 shows the percentage of persons who work part-time. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2014.

Column 5 provides an indication of the unemployment level for an occupation. The unemployment rate is calculated by dividing the number of unemployed persons aged 15 and over in an occupation by the sum of the number of employed and unemployed persons aged 15 and over in that occupation. As only persons who stated their previous occupation were included in the calculations, the estimates may underestimate the true unemployment rate for an occupation.

The unemployment rate is indicated as follows:

- 'B.A.' for unemployment rates below the national average of 9.9% (quarter 4 2014)
- 'A.' for unemployment rates of 9.9% (quarter 4 2014)
- 'A.A.' for unemployment rates above the national average of 9.9% (quarter 4 2014)

To avoid issues with small sample size at this level of disaggregation, the unemployment rate could only be reported for occupations in which at least 1,000 persons were estimated to be unemployed. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2014.

Column 6 shows the percentage of persons aged 55 and over in employment in an occupation. A higher than average share of persons aged 55 and over indicates a higher expected retirement rate in the short to medium-term. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2014.

Column 7 shows the percentage of non-Irish nationals in employment. A higher than average proportion of non-Irish nationals in an occupation indicates employers' reliance on sourcing skills/labour from abroad to fill vacancies. Source: Analysis by SLMRU (SOLAS)

based on data provided by the CSO (QNHS), quarter 4 2014.

Column 8 shows the percentage of persons who have attained a third level qualification (NFQ levels 6-10). See Appendix A for the award types placed at these levels. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2014.

Column 9 shows the annualised rate of employment growth for the period 2009-2014. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), 2009-2014.

Column 10 shows the number of new employment permits issued to non-EEA nationals in 2014. This is an indicator of the demand for skills that could not be met from domestic or EEA sources. Source: Department of Jobs, Enterprise and Innovation.

Column 11 presents the results of the SLMRU (SOLAS) Recruitment Agency Survey conducted in April 2015. The occupations with mentions of difficult-to-fill vacancies reported by recruitment agencies are indicated by an 'X'. Source: SLMRU (SOLAS) Recruitment Agency Survey, April 2015.

Column 12 presents the expected medium term employment growth rate by occupation. The growth rates are indicated as follows:

- 'B.A.' for employment growth below the expected national average of 19% for the period 2012-2020
- 'A.' for expected employment growth of 19% for the period 2012-2020
- 'A.A.' for employment growth above the expected national average of 19% for the period 2012-2020.

Source: Recovery and competitive manufacturing scenario, Occupational Employment Projections 2020, SLMRU (SOLAS), February 2014.

Column 13 shows the estimated replacement rate for each occupation. The replacement rate was based on the number of identified transitions from employment to inactivity (e.g. retirement, home duties, study, etc.) and net losses from inter-occupational movements. The rates were reported only for occupations for which the estimated number of transitions was above 1,000. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2013 - quarter 4 2014.

Column 14 shows the estimated turnover rate for each occupation. The turnover rate was based on the number of identified intra-occupational transitions (changes of employer) and neutral intra-occupational movements (transitions between occupations where exits from an occupation were compensated in full by entries to that occupation). The rates were reported only for occupations for which the estimated number of transitions was above 1,000. Source: Analysis by SLMRU (SOLAS) based on data provided by the CSO (QNHS), quarter 4 2013 - quarter 4 2014.

Column 15 provides an indication of shortage for each occupation. The following categories were used:

- 'no shortage' - for occupations for which there were no apparent labour market imbalances
- 'skill shortage' - where there was an insufficient number of individuals who had the required level of educational attainment, skills set and/or experience

to meet the required labour market demand

- 'labour shortage' – where there was an insufficient number of individuals available to take up employment opportunities in a particular occupation
- 'inconclusive' - for occupations for which the available quantitative information was 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' within this report refers only to the situation whereby 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 EEA. Consequently, there may not be a shortage from a European perspective.

Column 16 provides some further elaboration on the shortages or issues identified for the relevant occupation.

Using data from Table 9.1, individual occupations were examined in detail. The analysis covers the following broad occupational groups:

- science occupations
- engineering occupations
- IT occupations
- business and financial occupations
- healthcare occupations
- education occupations
- social and care occupations
- legal and security occupations
- construction professional and associate professional occupations
- construction craft occupations
- other craft occupations
- arts, sports and tourism occupations
- transport and logistics occupations
- administrative and secretarial occupations
- sales and customer service occupations
- operatives
- elementary occupations (labourers).

In general, occupations that are associated with the same sector of employment or occupations with similar duties were grouped together. The following information was provided for each occupational group:

- the level of employment (expressed as an annual average figure for 2014)
- employment growth for the period 2009-2014 and 2013-2014
- age profile — employment was grouped as follows: persons aged 15-24, 25-54, and 55 years and older (quarter 4 2014)
- educational attainment — employment was grouped as follows: persons with lower secondary education or less; higher secondary or further education and training (FET); and third level education (quarter 4 2014).

A summary of the balance between the demand and supply is provided for each occupational group. The estimated recruitment requirement was derived by combining expected expansion and replacement demand. Replacement demand was based on the replacement rates presented in Section 6.

The supply of skills was approximated using the expected output from the formal

education and training system.[41] [42]The expected output was derived using third level enrolment and graduation data, as well as any available data on further education and training enrolments and certifications.

Supply data at occupational level is not reported due to the complexity of linking course output to specific occupations (e.g. business courses can be a source of supply for numerous occupations). In addition, for the majority of occupations, there are no mandatory qualification requirements. Thus, the intention is not to provide an exact quantification of the 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. employment permits, difficult-to-fill vacancies, etc.) were examined to reinforce the findings. The results also drew on conclusions from previous reports produced by the EGFSN and other qualitative information. The objective was to identify areas of shortages, without quantifying them.

Identified shortages are classified as skill or labour shortages. In some cases, an indication of the persistence of shortages is also discussed. Given that the findings are based on current data, future shortages are only indicated in cases where there is clear evidence that the shortages will persist or if 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 shortage may 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 the reason for which 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 to increase the number of student places in the relevant disciplines.

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

[41] It should be noted that it is possible that individuals do not work in the occupations for which they are educated/trained.
[42] A detailed analysis of the supply from the education and training system is published in Monitoring Ireland's Skills Supply: Trends in Educaiton and Training Outputs 2015, EGFSN.

Table 9.1 Demand and Shortage Indicators for Selected Occupations

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Functional managers & directors	49.5	20.6%	5.5%	B.A.	24.6%	9.5%	60.5%	1.3%	67		A.A.	9.0%	5.8%	No shortage	
Production managers in manufacturing, mining & energy	12.5	20.9%	5.4%		13.0%	10.3%	70.0%	5.9%	52		A.A.	0.7%	9.2%	No shortage	
Financial managers & directors	4.4	39.7%	3.9%		5.2%	10.1%	88.3%	-1.2%	38		A.	7.9%	8.4%	No shortage	
Advertising, marketing & sales directors	4.8	38.6%	7.5%		10.8%	6.3%	59.8%	3.6%	25	X	A.A.	6.4%	9.7%	Skill shortage	
Human resource managers	5.9	73.6%	9.8%		9.7%	16.1%	90.9%	9.8%	7		A.A.	7.4%	9.5%	No shortage	
ICT specialist & project managers	15.5	27.5%	2.4%		10.5%	10.8%	81.2%	4.2%	184	X	A.A.	4.6%	13.2%	Skill shortage	
Financial institution managers & directors	4.3	30.2%	0.0%		11.5%	11.5%	67.8%	-4.2%	9		A.A.	12.3%	6.3%	No shortage	
Managers & directors in transport & logistics	6.3	18.2%	4.3%		12.6%	9.5%	39.0%	-4.1%	8	X	A.A.	5.9%	8.1%	Skill shortage	
Managers & directors in retail & wholesale	16.0	43.6%	10.2%	B.A.	8.9%	14.3%	47.2%	1.1%	8		A.A.	7.1%	12.3%	No shortage	
Hotel & accommodation managers	8.1	52.4%	19.6%		25.7%	30.3%	53.7%	9.7%	2		A.	7.1%	1.4%	No shortage	
Restaurant managers	6.3	47.8%	7.7%		9.6%	32.5%	40.1%	-4.2%	2		A.A.	15.3%	6.5%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Publicans	3.7	17.4%	6.5%		40.2%	8.4%	12.2%	-6.3%	0		B.A.	9.6%	0.0%	No shortage	
Leisure & sports managers	2.2	29.3%	21.2%		27.2%	11.8%	44.6%	-6.3%	2		A.	44.2%	0.0%	No shortage	
Managers & proprietors in other services	27.1	32.8%	12.5%	B.A.	35.4%	8.0%	43.7%	5.2%	12		A.A.	6.3%	6.0%	No shortage	
Chemical, biological & physical scientists	6.4	50.3%	7.4%		8.6%	13.7%	97.6%	-1.5%	15	X	B.A.	16.6%	14.0%	Skill shortage	Niche areas
Other natural & social scientists; R&D managers	5.8	44.6%	12.8%		6.8%	2.1%	93.0%	0.7%	30		B.A.	6.7%	18.9%	No shortage	
Civil engineers	6.9	10.0%	5.7%		9.8%	4.2%	92.6%	-3.5%	0		B.A.	3.7%	8.1%	No shortage	
Electrical & electronic engineers	3.2	1.2%	0.0%		7.8%	7.1%	94.0%	11.2%	52	X	A.A.	12.5%	4.4%	Skill shortage	Niche areas
Production, process, design & development engineers	4.5	15.9%	0.0%		1.5%	24.6%	96.1%	9.2%	66	X	A.A.	0.3%	15.4%	Skill shortage	
Quality control engineers; other regulatory professionals	3.6	35.6%	4.8%		13.2%	16.5%	87.9%	7.0%	35	X	A.A.	10.9%	25.3%	Skill shortage	
Engineering professionals n.e.c.	3.7	21.4%	6.3%		11.7%	5.5%	92.6%	-1.8%	96	X	A.A.	6.7%	13.4%	Skill shortage	Niche areas
IT Business analysts & systems designers	3.5	19.2%	4.9%		7.3%	18.3%	82.0%	1.8%	379	X	A.A.	3.0%	15.0%	Skill shortage	
Programmers & software developers	17.7	23.0%	3.0%		2.3%	30.7%	92.7%	8.0%	733	X	A.A.	6.2%	13.7%	Skill shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Web designers & developers	1.9	32.8%	12.6%		0.0%	14.0%	52.9%	2.6%	48	X	A.A.	24.8%	24.2%	Skill shortage	Niche areas
ICT professionals n.e.c.	7.3	10.2%	3.0%		7.2%	25.0%	79.1%	-1.7%	234	X	A.A.	6.6%	1.8%	Skill shortage	
Medical practitioners	12.4	52.8%	16.0%		20.0%	15.0%	100.0%	4.0%	1036	X	B.A.	2.7%	11.7%	Skill shortage	
Pharmacists	3.8	62.4%	29.1%		16.4%	4.5%	93.8%	-0.8%	3		A.A.	2.8%	12.5%	No shortage	
Physiotherapists	3.2	75.6%	25.9%		5.4%	6.1%	97.6%	8.9%	1		A.A.	3.7%	17.9%	No shortage	
Occupational & other therapy professionals	5.0	80.0%	33.5%		21.4%	23.7%	100.0%	7.1%	2		B.A.	4.7%	4.8%	No shortage	
Nurses & midwives	55.1	91.7%	25.8%		14.3%	12.8%	96.5%	-0.3%	158	X	B.A.	4.5%	8.2%	Skill shortage	
Other health professionals n.e.c.	11.7	69.7%	18.5%		20.8%	18.4%	93.6%	2.3%	15	X	B.A.	1.0%	8.4%	Skill shortage	Niche areas
Higher & further education teaching profs.	10.4	44.7%	20.0%		25.9%	7.5%	98.7%	-5.2%	29		B.A.	9.2%	3.3%	No shortage	
Secondary teachers	29.3	66.6%	14.0%	B.A.	12.9%	2.2%	98.1%	5.2%	0		B.A.	6.4%	8.5%	No shortage	
Primary & nursery teachers	39.5	90.3%	12.1%		6.8%	1.5%	95.9%	-2.7%	1		B.A.	5.4%	7.6%	No shortage	
Teaching & other educational professionals	14.6	65.6%	31.9%	B.A.	20.1%	8.2%	88.9%	7.3%	15		B.A.	12.5%	16.7%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Barristers, judges, solicitors & related professionals	10.1	44.1%	7.2%		20.1%	4.5%	96.5%	-0.1%	7		A.A.	3.0%	6.1%	No shortage	
Accountants & tax experts	38.5	45.7%	8.6%		10.7%	6.5%	96.1%	0.1%	97	X	A.A.	1.4%	11.2%	Skill shortage	
Mgt. consultants, business analysts & project managers	8.4	34.9%	5.2%		9.0%	23.4%	94.5%	12.0%	122	X	A.A.	7.8%	10.9%	Skill shortage	
Actuaries, economists & statisticians; other business professionals	7.8	46.9%	10.4%		19.5%	9.3%	88.7%	1.0%	15	X	A.A.	10.3%	21.0%	Skill Shortage	
Architects & town planners	4.1	32.5%	9.5%		1.7%	18.9%	96.3%	-8.4%	0		B.A.	16.0%	15.8%	No shortage	
Architectural technologists, construction project managers & surveyors	5.3	6.7%	6.6%		10.2%	10.3%	92.5%	1.3%	5	X	A.A.	7.3%	6.9%	Skill shortage	Niche areas
Social workers & welfare professionals	6.2	58.4%	9.7%		30.3%	2.6%	95.3%	-3.1%	2		B.A.	4.2%	5.8%	No shortage	
Media professionals	5.6	43.6%	21.8%		14.9%	8.8%	82.0%	-3.5%	10		A.A.	3.7%	9.1%	No shortage	
Laboratory technicians	6.7	50.8%	17.3%		20.2%	1.6%	68.7%	1.7%	4		B.A.	6.5%	7.1%	No shortage	
Electrical, electronic & engineering technicians	5.1	6.7%	1.7%		14.7%	4.4%	69.6%	5.0%	131	X	A.A.	0.4%	11.9%	Skill shortage	Niche areas
Process & quality assurance technicians	4.6	35.3%	5.1%		8.9%	20.9%	76.9%	6.9%	17	X	A.A.	10.9%	3.0%	Skill shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Other technicians n.e.c.	5.1	20.5%	9.7%		14.2%	0.9%	68.1%	1.9%	45		A.A.	10.0%	7.4%	No shortage	
IT operations technicians	9.3	24.7%	8.8%		3.5%	16.4%	71.0%	1.2%	84	X	A.A.	13.8%	13.4%	Skill shortage	Multilingual
IT user support technicians	5.0	16.4%	2.7%		4.3%	41.9%	75.3%	10.7%	20	X	A.A.	11.5%	19.4%	Skill shortage	Multilingual
Health associate professionals	11.3	73.7%	24.2%		12.0%	7.2%	81.6%	1.3%	10		B.A.	4.8%	8.8%	No shortage	
Youth & community workers	5.2	72.2%	44.4%		22.2%	4.8%	66.8%	-2.3%	2		B.A.	17.6%	7.0%	No shortage	
Welfare & housing associate professionals	4.7	76.4%	25.7%		29.6%	10.2%	73.5%	3.5%	1		B.A.	12.3%	13.1%	No shortage	
Army personnel	5.6	3.3%	3.8%		7.5%	0.0%	30.2%	-1.7%	0		B.A.	6.6%	1.7%	No shortage	
Gardaí	13.9	25.7%	0.7%		1.4%	1.7%	83.9%	-0.5%	0		B.A.	2.8%	0.8%	No shortage	
Protective service occupations	6.6	11.9%	6.6%		11.0%	0.0%	39.2%	0.8%	2		B.A.	2.1%	2.3%	No shortage	
Artistic, literary & media occupations	16.8	41.3%	30.4%	B.A.	16.7%	19.8%	65.4%	4.1%	20		A.A.	12.9%	11.6%	No shortage	
Design occupations	6.0	47.8%	20.1%		10.6%	16.5%	80.7%	1.0%	7		B.A.	10.1%	6.6%	No shortage	
Sports & fitness occupations	8.3	41.5%	49.8%		3.8%	11.6%	57.2%	1.4%	35		A.A.	22.5%	10.5%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Aircraft pilots, ship officers, air traffic controllers	1.9	8.2%	6.2%		11.3%	6.2%	63.5%	0.7%	0		A.A.	17.0%	12.4%	No shortage	
Brokers & insurance underwriters	4.0	45.1%	8.5%		14.3%	4.1%	65.3%	-6.8%	3	X	A.A.	7.5%	11.5%	Skill shortage	Niche areas
Finance & investment analysts	7.0	35.0%	7.1%		9.8%	6.4%	86.3%	2.7%	53	X	A.A.	7.0%	14.0%	Skill shortage	Niche areas
Financial & accounting technicians	3.4	48.9%	20.2%		15.1%	0.0%	84.8%	-0.7%	11	X	A.A.	0.0%	0.0%	Skill shortage	Multilingual
Financial accounts managers	9.1	61.3%	10.0%	A.A.	9.9%	14.1%	75.5%	9.8%	15	X	A.A.	6.0%	17.7%	Skill shortage	Niche areas
Other business associate profs.	8.8	58.0%	8.4%		13.9%	12.3%	76.4%	11.9%	88		A.A.	13.7%	8.3%	No shortage	
Buyers & procurement officers	3.2	33.2%	4.8%		15.5%	14.7%	52.1%	-2.7%	6		A.A.	12.8%	4.5%	No shortage	
Business sales executives	24.2	23.6%	11.8%	B.A.	13.1%	10.8%	41.3%	-3.4%	53	X	A.A.	8.2%	12.4%	Skill shortage	Multilingual Niche areas
Marketing associate professionals	5.3	53.4%	16.1%		3.1%	22.2%	87.0%	-3.7%	44	X	A.A.	7.5%	15.7%	Skill shortage	Niche areas
Sales accounts & bus. dev. managers	16.4	36.0%	6.0%		8.0%	12.4%	76.2%	3.3%	81	X	A.A.	2.1%	10.2%	Skill shortage	Multilingual Niche areas
Estate agents etc.; conference & exhibition managers	4.8	50.9%	15.5%		13.2%	9.9%	73.8%	1.5%	3		B.A.	14.6%	15.4%	No shortage	
Environmental & other public services associate professionals	5.1	59.3%	23.6%		21.5%	2.2%	45.0%	5.9%	1		B.A.	9.1%	0.0%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Human resources & industrial relations officers	5.9	72.0%	22.7%		9.9%	16.5%	79.6%	-2.0%	16		B.A.	8.4%	19.6%	No shortage	
Vocational & industrial trainers & instructors	9.1	64.0%	18.2%		13.6%	21.2%	73.2%	6.9%	7		B.A.	8.5%	9.8%	No shortage	
Regulations inspectors; health & safety officers	4.0	24.4%	10.3%		15.4%	3.9%	75.2%	-3.0%	4		A.A.	10.6%	10.2%	No shortage	
Government admin. occupations	35.9	75.3%	16.4%	B.A.	19.1%	1.6%	42.0%	-7.3%	1		B.A.	4.3%	7.9%	No shortage	
Financial admin. occupations	54.3	76.7%	25.8%	B.A.	11.2%	11.2%	56.2%	-4.2%	23	X	A.A.	7.4%	15.4%	Skill shortage	Multilingual Niche areas
Records & library clerks etc.	4.1	78.8%	27.2%		17.2%	6.4%	54.1%	6.6%	1		B.A.	13.3%	3.1%	No shortage	
Stock control, transport & distribution admin. occupations	5.2	24.1%	20.3%		12.5%	25.9%	35.2%	-1.8%	0	X	A.A.	10.7%	14.6%	Skill shortage	Multilingual Niche areas
Other administrators n.e.c.	62.5	80.4%	33.6%	B.A.	17.5%	7.0%	43.3%	-0.4%	14		B.A.	8.9%	14.3%	No shortage	
Office managers & supervisors admin. occupations	8.8	82.0%	14.3%		22.1%	5.1%	53.7%	4.5%	1		A.A.	5.2%	7.1%	No shortage	
P.A.s & other secretaries, etc.	29.9	94.6%	39.4%		23.6%	5.4%	32.7%	-4.2%	5		B.A.	6.6%	8.4%	No shortage	
Receptionists	10.8	95.0%	44.5%	A.A.	16.6%	11.1%	32.6%	-2.4%	0		B.A.	14.6%	18.0%	No shortage	
Farmers	79.6	6.2%	11.9%		51.6%	0.6%	7.7%	1.0%	0		B.A.	8.3%	0.9%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Horticultural, agricultural & fishing trades n.e.c.	16.1	7.8%	33.8%	A.A.	28.9%	14.8%	28.0%	2.3%	1		B.A.	8.4%	12.2%	No shortage	
Metal forming, welding & related trades	10.0	0.0%	5.7%		11.7%	17.4%	11.9%	-0.5%	1	X	A.A.	9.8%	13.7%	Skill shortage	
Metal machining, fitting & instrument making trades	27.3	4.0%	8.3%	B.A.	20.1%	6.9%	32.6%	0.3%	11		A.A.	5.2%	5.1%	Skill shortage	
Vehicle trades	21.1	0.8%	8.8%	B.A.	15.7%	12.2%	13.8%	0.9%	0	X	B.A.	6.2%	6.0%	No shortage	
Electrical & electronic trades, etc.	33.9	4.5%	3.3%	B.A.	12.6%	11.9%	44.7%	-6.1%	82		A.A.	3.9%	10.3%	No shortage	
Bricklayers	3.8	1.0%	27.2%	A.A.	12.9%	10.3%	9.3%	-9.9%	0		B.A.	11.8%	25.3%	No shortage	
Plumbers	7.7	2.7%	10.8%		15.0%	6.8%	15.6%	-7.4%	0		A.A.	3.7%	20.7%	No shortage	
Carpenters & joiners	16.2	0.0%	12.5%	A.A.	13.3%	16.1%	9.5%	-10.3%	0		A.A.	8.0%	19.2%	No shortage	
Plasterers	3.8	0.0%	22.2%	A.A.	15.9%	9.1%	9.1%	-6.7%	0		A.A.	3.2%	7.2%	No shortage	
Painters & decorators	6.2	2.6%	14.8%	A.A.	10.1%	24.2%	9.3%	-5.5%	0		A.A.	9.2%	12.6%	No shortage	
Other construction trades	20.3	1.7%	10.1%	A.A.	18.7%	12.3%	15.9%	-8.8%	0	X	A.A.	8.3%	12.8%	Skill shortage	Niche areas
Printing trades	3.4	2.8%	2.7%		8.4%	16.4%	27.6%	-6.8%	0		B.A.	5.5%	0.0%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Butchers, fishmongers, etc.	8.5	9.5%	12.2%		13.0%	30.9%	7.1%	1.6%	18		A.A.	5.8%	4.6%	Labour shortage	Issues with attracting/ retaining staff
Bakers & flour confectioners	4.0	52.1%	24.3%		5.2%	53.5%	22.7%	6.2%	3		B.A.	6.0%	17.7%	No shortage	
Chefs & cooks	26.7	40.6%	27.1%	B.A.	7.8%	39.0%	38.8%	1.8%	146	X	A.	4.0%	10.3%	Skill shortage	Issues with attracting/ retaining staff
Catering & bar managers	5.6	50.0%	18.8%		16.4%	7.1%	29.0%	2.8%	2		A.	16.3%	11.9%	No shortage	
Other skilled trades	8.8	42.1%	20.4%		19.4%	31.2%	31.3%	-1.1%	2		B.A.	13.4%	10.7%	No shortage	
Nursery nurses & assistants	4.8	93.6%	65.2%		10.1%	4.2%	36.7%	-1.9%	5		B.A.	5.1%	10.6%	No shortage	
Child-minders, etc.	18.5	98.8%	55.7%	A.A.	6.9%	24.7%	36.6%	-0.1%	2		B.A.	20.6%	22.6%	No shortage	
Educational support assistants	13.5	91.3%	24.5%		22.1%	3.5%	40.2%	-1.5%	1		B.A.	15.6%	12.7%	No shortage	
Animal carers & pest controllers	1.8	79.2%	49.7%		4.0%	7.1%	46.5%	-5.0%	4		B.A.	12.9%	5.0%	No shortage	
Caring personal service occupations	10.8	71.8%	19.0%		19.5%	17.8%	32.6%	3.4%	51		B.A.	6.7%	9.1%	No shortage	
Care workers, home carers, etc.	51.4	86.0%	45.9%	B.A.	25.7%	10.5%	32.9%	-0.8%	9		B.A.	13.6%	13.0%	Inconclusive	Retention issues

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Leisure & travel service occupations	8.7	54.6%	36.2%		8.1%	12.9%	46.9%	-1.6%	1		A.	8.1%	14.4%	No shortage	
Hairdressers & beauticians, etc.	22.5	86.6%	46.3%	B.A.	4.4%	15.6%	31.9%	-0.7%	6		A.	9.0%	10.0%	No shortage	
Housekeepers & caretakers, etc.	14.4	44.9%	50.6%	A.A.	36.3%	21.8%	15.3%	-0.2%	3		B.A.	12.9%	9.3%	No shortage	
Sales assistants	122.1	69.2%	55.0%	B.A.	9.4%	20.7%	25.9%	-1.0%	6		A.A.	13.2%	16.5%	No shortage	
Sales related occupations	12.0	29.0%	17.8%	A.	15.3%	10.5%	35.4%	-0.2%	4		A.A.	12.2%	7.9%	No shortage	
Sales supervisors	3.9	57.0%	8.7%		8.0%	27.5%	31.1%	2.9%	2		A.A.	5.5%	14.8%	No shortage	
Customer service occupations	21.2	58.4%	18.0%	B.A.	10.5%	25.6%	46.4%	6.3%	21	X	A.A.	13.6%	17.1%	Skill shortage	Multilingual
Food, drink & tobacco process operatives	12.4	31.7%	12.6%	A.A.	8.4%	50.9%	26.3%	18.2%	2		A.A.	7.9%	16.5%	No shortage	Retention issues
Chemical & related process operatives	5.2	36.5%	3.7%		12.8%	11.4%	22.8%	0.2%	0	X	A.A.	1.6%	13.7%	Skill shortage	CNC
Other process operatives	3.0	15.2%	9.6%		18.1%	17.2%	10.4%	-4.1%	1	X	A.A.	24.8%	21.3%	Skill shortage	CNC
Plant & machine operatives	8.1	16.2%	7.4%		13.1%	19.7%	12.0%	-4.5%	4	X	B.A.	9.6%	19.5%	Skill shortage	CNC
Assemblers	7.1	33.3%	12.8%		5.3%	18.2%	21.8%	8.4%	0		A.A.	6.6%	21.2%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Routine operatives	20.6	43.2%	9.4%	B.A.	8.6%	18.4%	36.8%	5.1%	1		A.A.	9.6%	10.9%	No shortage	
Construction operatives	10.5	1.7%	20.8%	A.A.	25.2%	18.9%	5.5%	6.7%	0		A.A.	16.6%	21.3%	No shortage	
Road transport operatives	57.8	3.0%	18.9%	B.A.	31.2%	13.1%	10.7%	-2.8%	0		A.A.	7.1%	12.3%	Skill shortage	Niche areas
Mobile machine drivers & operatives	11.0	0.0%	12.1%	A.A.	17.2%	16.9%	4.1%	-5.7%	0	X	A.A.	9.0%	15.9%	Skill shortage	Niche areas
Other drivers & transport operatives	4.9	16.8%	17.7%		23.6%	14.1%	18.4%	1.5%	0		A.A.	5.5%	10.2%	No shortage	
Elementary agricultural occupations	14.7	29.4%	25.3%		20.5%	33.6%	18.0%	5.9%	1		B.A.	30.8%	15.0%	No shortage	
Elementary construction occupations	33.7	13.9%	21.2%	A.A.	12.8%	22.8%	12.7%	-9.1%	1		B.A.	11.9%	24.0%	No shortage	
Elementary process plant occupations	10.1	37.3%	14.8%	A.A.	5.0%	46.4%	21.6%	-10.7%	0		B.A.	31.6%	15.3%	No shortage	
Elementary administration occupations	9.2	21.1%	19.0%		27.4%	5.1%	12.9%	-4.6%	0		B.A.	7.2%	6.9%	No shortage	
Elementary cleaning occupations	39.1	72.3%	56.8%	A.A.	17.6%	41.7%	14.0%	1.4%	9		B.A.	10.8%	10.7%	No shortage	
Elementary security occupations	14.8	13.5%	26.9%	A.A.	19.2%	27.8%	22.2%	-3.0%	1		B.A.	7.3%	12.0%	No shortage	
Elementary sales & storage occupations	21.4	13.9%	22.5%	B.A.	15.3%	19.7%	17.5%	0.7%	1		B.A.	4.4%	17.3%	No shortage	

Occupation	Number Employed, 2014 (Annual Average - '000s)	% Female	% Part-Time	Unemployment Rate (%)	% Aged 55 years and over	% Non-Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2009-2014 (%)	New Employment Permits Issued, 2014 (Number)	SLMRU Recruitment Agency Survey	Projected Medium-Term Growth Rate (%)	Replacement Rate (%)	Turnover Rate (%)	Shortage Indicator	Comment
Kitchen & catering assistants	23.0	61.5%	46.1%	B.A.	9.8%	35.9%	18.6%	-0.1%	7		B.A.	17.3%	17.6%	No shortage	
Waiters & waitresses	27.6	80.3%	56.7%	B.A.	3.2%	30.5%	33.1%	4.8%	3		B.A.	25.1%	26.3%	No shortage	
Bar staff	18.4	31.9%	55.1%	A.A.	5.8%	14.5%	23.9%	-0.4%	0		B.A.	20.2%	18.6%	No shortage	
Other elementary occupations	4.1	14.8%	40.2%		13.0%	23.6%	22.9%	1.8%	1		B.A.	8.2%	30.1%	No shortage	
Other/not stated	9.1	37.1%	14.4%		9.7%	22.1%	64.8%	11.6%	11			10.7%	8.9%	No shortage	
Total	**1,913.9**	**45.7%**	**23.0%**	**National Average**	**16.4%**	**14.7%**	**46.7%**	**-0.5%**	**4,854**		**National Average**	**6.9%**	**12.8%**		

Table 9.2 Occupation by Sector: Employment Distribution

Occupation/sector	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Total
Functional managers & directors	*	*	13%	*	*	10%	20%	*	*	8%	7%	*	10%	*	*	*	*	*	*	*	*	100%
Production managers in manufacturing, mining & energy	*	*	36%	*	*	*	11%	6%	*	13%	5%	*	*	5%	*	*	*	*	*	*	*	100%
Financial managers & directors	*	*	13%	*	*	*	*	7%	*	*	60%	*	9%	*	*	*	*	*	*	*	*	100%
Advertising, marketing & sales directors	*	*	32%	*	*	*	21%	*	*	10%	*	*	8%	*	*	*	*	*	*	*	*	100%
Human resource managers	*	*	11%	*	*	*	17%	*	5%	8%	6%	*	*	12%	16%	5%	7%	*	*	*	*	100%
ICT specialist & project managers	*	*	13%	*	*	*	*	*	*	40%	15%	*	9%	*	*	*	*	*	*	*	*	100%
Financial institution managers & directors	*	*	*	*	*	*	*	*	*	*	87%	*	*	*	*	*	*	*	*	*	*	100%
Managers & directors in transport & logistics	*	*	17%	*	*	*	28%	37%	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Managers & directors in retail & wholesale	*	*	6%	*	*	*	81%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Hotel & accommodation managers	*	*	*	*	*	*	6%	*	74%	*	*	*	*	*	*	*	*	*	*	*	*	100%
Restaurant managers	*	*	*	*	*	*	*	*	92%	*	*	*	*	*	*	*	*	*	*	*	*	100%
Publicans	*	*	*	*	*	*	*	*	96%	*	*	*	*	*	*	*	*	*	*	*	*	100%
Leisure & sports managers	*	*	*	*	*	*	*	*	11%	*	*	*	*	*	*	*	*	70%	*	*	*	100%
Managers & proprietors in other services	6%	*	6%	*	*	*	44%	*	*	*	*	*	*	*	7%	*	7%	*	6%	*	*	100%
Chemical, biological & physical scientists	6%	*	37%	*	*	*	*	*	*	*	*	*	16%	*	5%	8%	25%	*	*	*	*	100%
Other natural & social scientists; R&D managers	*	*	22%	*	*	*	*	*	*	*	*	*	35%	*	15%	6%	6%	*	*	*	*	100%
Civil engineers	*	*	*	*	*	7%	*	*	*	*	*	*	63%	*	24%	*	*	*	*	*	*	100%
Electrical & electronic engineers	*	*	32%	5%	*	*	*	*	*	*	*	*	51%	*	*	*	*	*	*	*	*	100%
Production, process, design & development engineers	*	*	67%	*	*	*	*	*	*	*	*	*	23%	*	*	*	*	*	*	*	*	100%
Quality control engineers; other regulatory professionals	*	*	50%	*	*	*	10%	*	*	*	*	*	21%	*	9%	*	*	*	*	*	*	100%
Engineering professionals n.e.c.	*	*	31%	12%	*	*	6%	*	*	15%	*	*	23%	*	*	*	*	*	*	*	*	100%

Occupation/sector	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Total
IT Business analysts & systems designers	*	*	12%	*	*	*	*	*	*	38%	16%	*	12%	*	8%	*	*	*	*	*	*	100%
Programmers & software developers	*	*	16%	*	*	*	*	*	*	59%	12%	*	*	*	*	*	*	*	*	*	*	100%
Web designers & developers	*	*	6%	*	*	*	9%	*	*	53%	9%	*	9%	*	*	*	*	5%	*	*	*	100%
ICT professionals n.e.c.	*	*	16%	*	*	*	*	*	*	61%	12%	*	*	*	*	*	*	*	*	*	*	100%
Medical practitioners	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	95%	*	*	*	*	100%
Pharmacists	*	*	8%	*	*	*	85%	*	*	*	*	*	*	*	*	*	6%	*	*	*	*	100%
Physiotherapists	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%	*	*	*	*	100%
Occupational & other therapy professionals	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	92%	*	*	*	*	100%
Nurses & midwives	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	98%	*	*	*	*	100%
Other health professionals n.e.c.	*	*	*	*	*	*	*	*	*	*	*	*	8%	*	9%	*	76%	*	*	*	*	100%
Higher & further education teaching profs.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	99%	*	*	*	*	*	100%
Secondary teachers	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	99%	*	*	*	*	*	100%
Primary & nursery teachers	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	97%	*	*	*	*	*	100%
Teaching & other educational professionals	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	79%	9%	*	*	*	*	100%
Barristers, judges, solicitors & related professionals	*	*	*	*	*	*	*	*	*	*	5%	*	77%	*	8%	*	*	*	*	*	*	100%
Accountants & tax experts	*	*	9%	*	*	*	*	*	*	*	19%	*	46%	*	*	*	*	*	*	*	*	100%
Mgt. consultants, business analysts & project managers	*	*	7%	*	*	*	*	*	*	23%	25%	*	26%	*	*	*	*	*	*	*	*	100%
Actuaries, economists & statisticians; other business professionals	*	*	6%	*	*	*	*	*	*	*	23%	*	14%	*	*	20%	*	23%	*	*	*	100%
Architects & town planners	*	*	6%	*	*	*	*	*	*	*	*	*	70%	*	16%	*	*	*	*	*	*	100%
Architectural technologists, construction project managers & surveyors	*	*	10%	*	*	*	*	*	*	*	5%	7%	61%	*	*	*	*	*	*	*	*	100%
Social workers & welfare professionals	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6%	*	63%	*	29%	*	*	100%
Media professionals	*	*	*	*	*	*	8%	*	*	49%	*	*	14%	*	*	*	*	16%	*	*	*	100%
Laboratory technicians	*	*	49%	*	*	*	*	*	*	*	*	*	18%	*	7%	10%	9%	*	*	*	*	100%
Electrical, electronic & engineering technicians	*	*	41%	*	*	*	9%	*	*	14%	*	*	11%	*	7%	5%	*	*	*	*	*	100%

Occupation/sector	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Total
Process & quality assurance technicians	*	*	75%	*	*	*	*	*	*	5%	*	*	5%	*	*	*	*	*	*	*	*	100%
Other technicians n.e.c.	*	*	24%	*	*	*	5%	*	*	6%	*	*	35%	*	5%	13%	5%	*	*	*	*	100%
IT operations technicians	*	*	23%	11%	*	*	9%	*	*	26%	10%	*	*	*	*	7%	*	*	*	*	*	100%
IT user support technicians	*	*	18%	*	*	*	*	*	*	47%	16%	*	*	*	*	*	5%	*	*	*	*	100%
Health associate professionals	*	*	7%	*	*	*	19%	*	*	*	*	*	*	*	*	*	62%	*	8%	*	*	100%
Youth & community workers	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12%	70%	*	12%	*	*	100%
Welfare & housing associate professionals	*	*	*	*	*	*	*	*	*	*	*	*	*	*	17%	18%	52%	*	*	*	*	100%
Army personnel	*	*	*	*	*	*	*	*	*	*	*	*	*	*	96%	*	*	*	*	*	*	100%
Gardaí	*	*	*	*	*	*	*	*	*	*	*	*	*	*	96%	*	*	*	*	*	*	100%
Protective service occupations	*	*	*	*	*	*	*	5%	*	*	*	*	*	*	85%	*	*	*	*	*	*	100%
Artistic, literary & media occupations	*	*	*	*	*	*	*	*	*	24%	*	*	18%	*	*	*	*	39%	*	*	*	100%
Design occupations	*	*	32%	*	*	*	7%	*	*	7%	*	*	50%	*	*	*	*	*	*	*	*	100%
Sports & fitness occupations	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	14%	*	78%	*	*	*	100%
Aircraft pilots, ship officers, air traffic controllers	*	*	*	*	*	*	*	50%	*	*	*	*	*	*	25%	15%	*	*	*	*	*	100%
Brokers & insurance underwriters	*	*	*	*	*	*	*	*	*	*	97%	*	*	*	*	*	*	*	*	*	*	100%
Finance & investment analysts	*	*	*	*	*	*	*	*	*	7%	71%	*	10%	*	*	*	*	*	*	*	*	100%
Financial & accounting technicians	*	*	13%	*	*	12%	*	5%	9%	11%	11%	*	23%	*	*	5%	*	*	*	*	*	100%
Financial accounts managers	*	*	9%	*	*	*	14%	*	*	22%	25%	*	8%	*	*	*	*	*	*	*	*	100%
Other business associate profs.	*	*	12%	*	*	*	11%	*	*	8%	28%	*	15%	*	7%	5%	*	*	*	*	*	100%
Buyers & procurement officers	*	*	31%	*	*	*	26%	5%	*	11%	*	*	5%	*	*	*	8%	*	*	*	*	100%
Business sales executives	*	*	19%	*	*	*	47%	*	*	7%	*	*	*	6%	*	*	*	*	*	*	*	100%
Marketing associate professionals	*	*	*	*	*	*	*	*	*	16%	7%	*	41%	*	*	*	*	*	*	*	*	100%
Sales accounts & bus. dev. managers	*	*	21%	*	*	5%	21%	*	*	18%	7%	*	10%	*	*	*	*	*	*	*	*	100%
Estate agents etc.; conference & exhibition managers	*	*	*	*	*	*	*	*	13%	5%	*	47%	17%	*	*	*	6%	*	*	*	*	100%
Environmental & other public services associate professionals	*	*	*	*	*	*	*	*	*	6%	*	*	*	*	57%	*	18%	*	*	*	*	100%

Occupation/sector	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Total
Human resources & industrial relations officers	*	*	8%	*	*	*	11%	*	*	*	9%	*	12%	26%	*	5%	11%	*	*	*	*	100%
Vocational & industrial trainers & instructors	*	*	12%	*	*	*	*	*	6%	10%	*	*	*	*	6%	26%	17%	*	*	*	*	100%
Regulations inspectors; health & safety officers	6%	*	15%	*	*	9%	5%	5%	*	*	*	*	*	*	29%	13%	8%	*	*	*	*	100%
Government admin. occupations	*	*	*	*	*	*	*	*	*	*	*	*	*	*	79%	*	7%	*	*	*	*	100%
Financial administrative occupations	*	*	6%	*	*	*	11%	6%	*	*	45%	*	12%	*	*	*	*	*	*	*	*	100%
Records & library clerks etc.	*	*	7%	*	*	*	7%	*	*	*	*	*	6%	*	*	13%	37%	14%	*	*	*	100%
Stock control, transport & distribution admin. occupations	*	*	16%	*	*	*	29%	21%	6%	*	*	*	9%	*	*	*	*	*	*	*	*	100%
Other administrators n.e.c.	*	*	11%	*	*	*	10%	6%	*	*	10%	*	*	6%	13%	6%	13%	*	*	*	*	100%
Office managers & supervisors admin. occupations	*	*	8%	*	*	9%	15%	*	*	8%	8%	*	11%	*	*	5%	15%	*	*	*	*	100%
PAs & other secretaries, etc.	*	*	*	*	*	*	*	*	*	*	*	*	9%	18%	*	15%	25%	*	*	*	*	100%
Receptionists	*	*	*	*	*	*	7%	*	31%	*	*	*	12%	*	*	5%	19%	*	*	*	*	100%
Farmers	99%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Horticultural, agricultural & fishing trades n.e.c.	27%	*	*	*	*	6%	*	*	*	*	*	*	*	30%	*	*	*	14%	*	*	*	100%
Metal forming, welding & related trades	*	*	63%	*	*	10%	*	*	*	*	*	*	16%	*	*	*	*	*	*	*	*	100%
Metal machining, fitting & instrument making trades	*	*	44%	*	*	9%	6%	*	*	*	*	*	16%	*	*	*	*	*	*	*	*	100%
Vehicle trades	*	*	12%	*	*	*	68%	7%	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Electrical & electronic trades, etc.	*	*	19%	5%	*	24%	*	*	*	21%	*	*	13%	*	*	*	*	*	*	*	*	100%
Bricklayers	*	*	24%	*	*	69%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Plumbers	*	*	*	*	*	83%	*	*	*	*	*	*	5%	*	*	*	*	*	*	*	*	100%
Carpenters & joiners	*	*	8%	*	*	88%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Plasterers	*	*	*	*	*	100%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Painters & decorators	*	*	*	*	*	97%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Other construction trades	*	*	8%	*	*	78%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%

Occupation/sector	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Total
Printing trades	*	*	85%	*	*	*	*	*	*	6%	*	*	6%	*	*	*	*	*	*	*	*	100%
Butchers, fishmongers, etc.	*	*	40%	*	*	*	58%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Bakers & flour confectioners	*	*	76%	*	*	*	19%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Chefs & cooks	*	*	*	*	*	*	*	*	79%	*	*	*	*	*	*	*	8%	*	*	*	*	100%
Catering & bar managers	*	*	*	*	*	*	*	*	73%	*	*	*	*	*	*	7%	7%	*	*	*	*	100%
Other skilled trades	*	*	53%	*	*	*	25%	*	*	*	*	*	*	*	*	*	*	*	7%	*	*	100%
Nursery nurses & assistants	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	49%	38%	*	*	*	*	100%
Child-minders, etc.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	75%	*	*	18%	*	100%
Educational support assistants	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	94%	*	*	*	*	*	100%
Animal carers & pest controllers	44%	*	*	*	*	*	*	*	*	*	*	*	47%	*	*	*	*	*	*	*	*	100%
Caring personal services occupations	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	96%	*	*	*	*	100%
Care workers, home workers, etc.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	93%	*	*	*	*	100%
Leisure & travel service occupations	*	*	*	*	*	*	*	20%	6%	*	*	*	*	34%	7%	*	*	27%	*	*	*	100%
Hairdressers & beauticians, etc.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	92%	*	*	100%
Housekeepers & caretakers, etc.	*	*	*	*	*	*	*	*	21%	*	*	7%	*	6%	*	25%	15%	*	*	*	*	100%
Sales assistants	*	*	*	*	*	*	87%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Sales related occupations	*	*	10%	*	*	*	25%	*	*	*	17%	17%	7%	*	*	*	*	*	*	*	*	100%
Sales supervisors	*	*	*	*	*	*	96%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Customer service occupations	*	*	7%	*	*	*	20%	8%	*	19%	9%	*	6%	17%	*	*	*	*	*	*	*	100%
Food, drink & tobacco process operatives	*	*	92%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Chemical & related process operatives	*	*	92%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Other process operatives	*	*	82%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Plant & machine operatives	*	14%	47%	*	*	13%	*	*	*	*	*	*	7%	*	*	*	*	*	*	*	*	100%
Assemblers	*	*	86%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Routine operatives	*	*	73%	*	*	*	9%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%

Occupation/sector	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Total
Construction operatives	*	*	8%	*	*	60%	*	*	*	*	*	5%	*	*	*	*	*	*	*	*	*	100%
Road transport operatives	*	*	6%	*	*	*	12%	66%	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Mobile machine drivers & operatives	7%	*	22%	*	*	44%	7%	8%	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Other drivers & transport operatives	*	*	*	*	*	*	9%	66%	*	*	*	*	*	*	8%	*	*	*	*	*	*	100%
Elementary agricultural occupations	77%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Elementary construction occupations	*	*	30%	*	*	38%	7%	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Elementary process plant occupations	5%	*	65%	*	*	*	9%	*	*	*	*	*	*	7%	*	*	*	*	*	*	*	100%
Elementary administration occupations	*	*	*	*	*	*	*	89%	*	*	*	*	*	*	*	*	*	*	*	*	*	100%
Elementary cleaning occupations	*	*	*	*	*	*	10%	*	10%	*	*	*	*	34%	*	8%	13%	*	8%	*	*	100%
Elementary security occupations	*	*	*	*	*	*	6%	*	7%	*	*	*	*	56%	*	8%	*	*	*	*	*	100%
Elementary sales & storage occupations	*	*	17%	*	*	*	38%	16%	7%	*	*	*	*	*	*	*	8%	*	*	*	*	100%
Kitchen & catering assistants	*	*	*	*	*	*	*	*	66%	*	*	*	*	*	*	*	18%	*	*	*	*	100%
Waiters & waitresses	*	*	*	*	*	*	*	*	95%	*	*	*	*	*	*	*	*	*	*	*	*	100%
Bar staff	*	*	*	*	*	*	*	*	93%	*	*	*	*	*	*	*	*	*	*	*	*	100%
Other elementary services occupations	*	*	*	*	*	6%	*	*	39%	8%	*	*	*	*	*	*	29%	7%	*	*	*	100%
Grand total	5.5%	0.3%	11.3%	0.4%	0.6%	6.0%	14.3%	4.7%	7.1%	4.3%	4.6%	0.6%	6.0%	3.4%	4.9%	7.9%	12.8%	2.1%	2.3%	0.3%	0.3%	100%

*less than 5%

A: agriculture, forestry and fishing

B: mining and quarrying

C: manufacturing

D: electricity, gas, steam and air conditioning supply

E: water supply, sewerage, waste management and remediation activities

F: construction

G: wholesale and retail trade; repair of motor vehicles and motorcycles

H: transportation and storage

I: accommodation and food service activities

J: information and communication

K: financial and insurance activities

L: real estate activities

M: professional, scientific and technical activities

N: administrative and support service activities

O: public admin and defence

P: education

Q: human health and social work activities

R: arts, entertainment and recreation

S: other service activities

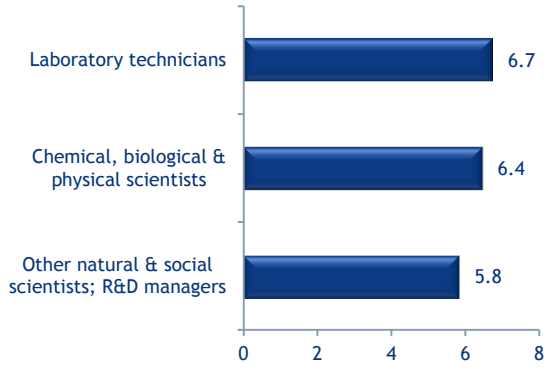
T: activities of households as employers

U: activities of extra territorial organisations and bodies

9.1 Science Occupations

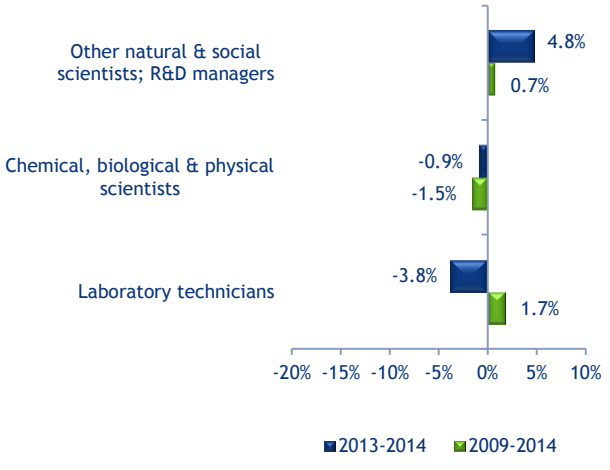
- In 2014, there were approximately 19,000 persons employed in the selected science occupations, representing 1% of national employment (Figure 9.1.1)
- Almost three quarters of employment was concentrated in three sectors: manufacturing (mostly pharmaceuticals), professional, scientific and technical activities (e.g. scientific R&D) and human health activities
- Almost two thirds of total employment was at professional level; the remainder was at technician level (i.e. laboratory technicians)
- Over the period 2009 to 2014, overall employment increased very modestly, at an average annual rate of 0.3%; however, this was in contrast to negative growth of 0.5% recorded nationally; over the same five year period, employment levels in each of the science occupations remained relatively static (Figure 9.1.2)
- Between 2013 and 2014, overall employment decreased by 0.3%; this was in contrast to positive growth of 1.7% nationally
- Almost 90% of science professionals were aged 25-54; the corresponding share was 70% for laboratory technicians; one fifth of employed laboratory technicians was aged 55 or older (Figure 9.1.3)
- Approximately 95% of science professionals held third level qualifications; the share was 70% for laboratory technicians (Figure 9.1.4)
- The overall workforce of both science professionals and technicians was almost gender balanced
- The majority of employed science professionals and technicians worked full-time and were Irish-nationals
- In quarter 4 2014, the unemployment rate for science occupations was 5% – half the national rate.

Figure 9.1.1 Numbers Employed (000s) in Selected Science Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

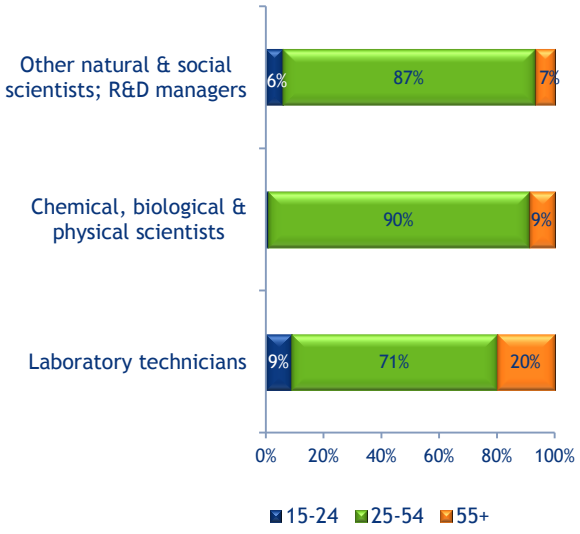
Figure 9.1.2 Average Annual Growth (%) in Selected Science Occupations



Source: SLMRU (SOLAS) analysis of CSO data

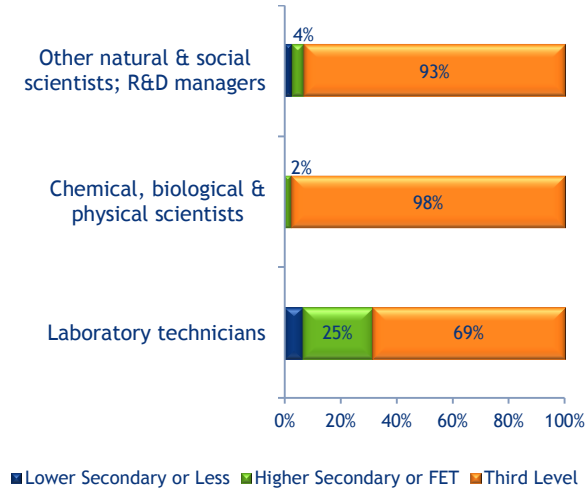
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.1.3 Age Profile of Selected Science Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.1.4 Education Profile of Selected Science Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

Although accounting for a relatively small workforce (6,400 natural scientists (chemical, biological and physical) and 6,700 laboratory technicians), natural science skills are critical for the performance and future growth of high value added, exporting sectors of the Irish economy, such as pharmaceuticals, medical devices and food processing. The importance of the availability of natural scientists is illustrated by the Government's investments in this area, with the most recently announced fund of €85 million for the life sciences sector.

Given the age profile of scientists in employment (less than 10% are aged over 55), exits to retirements are estimated to be small. However, replacement demand is estimated to be greater than retirements due to exits to economic inactivity (e.g. home duties, study etc.). In addition, sectors employing scientists are expected to perform strongly in the short to medium term. Moreover, a further move within these sectors to higher value added activities will further increase the annual recruitment requirement for scientists and scientific technicians.

Recent job announcements relevant to the recruitment of science skills were numerous and included Horizon Pharma, Life Scientific (R&D crop protection), Bausch and Lomb (contact lenses), ENBIO Space Technology Centre (thermal management treatments or sunscreen technology for satellites, spacecraft and space related hardware), Zimmer (orthopaedic implants), Advanced Laboratory Testing (food).

Graduate output from the life and physical sciences is significant, with over 3,500 graduates in 2013/2014, 80% of whom are at honours degree or post-graduate level. Based on the CAO applications, a similar number of graduates can be expected in the coming years.

Despite the available graduate supply and the supply from unemployment (in May 2015, there were 120 chemical, biological and

physical scientists and 260 laboratory technicians (most holding third level qualification) job-ready job seekers), shortages of science skills have been identified. Many employers are experiencing difficulty in filling the following roles:

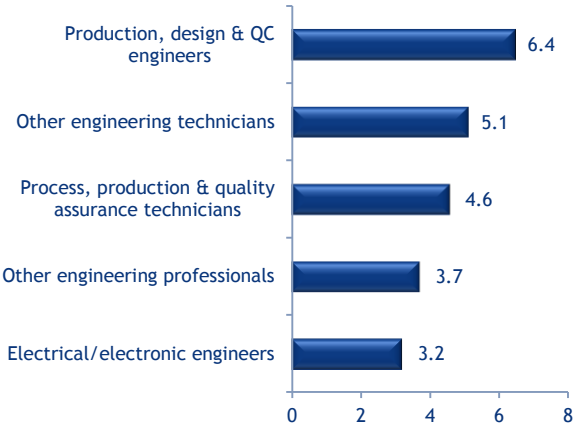
- chemical and biological scientists and biochemists in the areas of pharma co-vigilance (drug safety and clinical trials), analytical development and product formulation
- cardiac technicians (production process)
- biotechnology technician (computerised maintenance (preventive, corrective, predictive), SOPs/EWI and GMP engineering systems, cleanroom).

There is also an issue regarding the availability of persons willing to work as laboratory technicians, as most graduates at technician level (NFQ 6 and 7) stay in education to progress to higher qualifications, while holders of NFQ level 8 qualifications and above seek more challenging roles than those available at technician level.

9.2 Engineering Occupations

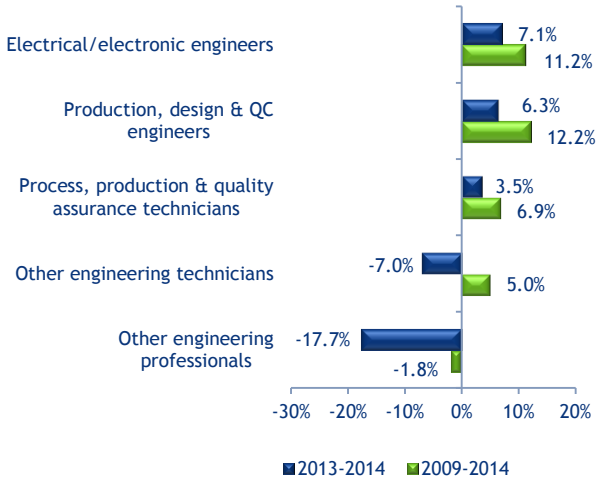
- In 2014, there were approximately 23,000 persons employed in the selected engineering occupations, representing 1.2% of national employment (Figure 9.2.1)
- Approximately half of overall employment was concentrated in manufacturing (mostly pharmaceuticals and machinery/equipment), with an additional one fifth concentrated in professional, scientific and technical activities (mostly architectural & engineering activities; technical testing and analysis)
- Almost 60% of total employment in the selected engineering occupations was at a professional level (i.e. engineers); the remainder was at technician level
- Between 2009 and 2014, employment growth in engineering occupations was the strongest recorded amongst the 17 broad occupational groups examined (6.5% on average annually); with the exception of other engineering professionals, employment expanded in all occupations, with the strongest growth rates observed for production, design & QC engineers (12.2% on average annually) and electrical/electronic engineers (11.2% on average annually) (Figure 9.2.2)
- Over the same five year period, in absolute terms, employment increased by approximately 6,000; the largest increase was recorded for production, design & QC engineers (almost 3,000); meanwhile, employment in other engineering professionals remained relatively static
- Between 2013 and 2014, overall employment in engineering occupations contracted by 1.8%; with the exception of other engineering professionals, employment levels in all occupations remained relatively static
- Over four fifths of persons employed in each occupation was aged 25-54 (Figure 9.2.3)
- Just over 90% of employed engineering professionals held third level qualifications; the share was almost 75% for engineering technicians (Figure 9.2.4)
- The share of females employed in engineering professional occupations (15%) and technician occupations (21%) was well below the national average (46%); the overall workforce of process, production and QA technicians had the highest share of females, at 35%
- The majority of employed engineering professionals and technicians worked full-time and were Irish-nationals
- In quarter 4 2014, the overall unemployment rate for engineering occupations (at 5.1%) was well below the national average rate of almost 10%.

Figure 9.2.1 Numbers Employed (000s) in Selected Engineering Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

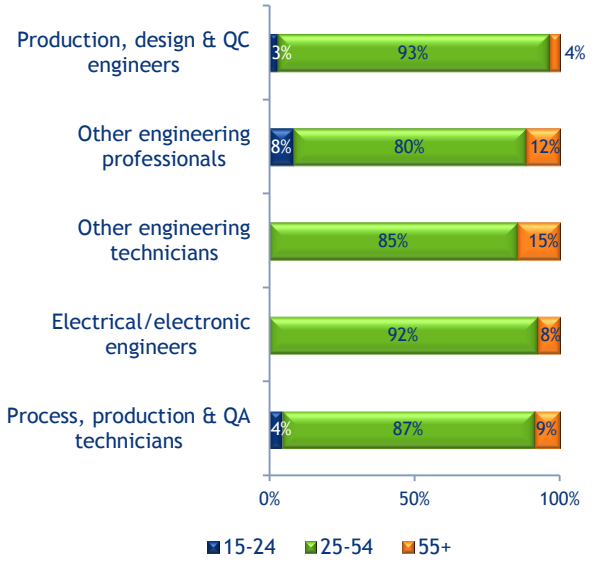
Figure 9.2.2 Average Annual Growth (%) in Selected Engineering Occupations



Source: SLMRU (SOLAS) analysis of CSO data

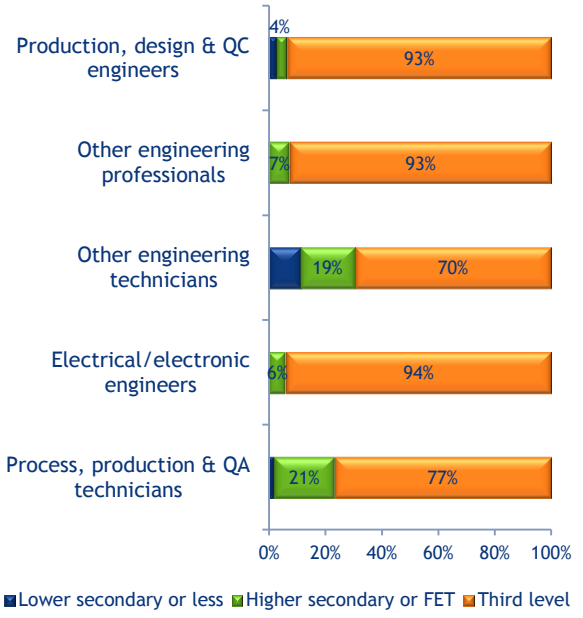
*Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.2.3 Age Profile of Selected Engineering Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

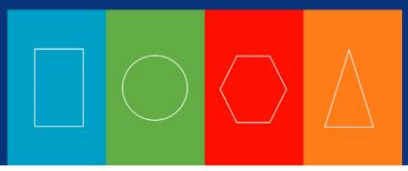
Figure 9.2.4 Education Profile of Selected Engineering Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In 2014, 13,000 engineers and 10,000 engineering technicians were working in Ireland, with the majority employed in the manufacturing and professional, scientific and technical activities sectors. The age profile of engineering occupations is somewhat younger than the national average (particularly for electronic, design and development engineers). In addition, exits to economic inactivity are not estimated to be large, with the total annual replacement demand (including retirement) estimated at 1,500. However, the expected strong performance of the professional, scientific and technical services sector, as well as the move to higher value added activities in manufacturing, is likely to bring the annual recruitment requirement to well over 2,000. Strong demand for engineering skills is confirmed in numerous job announcements, including ABEC (engineered process equipment for biopharmaceutical manufacturing), EPS



(water and wastewater treatment), Schwungrad Energie Limited (Europe's first grid connected to a hybrid flywheel system service facility).

The vacancy data for 2014 supports this finding (3,000 vacancies advertised on the PES and Irishjobs.ie portals alone), although a share of vacancies for engineers is arising due to turnover, which is somewhat more pronounced in the area of quality control.

The number of third level engineering graduates is estimated at just fewer than 4,300 (2013/2014), of which approximately one half are at honours bachelor degree or postgraduate level. This does not include graduates from the new provision in polymer technology in Sligo IT (level 6/7) and Athlone IT (level 8). In addition, in May 2015, there were 400 engineers and 270 engineering technicians (third level graduates) who were job-ready job seekers.

Despite a significant supply of engineering skills emerging from the education system and a number of unemployed persons with engineering skills, shortages continue to exist. In 2014, 380 engineers were sourced from outside the EEA.

At professional level shortages of the following skills have been identified:

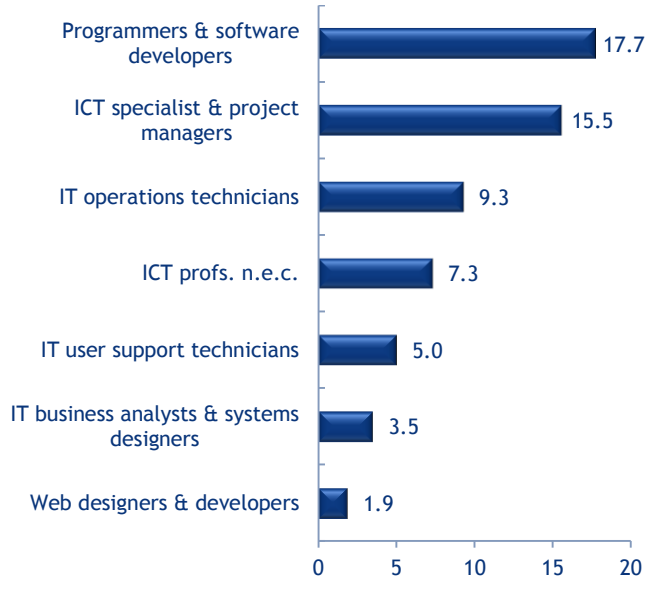
- production and process engineering - process automation and system control (computer numerical control (CNC), computer aided design (CAD), computer aided manufacturing (CAM)), production planning and supply chain management and integration (e.g. medical devices, biotech and pharmaceuticals)
- product development and design engineering (in medical devices, biotech and the pharmaceutical industry)
- quality control, assurance and validation engineering (e.g. computer validation systems, regulatory compliance)
- electrical engineering (e.g. electrical safety testing for medical devices)
- electronic engineering
- chemical engineering - specialised roles in the biotech/pharmaceutical industry
- mechanical engineering - waste water and purification treatment, polymer and injection moulding.

At technician level, shortages have been identified in the area of electronic engineering (generic roles and in Surface Mount Technology (SMT)/PTH Rework Operators (electronic printed circuit board assembly (PCBA).

9.3 IT Occupations

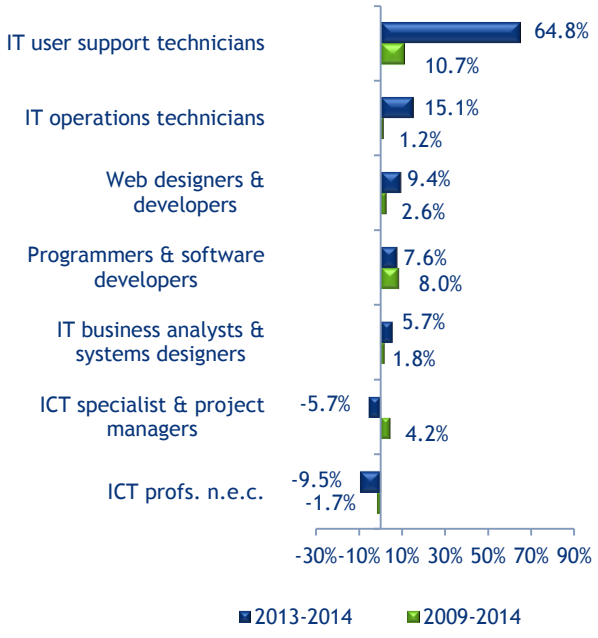
- In 2014, there were approximately 60,000 persons employed in the selected IT occupations, representing 3% of Ireland's workforce (Figure 9.3.1)
- Almost half of overall employment was concentrated in the IT sector (mostly computer programming and consultancy), with an additional one fifth in industry (mostly computer, electronic and optical manufacturing)
- Three quarters of overall employment was at professional level (of which, almost 30% were programmers & software developers); the remainder was at technician level
- Between 2009 and 2014, overall employment in IT occupations grew at an average annual rate of 4.1% – one of the highest rates of growth recorded amongst the 17 broad occupational groups examined; the strongest growth rates were recorded for IT user support technicians (10.7% on average annually) and programmers & software developers (8% on average annually) (Figure 9.3.2)
- Over the same five year period, the IT occupational group also experienced the largest absolute increase in employment (approximately 11,000); the largest increases were observed for programmers & software developers (almost 6,000) and ICT specialist & project managers (3,000)
- Between 2013 and 2014, overall employment increased by 3,000 or 5.4% – exceeding the national average rate of 1.7%; the strongest growth was recorded for user support technicians
- The majority of those employed in IT occupations were aged 25-54 (Figure 9.3.3)
- Over four fifths of IT professionals were third level graduates; the corresponding share was almost three quarters for IT technicians (Figure 9.3.4)
- Most of those employed in IT occupations were male and worked full-time
- Just over 40% of employed IT user support technicians were non-Irish nationals – considerably above the national average share of 15%; at almost 33%, the share of non-Irish national programmers & software developers was relatively high
- In quarter 4 2014, the overall unemployment rate for IT occupations (measuring 3%) – was well below the national average rate of 9.9%.

Figure 9.3.1 Numbers Employed (000s) in Selected IT Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

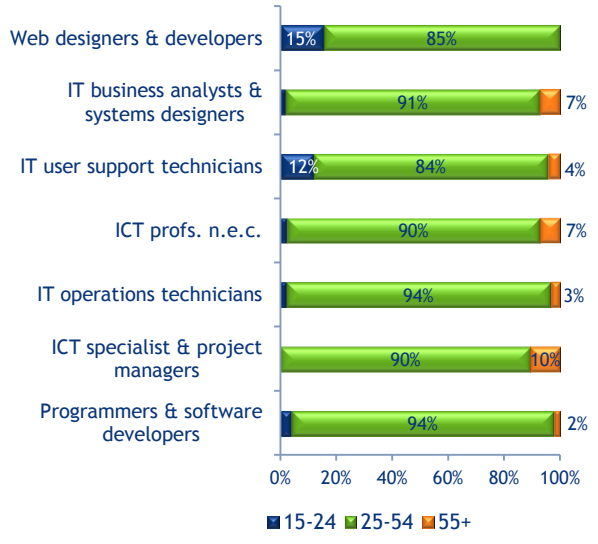
Figure 9.3.2 Average Annual Growth (%) in Selected IT Occupations



Source: SLMRU (SOLAS) analysis of CSO data

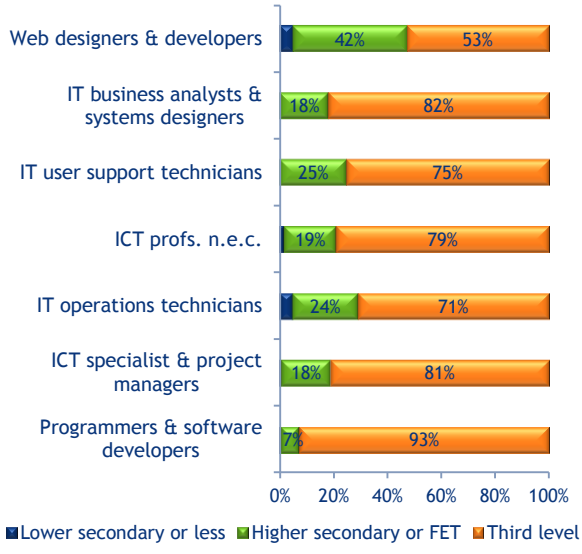
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.3.3 Age Profile of Selected IT Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.3.4 Education Profile of Selected IT Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In 2014, there were approximately 15,000 specialist IT managers, 30,000 IT professionals and 15,000 IT technicians. The demand across all IT occupations has been strong. In 2014, over 6,500 vacancies were advertised through the PES and Irishjobs.ie portals alone. Difficulty in filling vacancies has been reported: results from the Recruitment Agency Survey in May 2015, indicate that one third of all difficult to fill mentions were in relation to IT roles. In 2014, almost 1,700 employment permits were issued to IT workers from outside the EEA - 1,600 for professionals and 100 for technicians.

IT workers are typically young (over 55s account for a small share), indicating that retirements are not a significant element of the overall demand. Attrition is somewhat higher when all exits to inactivity (e.g. home duties, study etc.) are taken into account. Turnover estimates suggest that many vacancies for IT workers arise due to intra- or inter-occupational movements. For instance,

it is estimated that 14% of programmers changed employer or occupation in 2014.

Nonetheless, the demand for IT skills is growing, with expansion demand expected to push total annual recruitment requirement to over 3,500 for IT professionals and managers and a further 2,000+ for IT technicians. Numerous companies announced job creation for IT workers recently, including Global Shares (web based software), Movidius (hardware and software for virtual reality headsets, drones, home automation, vision-based technology), IFDS (financial software for admin solutions for investment and insurance), NearForm (Node.js), GuideWire Software (insurance), Version 1, Bank of America Merrill Lynch (banking technology), Dell (R&D), MalwareBytes (cybersecurity), Treemetrics, LogMein (cloud), Espion (IT security), Agora (applications for global publishing) and SmartTech (IT security).

The 2013/2014 graduate supply from computing courses was 3,700, of which 70% were at NFQ levels 8 and above. There were a further 465 QQI awards made to learners from private colleges, three quarters of which at level 8 or above. In addition, in May 2015, there were 1,000 job ready job seekers who held third level qualifications and had previous experience in IT (600 managers and professionals, 400 technicians). In response to the continuous shortage of IT skills, the Government has put forward the ICT skills action plan 2014-2018, which sets outs targets in relation to increasing graduate output, improving maths skills at higher secondary level and providing ICT conversion courses.

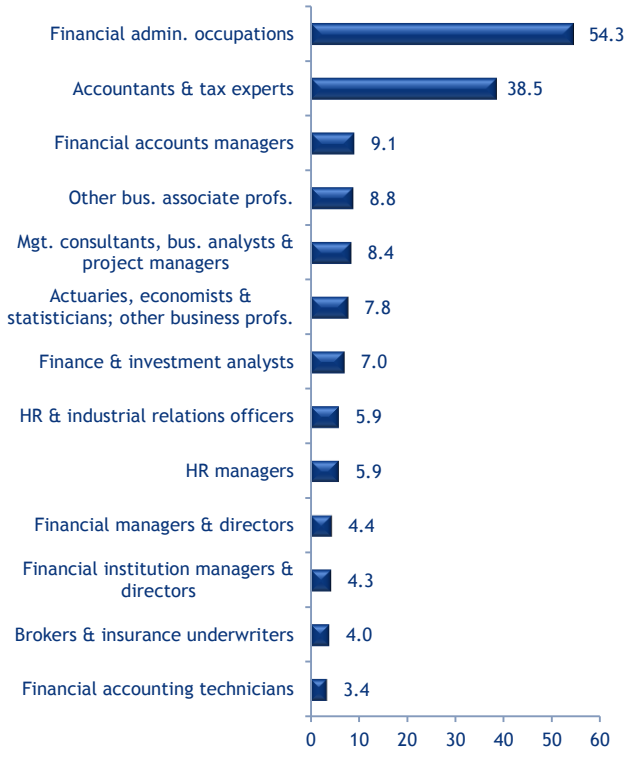
Despite significant graduate supply and a number of job seekers with IT skills (many of whom are likely to be only in frictional unemployment, given the turnover estimates), shortages of IT skills continue to exist. While approximately one half of IT workers are employed directly in the ICT sector, IT skills are demanded by all sectors of the economy. Moreover, a shortage of IT skills is not unique to Ireland, but rather a global phenomenon. Shortages identified for the Irish labour market include:

- programming and software development: programming languages (Java, J2EE, JavaScript, C++, Summit, .net, C#, JSP, JQuery, AJAX, Python, PHP); mobile applications development (iOS and Android); web development (CSS, HTML)
- cloud computing: Software as a Service (SaaS) and virtualisation technologies
- web design (niche areas only): particularly web related applications focusing on enhancing users' online experience (UX) and supporting user interaction (UI)
- IT project management
- networking and infrastructure: IP networking and specialist roles such as software quality assurance engineers
- IT business analysis: business intelligence and search engine optimisation
- databases, big data analytics and data warehousing: Oracle, SQL, MySQL, Hadoop and noSQL
- testing and troubleshooting: quality assurance testers
- technical support: user support with foreign language skills (German, French).

9.4 Business and Financial Occupations

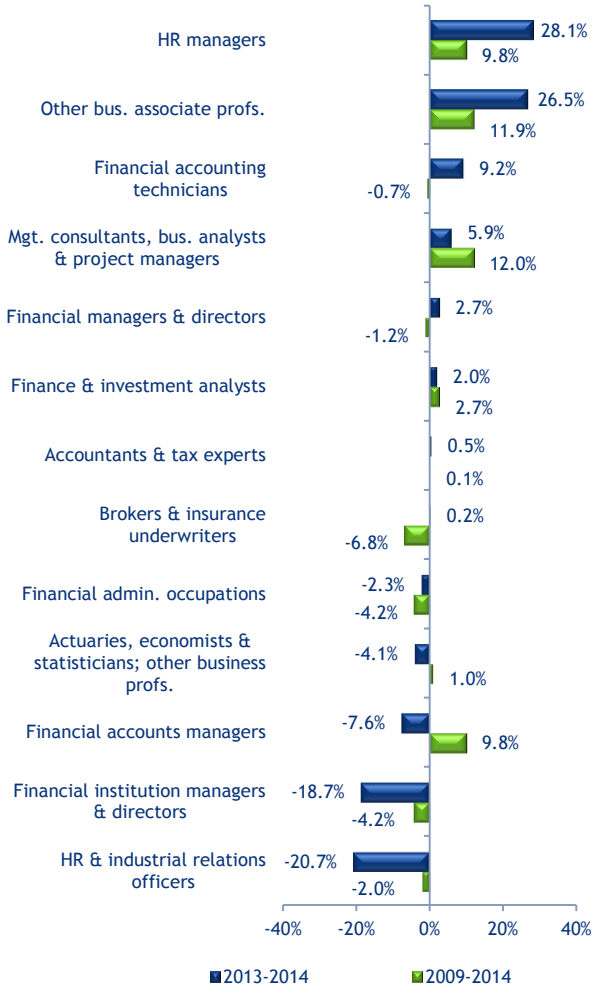
- In 2014, there were approximately 162,000 persons employed in the selected business and financial occupations, representing 8.5% of Ireland's workforce (Figure 9.4.1)
- Approximately half of overall employment was concentrated in financial, insurance and real estate activities (36%) and legal and accounting activities (15%)
- One third of overall employment was at administrative level (mostly book-keepers, payroll managers and wages clerks; bank and post office clerks); one third was at professional level (mostly accountants and tax experts); one quarter was at associate professional level and the remainder was at managerial level
- The largest number of persons were employed in financial administrative occupations (54,000) and accounting and taxation (approximately 39,000) – accounting for one third and one quarter of overall employment respectively
- Between 2009 and 2014, overall employment in business and financial occupations decreased very modestly, by 0.3% on average annually; however, over the period, employment growth varied by occupation; the strongest growth (in relative terms) was recorded for management consultants, business analysts & project managers, and other business associate professionals (each at 12% on average annually), and financial accounts managers (9.8% on average annually); in contrast, the strongest rate of decline was recorded for brokers and insurance underwriters (6.8% on average annually) and financial institution managers & directors, and financial administrative occupations (jointly at 4.2% on average annually); the largest absolute decline was recorded for financial administrative occupations (Figure 9.4.2)
- Between 2013 and 2014, overall employment levels remained relatively static
- Over four fifths of persons employed in business and financial occupations were aged 25-54 (Figure 9.4.3)
- Over 90% of those employed at professional level and almost 80% at associate professional level were third level graduates; the share was 56% for those employed in administrative occupations (Figure 9.4.4)
- The share of females employed in financial administrative occupations and as HR managers and HR industrial relations officers was relatively high, ranging from 70% to 75%.

Figure 9.4.1 Numbers Employed (000s) in Selected Business and Financial Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

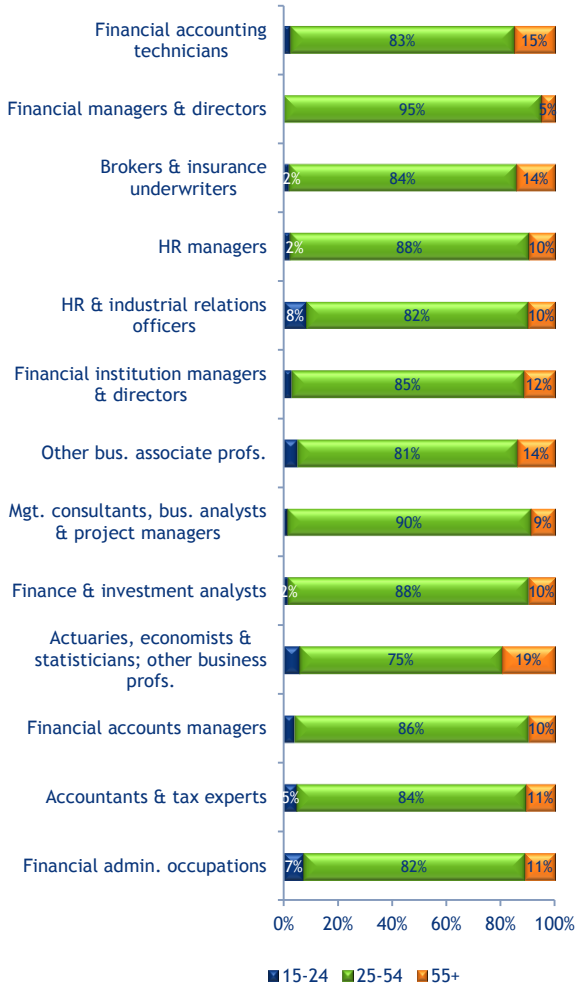
Figure 9.4.2 Average Annual Growth (%) in Selected Business and Financial Occupations



Source: SLMRU (SOLAS) analysis of CSO data

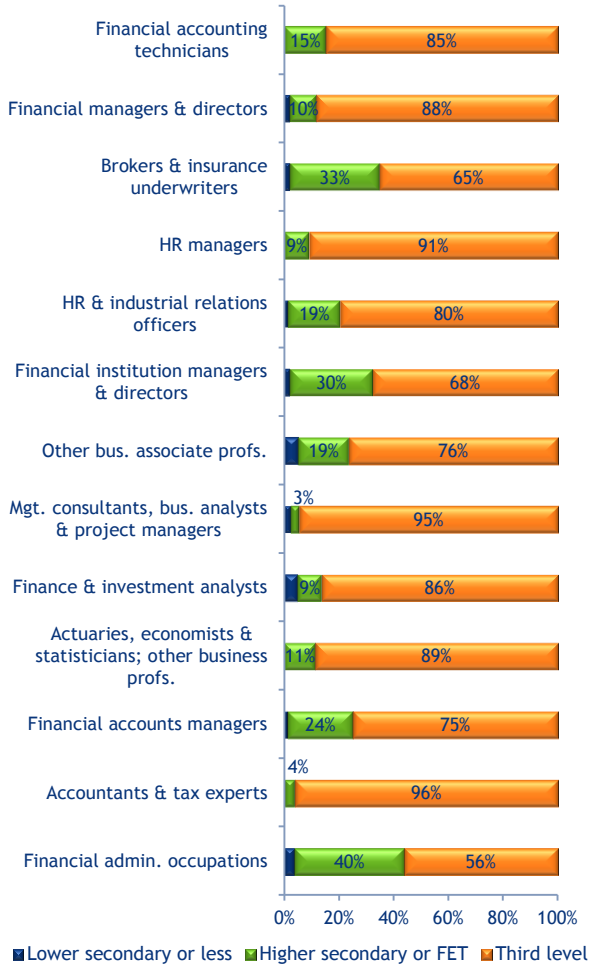
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.4.3 Age Profile of Selected Business and Financial Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.4.4 Education Profile of Selected Business and Financial Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In 2014, newly advertised vacancies for persons with financial and business skills were numerous. For instance, on the DSP and Irishjobs.ie vacancy portals alone, there were 2,300 vacancies for financial professionals (accountants, business analysts, actuaries and economists), 2,500 for financial technicians (accounting, insurance and investment) and 2,500 for financial clerks. Financial and business skills are demanded by almost all sectors of the economy, although many are employed directly in the financial and professional activities sectors.

Many of the vacancies were arising due to the need to replace those who leave employment. For instance, almost 4,000 financial clerks, 2,000 financial professionals (accountants, business analysis, etc.) and 1,300 financial technicians (accounting, investment, and insurance) transitioned from employment into economic inactivity (retirement, study, home duties etc.) creating replacement demand. In addition, significant turnover was present in financial occupations, particularly in relation to financial accounts managers, economists and financial clerks.

Nonetheless, expansion demand for financial skills is expected to remain strong, as illustrated in recent job announcements: Miagen (forecasting, planning and analysis), Zalando (big data analytics), Acorn Life (financial advice), Accenture (including financial services), Zurich (insurance) etc. Demand for HR skills is also expected to grow as economic recovery takes hold, as illustrated in recent job announcements in the HR area (e.g. Hays Ireland Recruitment).

There is an ample supply of financial and business skills from the education system: in 2013/2014, there were 26,000 futher and higher education graduates from social science and business courses (including accounting and finance), of which 15,000 were at NFQ level 8 or above. Approximately 500 financial professionals and 400 financial technicians with third level qualifications were registered with the DSP in May 2015 as job ready job seekers, which is not excessive when the size of the workforce and frictional unemployment is taken into account.

However, shortages in the areas of business and finance continue to exist. There were over 350 work permits issued to non-EEA

nationals for work in financial occupations (as managers, professionals and technicians) in 2014.

Shortages of skills have been identified in the following areas:

- risk management
- compliance (ALM, BAEL, MiFID, IAFID, AIFMD)
- accounting (tax, audit, financial restructuring and management)
- business intelligence (e.g. Oracle OBIEE, ERP with SAP)
- data analytics, economics and statistics (big data, predictive analytics, data visualisation/infographics and quantitative modelling)
- financial advisors (banking/ insurance)
- fund accounting/trustee roles and transfer agency client servicing roles (especially with AML skills)
- multilingual financial clerks (credit control and debt control).

Many financial companies are sourcing science, maths and computing graduates for roles in big data, quantitative modelling and business intelligence, as technological advances continue to blur the line between IT, finance, maths, science, engineering and other technical roles. This is only intensifying the issue of the availability of technical skills in Ireland and globally.

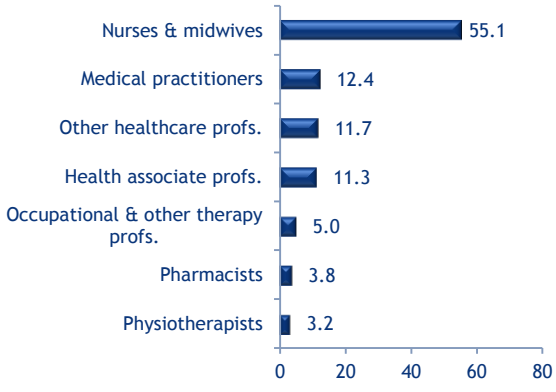
The Transatlantic Trade and Investment Partnership (TTIP) between the EU and US which is currently being negotiated is expected to create significant growth in the financial services sector in Ireland, with particular growth potential identified for the insurance sector.[43] This is likely to further drive the demand for financial skills at professional, technician and administrative level.

[43] DJEI, *TTIP Impact in Ireland*, February 2015

9.5 Healthcare Occupations

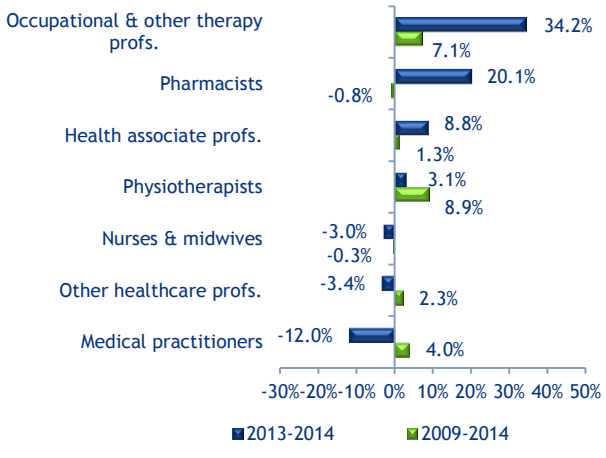
- In 2014, there were approximately 103,000 persons employed in healthcare occupations, representing 5.4% of Ireland's workforce (Figure 9.5.1)
- Almost 90% of those employed in the selected occupations were professionals (approximately 92,000 persons)
- There were 55,000 employed nurses and midwives, accounting for half of overall employment in healthcare occupations; this ranked the largest professional workforce nationally and the fourth largest nationally, after sales assistants, farmers, other administrative occupations
- Between 2009 and 2014, overall employment in the selected healthcare occupations expanded by 1.1%, strong average annual growth in employment was recorded for physiotherapists (8.9%, albeit from a low 2009 base level), occupational & therapy professionals (7.1%) and medical practitioners (4%); in contrast, very modest average annual rates of decline were recorded for pharmacists and nurses & midwives
- Over the five year period 2009 to 2014, there were a net 5,500 additional jobs created; the largest absolute employment increase was observed for medical practitioners (at 2,000); however, employment for this occupation contracted between 2013 and 2014
- Between 2013 and 2014, overall employment contracted by 0.8% or 1,000; this was in contrast to positive growth of 1.7% nationally (Figure 9.5.2)
- Four fifths of persons employed in healthcare occupations was aged 25-54; one fifth of employed medical practitioners and occupational & other therapy professionals was aged 55 or older (Figure 9.5.3)
- Over 90% of all employed healthcare professionals were third level graduates; the corresponding share was over 80% for healthcare associate professionals
- While most persons employed in healthcare occupations were female, just over half of employed medical practitioners were male
- One quarter of employed occupational & other therapy professionals were non-Irish nationals – above the national average share of 15%.

Figure 9.5.1 Numbers Employed (000s) in Selected Healthcare Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

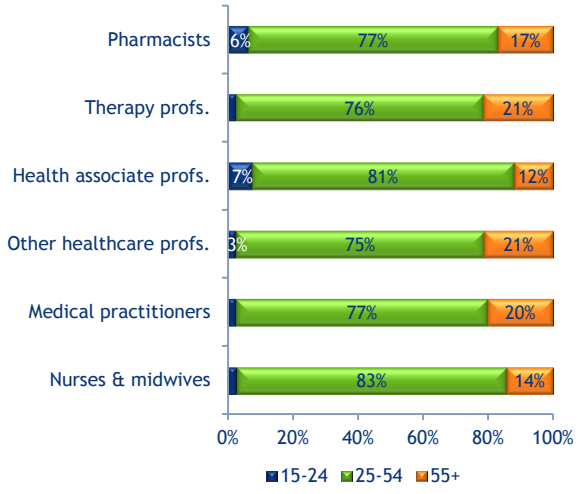
Figure 9.5.2 Average Annual Growth (%) in Selected Healthcare Occupations



Source: SLMRU (SOLAS) analysis of CSO data

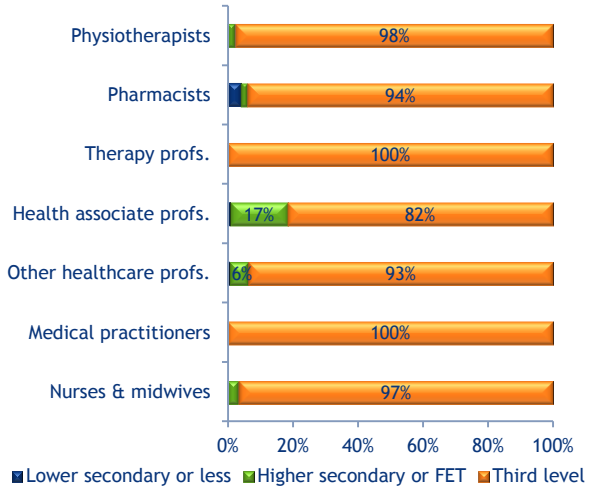
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.5.3 Age Profile of Selected Healthcare Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.5.4 Education Profile of Selected Healthcare Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In recent years, the recruitment controls in relation to permanent employment contracts in the publicly funded healthcare sector resulted in frequent movements of doctors and nurses between employers. This was evident in the number of intra-occupational transitions, with 1,500 transitions identified for medical practitioners (some of this movement is due to standard hospital rotations during training) and 4,500 for nurses in 2014. The removal of the recruitment ban should result in less intra-occupational movement and importantly in expansion demand for healthcare roles.

However, the increase in public expenditure is expected to be modest in light of requirements for further fiscal consolidation, resulting in lower than average expected growth in employment in publicly funded services, including healthcare. Any growth which does occur is expected to be only a fraction of the total recruitment requirement, which will mostly be driven by the replacement demand. Exits to inactivity are estimated at 2,000 for nurses and 1,500 for other healthcare professionals and associate professionals. As a result the total annual recruitment requirement for healthcare professionals and associate professionals is estimated at over 5,000, with the recruitment requirement for nurses accounting for half of it.

Ireland, together with most developed countries, suffers from a chronic shortage of doctors. The number of unemployed qualified healthcare workers overall is negligible, while reliance on importing healthcare skills has been an important part of HR practices: in 2014, over 1,000 employment permits were issued to non-EEA doctors and a further 150 to nurses.

Shortages continue to persist for the following occupations:

- medical practitioners (especially locum and non-consultant hospital doctors, registrars and medical specialists (e.g. general and emergency medicine, anaesthetists, paediatricians, consultant radiologists))

- nurses - advanced nursing practitioners (e.g. intensive care, operation theatre), registered nurses (e.g. general nurse, cardiovascular care, children's care; intellectual disability care, mental health care) and clinical nurses
- radiographers (clinical specialists; MRI and CT radiographers)
- niche area specialists (radiation therapists, audiologists, orthoptists, prosthetists, orthotists)
- health service managers.

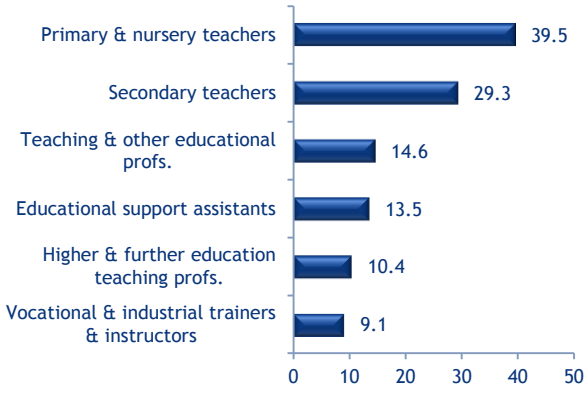
The Department of Health increased the intake of medical students several years ago (the 2013/2014 graduate output at NFQ levels 8 and above was above 1,500, although some are non-EEA students) and is working on restructuring the progression paths through specialist medical training with a view of reducing the reliance on foreign doctors in non-consultant hospital grades and greater retention of Irish trained doctors.

The removal of the public sector recruitment ban should alleviate some of the above shortages.

9.6 Education Occupations

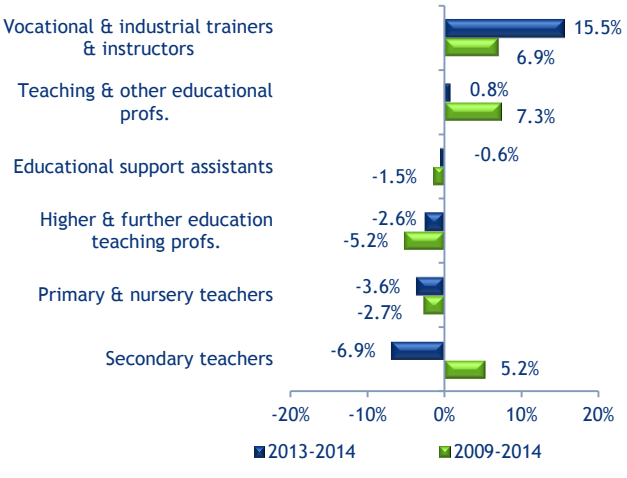
- In 2014, there were approximately 116,000 persons employed in the selected education occupations, representing 6.1% of national employment (Figure 9.6.1)
- Four fifths of overall employment was at professional level (three fifths was in primary/nursery and secondary school teaching); a further 8% was at associate professional level
- Between 2009 and 2014, while overall employment increased by only 0.6% on average annually, strong employment growth was observed for teaching & other educational professionals (7.3% on average annually), vocational & industrial trainers/instructors (6.9% on average annually) and secondary school teachers (5.2% on average annually); in contrast, employment contracted for all other occupations, with the strongest rate of decline observed for higher & further education teaching professionals
- Over that five year period, a net 3,500 additional jobs were created; the largest employment increase was recorded for secondary teachers (6,600); in contrast, the largest decline was observed for primary/nursery teachers (almost 6,000)
- Between 2013 and 2014, overall employment declined by 2.2%, with a net job loss of almost 3,000; while employment levels for most occupations did not change significantly, the most pronounced decline was observed for secondary school teachers (Figure 9.6.2)
- One quarter of employed higher & further education teaching professionals were aged 55 or older (Figure 9.6.3)
- The majority of persons employed in professional and associate professional occupations were third level graduates; two fifths of employed educational assistants were third level graduates
- At least three fifths of those employed in each occupation was female; at 90%, the share of females was the highest for primary & nursery teachers and educational support assistants; with just over half male, the workforce of higher & further education teaching professionals was the most closely gender balanced.

Figure 9.6.1 Numbers Employed (000s) in Selected Education Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

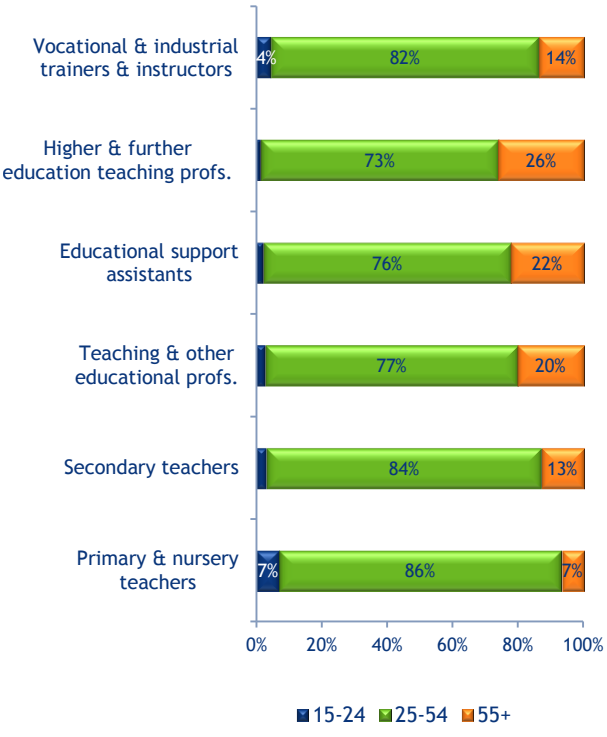
Figure 9.6.2 Average Annual Growth (%) in Selected Education Occupations



Source: SLMRU (SOLAS) analysis of CSO data

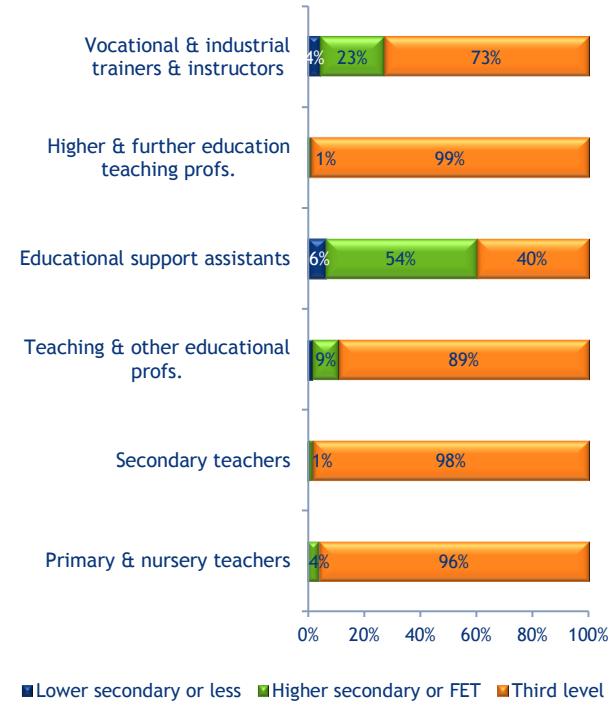
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.6.3 Age Profile of Selected Education Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.6.4 Education Profile of Selected Education Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In recent years, the lack of permanent employment contracts in the publicly funded education sector resulted in frequent movements of teachers between employers. In 2014, the number of transitions arising due to a change of employer was estimated at 5,500 for primary and secondary teachers, which translates into a higher turnover rate than that for most other professionals. The removal of the recruitment ban should result in less intra-occupational movement and importantly in expansion demand for teachers.

While some expansion demand is expected to emerge as the public sector resumes recruitment, given the cautious increases in public spending, most of the recruitment requirement is expected to arise due to replacement demand. In 2014, almost 4,000 transitions to economic inactivity (i.e. retirement, home duty etc.) were identified for primary and secondary teachers.

In 2014, graduate output from education courses at NFQ levels 8 and above was almost 6,000 (including private colleges). To what extent will this be sufficient to meet the recruitment requirement will depend on Government policy regarding public expenditure on education.

The expected demographic change will create pressure to increase the number of teachers. The population in relevant age cohorts - children aged 5-12 (primary cycle) and 13-18 (secondary cycle) - is expected to increase over the medium term. For the period 2016-2021, the CSO estimated growth of 35,000-46,000 (depending on the scenario) for the

primary cycle cohort and 32,000-37,000 for the secondary cycle cohort.[44]

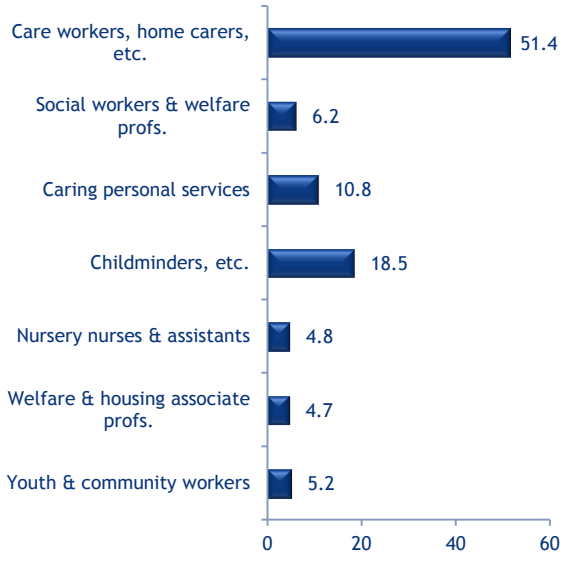
Even during the recent periods of excess supply of teachers (in May 2015, there were 600 job ready job seekers with third level qualifications), there were issues with sourcing teachers with a high level of expertise in specific fields, such as science and mathematics. As the economy recovers, the ability to attract persons with science and maths skills into teaching may become more challenging given that such skills are also in demand in other sectors (e.g. financial).

[44] Population and Labour Force Projections 2016-2046, CSO, 2013.

9.7 Social and Care Occupations

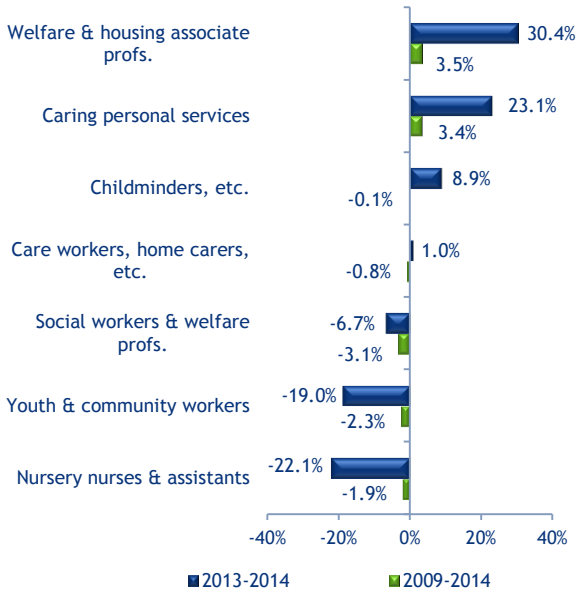
- In 2014, there were approximately 102,000 persons employed in the selected social and care occupations, representing 5.3% of Ireland's workforce (Figure 9.7.1)
- With 52,000 persons employed, care workers/home carers accounted for 50% of overall employment in the selected occupations
- Four fifths of total employment was concentrated in human health and social work activities
- Between 2009 and 2014, overall employment levels in social and care occupations remained relatively static, with a very modest average annual decrease of 0.4% (or equivalent to 2,000); this rate of decline was similar to the national average rate (Figure 9.7.2)
- Over that five year period, employment of welfare & housing associate professionals grew by 3.5% on average annually; the rate of growth was similar for caring personal services occupations; with the exception of child-minders, the average annual rate of contraction in employment for all other occupations was stronger than the national average
- With almost one fifth aged 15-24, the age profile of the workforce of child-minders was the youngest among the selected occupations; in contrast, the workforces of both social workers & welfare professionals and welfare & housing associate professionals were the most mature, each with 30% aged 55 or older (Figure 9.7.3)
- The share of third level graduates among social workers & welfare professionals was 95%; on the other hand, only one third of care workers/home carers and caring & personal services workers had attained third level qualifications; one fifth of care workers/home carers had lower secondary or less qualifications (Figure 9.7.4)
- The workforce of most social and care occupations was predominantly female; it was most almost exclusively female for child-minders
- Two fifths of persons employed in social and care occupations worked part-time, almost double the national average; two thirds of employed nursery nurses and assistants worked part-time (one of the highest shares nationally), while the share was just over a half for child-minders
- One quarter of the workforce of child-minders were non-Irish nationals, exceeding the national average share of 14.7%.

Figure 9.7.1 Numbers Employed (000s) in Selected Social and Care Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

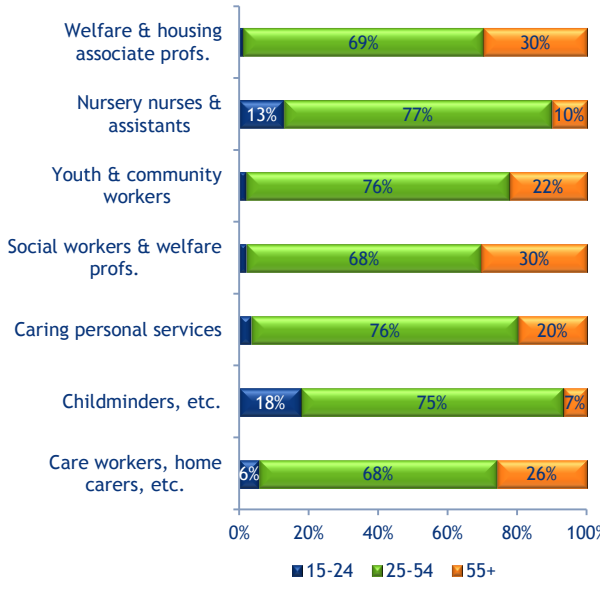
Figure 9.7.2 Average Annual Growth (%) in Selected Social and Care Occupations



Source: SLMRU (SOLAS) analysis of CSO data

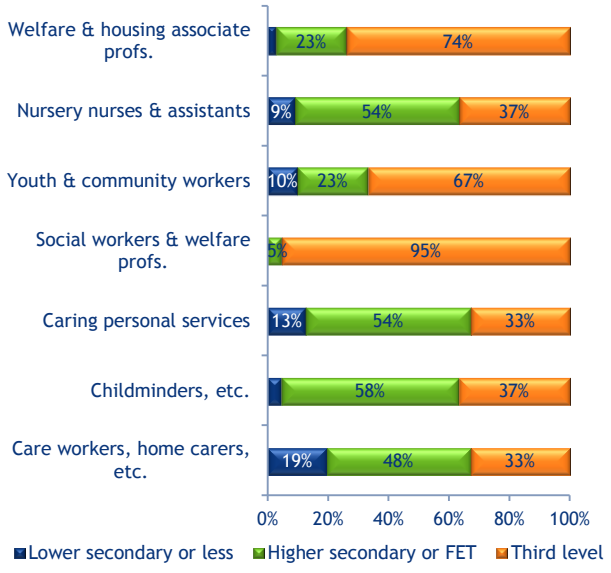
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.7.3 Age Profile of Selected Social and Care Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.7.4 Education Profile of Selected Social and Care Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In 2014, there were 51,000 care workers and 19,000 child-minders, of whom approximately one half worked part-time and the overwhelming majority was female.

These two occupations are characterised by high turnover rates, with 6,700 and 4,200 transitions due to a change of employer identified in 2014, respectively. In addition, these were among occupations with the highest number of transitions between employment, unemployment and economic inactivity. Based on transitions to economic inactivity, replacement demand was estimated at 7,000 and 4,000 for care and childcare workers respectively. Given such a large level of movement, it is recognised that some employers may be experiencing difficulty in attracting and retaining qualified care and childcare workers.

Graduate output in 2014 amounted to 3,300 in caring/nursing at NFQ level 5 and 4,000 in

childcare at NFQ levels 5 and 6, with a further 1,400 in social work and counselling at NFQ levels 5 and 6. In addition, there were 4,800 job ready carers and 500 child-minders seeking employment in May 2015.

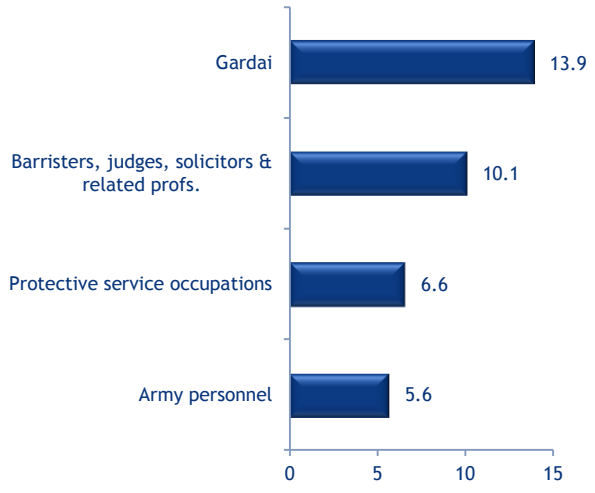
Ireland's ageing population will be a key driver of the future demand for care workers. The CSO projects that by 2046, over one quarter of the population will be aged 65 and over, while persons aged over 80 are expected to grow to half a million.[45] The extent to which this requirement translates into employment growth will partly depend on Government policy, given that a significant share of the care services are publicly funded. Some employment expansion was already evident in recent job announcements including those by Euromedic Ireland, Bluebird care, Morehall lodge nursing home, RHS, Daffodil Care, etc.

[45] Population and Labour Force Projections 2016-2046, CSO, 2013.

9.8 Legal and Security Occupations

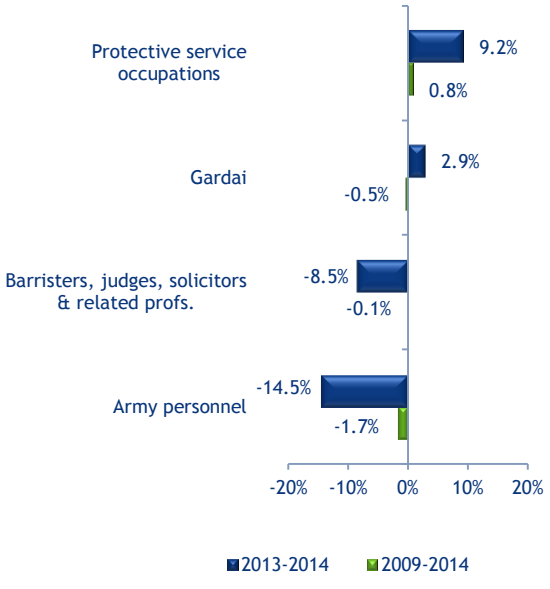
- In 2014, there were approximately 36,000 persons employed in legal and security occupations, representing 1.9% of Ireland's workforce (Figure 9.8.1)
- Almost 70% of overall employment was concentrated in public administration and defence, while a further 25% was in professional, scientific and technical activities
- Over the period 2009 to 2010, overall employment in legal and security occupations increased from 37,000 to 43,000, but then declined to just below the 2009 level by 2014; over the five year period, employment levels remained relatively static for all occupations (Figure 9.8.2)
- Between 2013 and 2014, overall employment contracted by 1.6%; this was in contrast to positive growth of 1.7% nationally; employment of Gardaí and protective service occupations grew at rates higher than the national average, at 2.9% and 9.2% respectively; the absolute employment increases for these occupations were small in magnitude
- Almost 90% of persons employed in legal and security occupations was aged 25-54 (Figure 9.8.3)
- Almost all persons employed as legal professionals (i.e. barristers, judges, solicitors and related legal professionals) had attained third level qualifications; at the lower end of the educational spectrum, one fifth of army personnel had attained lower secondary or less qualifications (Figure 9.8.4)
- Most of those employed in legal and security occupations were Irish males who worked full-time.

Figure 9.8.1 Numbers Employed (000s) in Selected Legal and Security Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

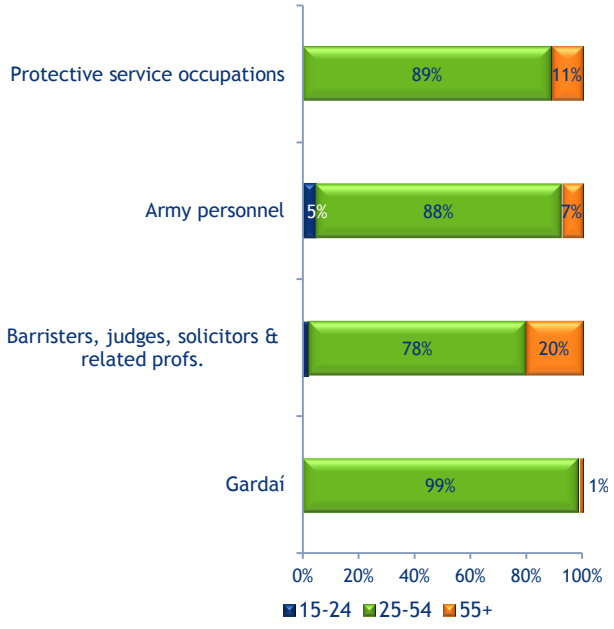
Figure 9.8.2 Average Annual Growth (%) in Selected Legal and Security Occupations



Source: SLMRU (SOLAS) analysis of CSO data

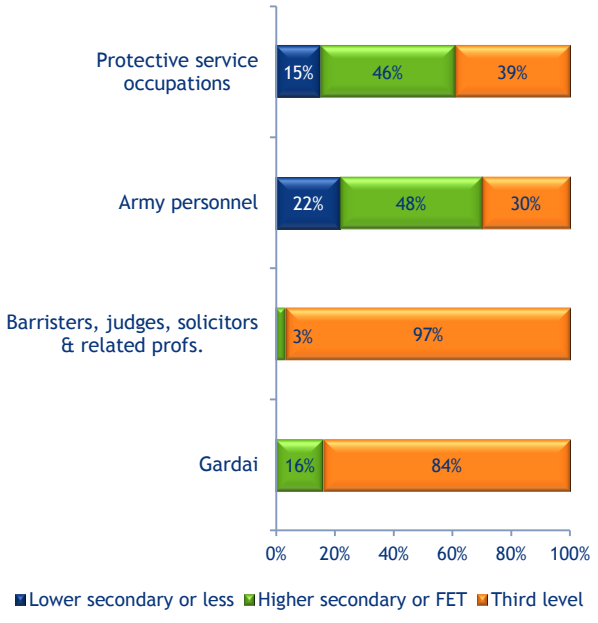
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.8.3 Age Profile of Selected Legal and Security Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.8.4 Education Profile of Selected Legal and Security Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

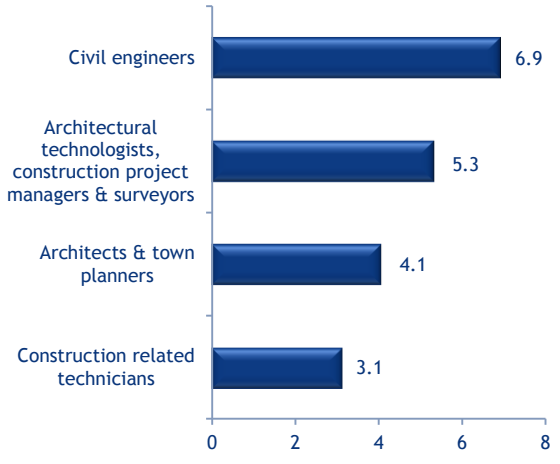
There were 10,000 legal professionals (including judges, barristers and solicitors) employed in Ireland in 2014. With over 1,500 law graduates from NFQ level 8 and above courses in 2014, the supply from the education and training system appears to be sufficient to meet the recruitment requirement (which is estimated at less than a 1,000).

There has been an increase in the number of Gardaí recently, however, any further increases will depend on Government policy.

9.9 Construction Professional and Associate Professional Occupations

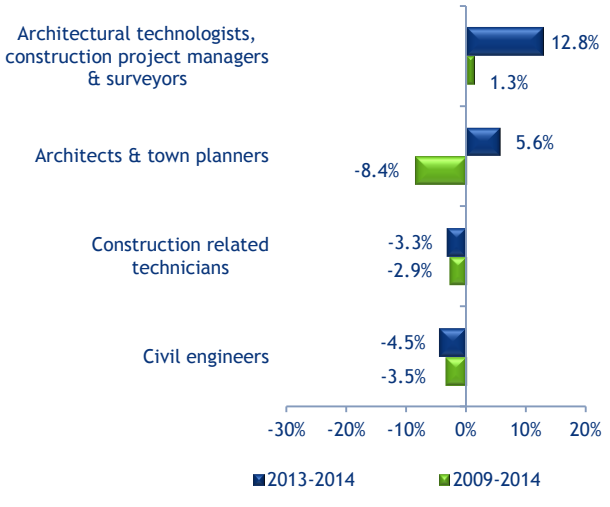
- In 2014, there were approximately 19,000 persons employed in the selected construction professional and associate professional occupations, representing 1% of total national employment (Figure 9.9.1)
- Almost 85% of overall employment was at professional level
- Just over 60% of overall employment was concentrated in professional, scientific and technical activities (mostly architectural and engineering activities), a further 15% was in public administration and defence; only 4% was in construction
- Between 2009 and 2014, employment in the selected occupations contracted at an average annual rate of 3.5%, compared to the national average rate of 0.5%; employment contracted for all occupations (excluding the combined group – architectural technologists, construction project managers & surveyors); the strongest pace of decline was recorded for architects & town planners (8.4% on average annually) and civil engineers (3.5% on average annually)
- Over the five-year period, overall employment levels contracted by almost 4,000; the most pronounced absolute employment decrease was recorded for architects & town planners (Figure 9.9.2)
- While overall employment expanded by 2.1% between 2013 and 2014, employment levels remained relatively static
- Approximately 90% of all employed construction professionals were aged 25-54; the share was almost 80% for construction associate professionals
- Almost 95% of construction professionals in employment were third level graduates; the share was 76% for construction associate professionals
- Most persons employed in each occupation were male; the workforce of architects & town planners had the highest representation of females, at almost one-third.

Figure 9.9.1 Numbers Employed (000s) in Selected Construction Professional and Associate Professional Occupations, 2014



Source: SLMRU (SOLAS) Analysis of CSO data

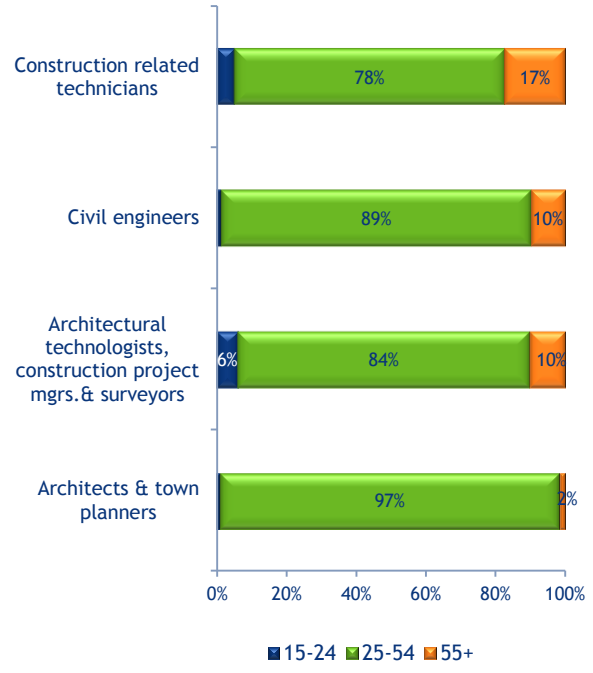
Figure 9.9.2 Average Annual Growth (%) in Selected Construction Professional and Associate Professional Occupations



Source: SLMRU (SOLAS) Analysis of CSO data

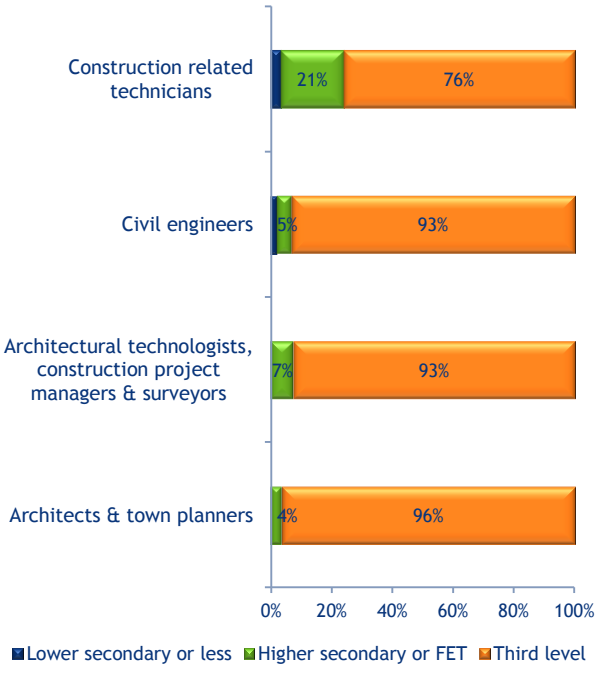
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.9.3 Age Profile of Selected Construction Professional and Associate Professional Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.9.4 Education Profile of Selected Construction Professional and Associate Professional Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

Following several quiet years in relation to the demand for construction skills, a number of vacancies for construction professionals and technicians were observed in 2014. While some vacancies were arising due to replacement demand and turnover within employment, growth in construction activity has also been a contributor. The seasonally adjusted volume of production index in building and construction has been gradually increasing since 2012. In fact, growth is expected to accelerate in absolute and relative terms over the medium term, as the sector recovers from the collapse which followed the bursting of the housing bubble.

The initial growth has been concentrated in commercial construction and resulted from expansion in other sectors, namely bio-pharma/medical, utilities and ICT. Further growth in commercial building is confirmed by recent job announcement (e.g. Bausch and Lomb (pharma manufacturing), EPS (water and wastewater treatment), Apple (new data centre)).

Growth in residential construction is also expected to gather pace, given recent signals from the property market: the monthly residential property price index has been increasing almost continuously since March 2013 (albeit some price stabilisation was observed in recent months) and the volume of production index has been increasing since quarter 1 2014.

There is significant graduate output from construction related courses (over 1,500 annually at level 8 or above). In addition, some overhang of construction skills is still present (in May 2015, there were 200 job ready civil engineers and 160 architects

seeking employment). The supply from these sources is likely to be sufficient to meet the requirement in the short run.

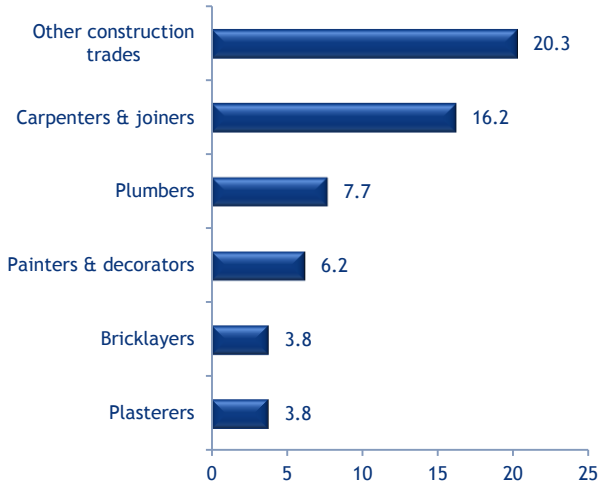
Nonetheless, shortages of the following skills have already been identified:

- construction and quantity surveyors
- BIM (building information modelling, CAD).

9.10 Construction Craft Occupations

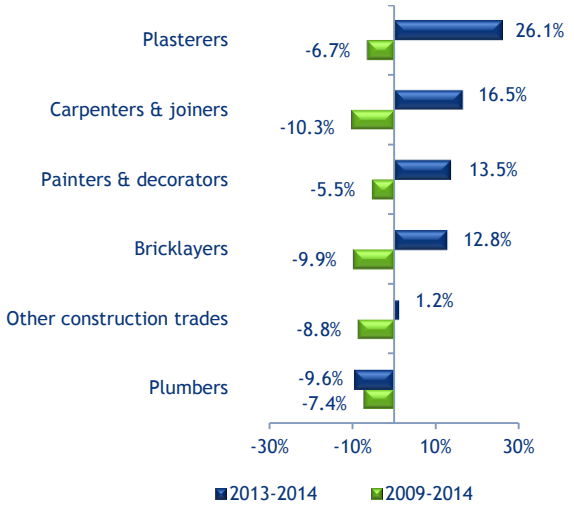
- In 2014, there were approximately 58,000 persons employed in the selected construction craft occupations (Figure 9.10.1), representing 3% of the national workforce
- Employment in construction craft occupations was predominantly concentrated in construction
- Between 2009 and 2014, overall employment contracted at an average annual rate of 8.7% or by 33,000 persons – the strongest pace of contraction and largest absolute decrease recorded among the 17 broad occupational groups examined (the national average rate of decline was at 0.5%) (Figure 9.10.2)
- Over the five-year period, employment contracted in all occupations; the strongest average annual rates of decline were recorded for carpenters & joiners (10.3%), other construction trades (8.8%) and bricklayers (9.9%); the most pronounced absolute employment decreases were recorded for carpenters & joiners and other construction trades (at 12,000 each)
- Between 2013 and 2014, overall employment expanded by 6.8% or almost 4,000; employment levels increased for most occupations, with the most pronounced increase recorded for carpenters & joiners (almost 2,500)
- At 70% and over, the majority of those employed in each occupation was aged 25-54; the age profile of plumbers was the youngest and above the national average – the share of 15-24 year olds was 12%; in contrast, it was the most mature for other construction trades (Figure 9.10.3)
- The share of persons employed in the selected craft occupations who had attained higher secondary/FET qualifications (at almost 66%) and lower secondary or less qualifications (at almost 25%) was well above the respective national average share of 38% and 15%; the share who had attained third level qualifications (at 12%) was considerably below the national average share (47%) (Figure 9.10.4)
- Employment in most occupations was almost exclusively male
- While only 13% of construction craft workers were in part-time employment, the share was relatively high for bricklayers, at approximately one quarter
- In quarter 4 2014, the unemployment rate for construction craft workers was 23.2% compared to 30.4% a year previously; however, it was still over double the national average rate.

Figure 9.10.1 Numbers Employed (000s) in Selected Construction Craft Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

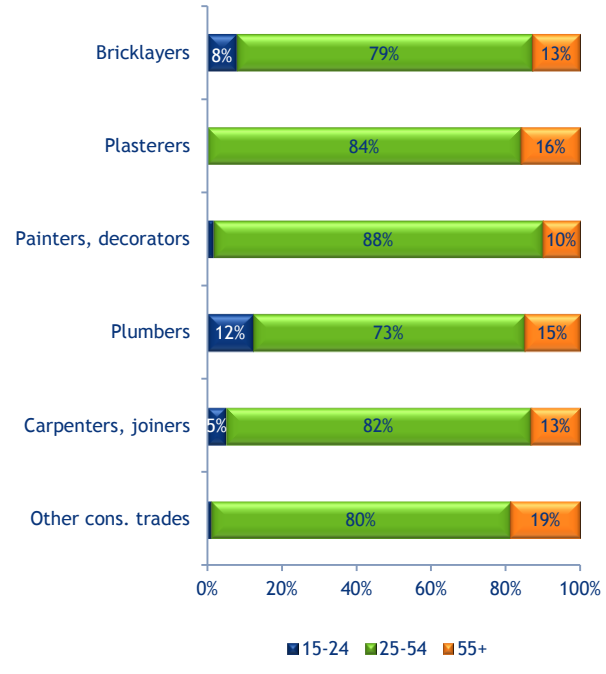
Figure 9.10.2 Average Annual Growth (%) in Selected Construction Craft Occupations



Source: SLMRU (SOLAS) analysis of CSO data

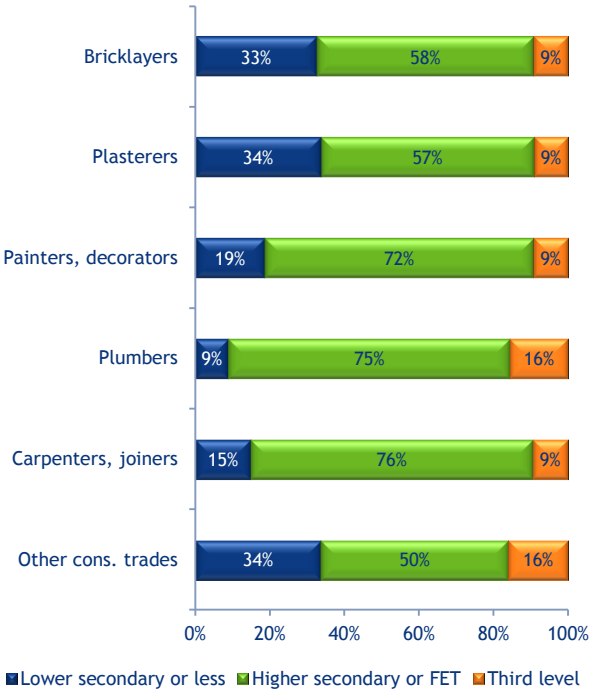
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.10.3 Age Profile of Selected Construction Craft Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.10.4 Education Profile of Selected Construction Craft Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

Over the last year, several indicators have pointed to a recovery in the construction sector: increases have been observed in the volume of the construction production index, residential property price index, apprentices intake and employment levels. Vacancies for construction craftspersons were also on the rise. While some of the notified vacancies were arising due to replacement of those who retire or leave for other reasons, as well as due to changes of employers of those in employment, expansion demand also played a role.

During 2014, job opportunities for construction craftspersons still remained limited, given that most of the activity was concentrated in the construction of commercial building (arising from expansion in other sectors, namely bio-pharma/medical,

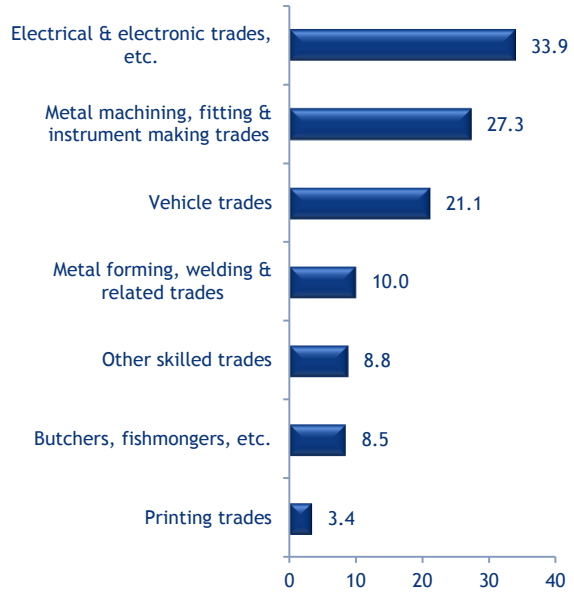
utilities and ICT). The demand for most construction craft skills will be more pronounced when the recovery in residential development gathers pace, given the greater labour intensity of house building compared to other construction activities.

There is still a significant overhang of construction skills in the Irish labour market: in May 2015, there were over 2,000 bricklayers, 1,500 plumbers, 4,000 carpenters, 2,000 plasterers and 2,700 painters/decorators seeking employment through the Public Employment Service (PES). It should be noted, however, that a significant number of job seekers in each of these occupations has a Leaving Certificate or lower level of qualification. As a result, the availability of qualified tradespersons may become an issue as the recovery accelerates. Indeed, despite the excess supply of most construction skills at present, a shortage of steel erectors/fixers has been identified.

9.11 Other Craft Occupations

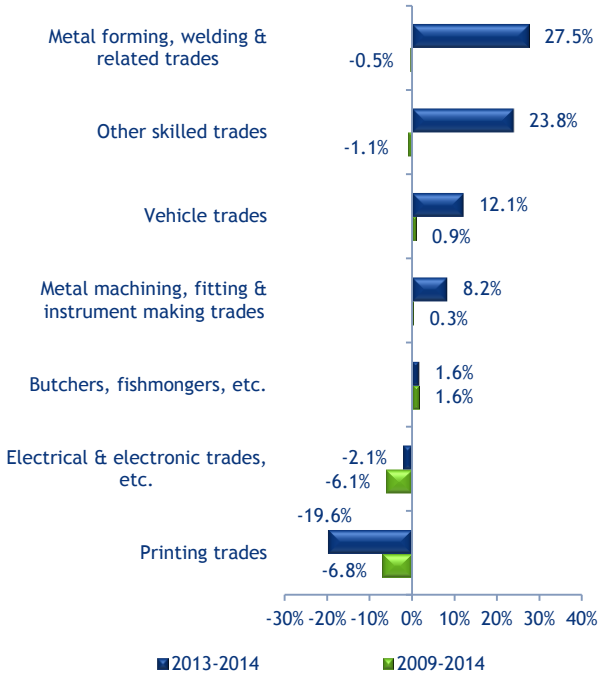
- In 2014, there were approximately 113,000 persons employed in other craft occupations, representing 5.9% of the national workforce (Figure 9.11.1)
- Two thirds of overall employment was concentrated in two sectors: manufacturing (one third) and wholesale and retail (approximately one fifth)
- Almost 75% of overall employment was concentrated in three trades: electrical & electronic (30%), metal machining, fitting and instrument making (24%) and vehicle (almost 20%)
- Between 2009 and 2014, overall employment in other craft occupations contracted by 2.1% on average annually, with a net 12,600 job losses; however, between 2013 and 2014, employment expanded by 6.4%, with almost a net 7,000 jobs created
- Between 2009 and 2014, the strongest average annual rates of employment decline were observed for printing trades (6.8%) and electrical & electronic trades (6.1%); the latter group experienced the largest reduction in the numbers employed (approximately 12,000); between 2013 and 2014, employment in these trades also contracted, while employment in most other craft occupations expanded (Figure 9.11.2)
- Just over 75% of all persons employed in the selected occupations was aged 25-54 (Figure 9.11.3)
- Approximately 56% of all persons employed in the selected occupations had attained higher secondary/FET qualifications, exceeding the national average of 38%; however, at 30%, the overall share with third level qualifications was considerably below the national average of 47%; the share who had third level qualifications varied across the occupations: at 45%, the highest share was for electrical & electronic craftsworkers (within this category, 90% of computer repair and maintenance engineers had attained this level of education); in contrast, the corresponding share was only 7% for butchers, fishmongers and related trades (Figure 9.11.4)
- Approximately 30% of all employed butchers, fishmongers and related trades were non-Irish nationals
- The majority of other craftpersons in employment were male and worked full-time.

Figure 9.11.1 Numbers Employed (000s) in Selected Other Craft Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

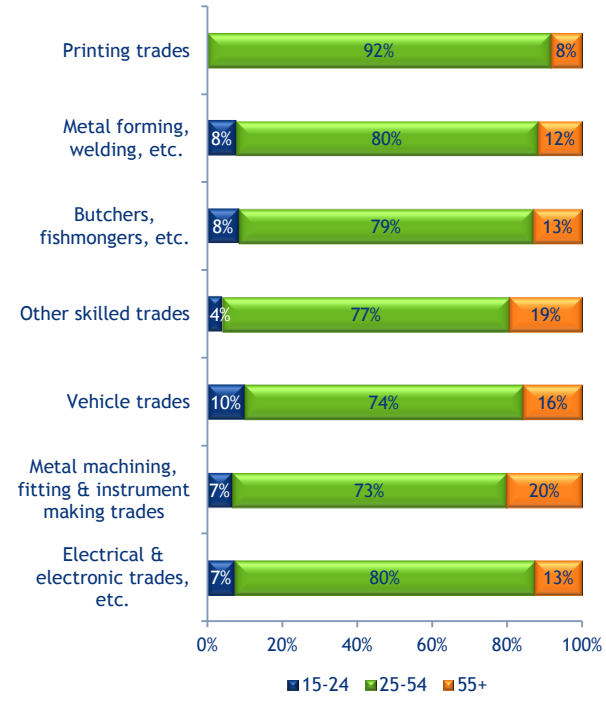
Figure 9.11.2 Average Annual Growth (%) in Selected Other Craft Occupations



Source: SLMRU (SOLAS) analysis of CSO data

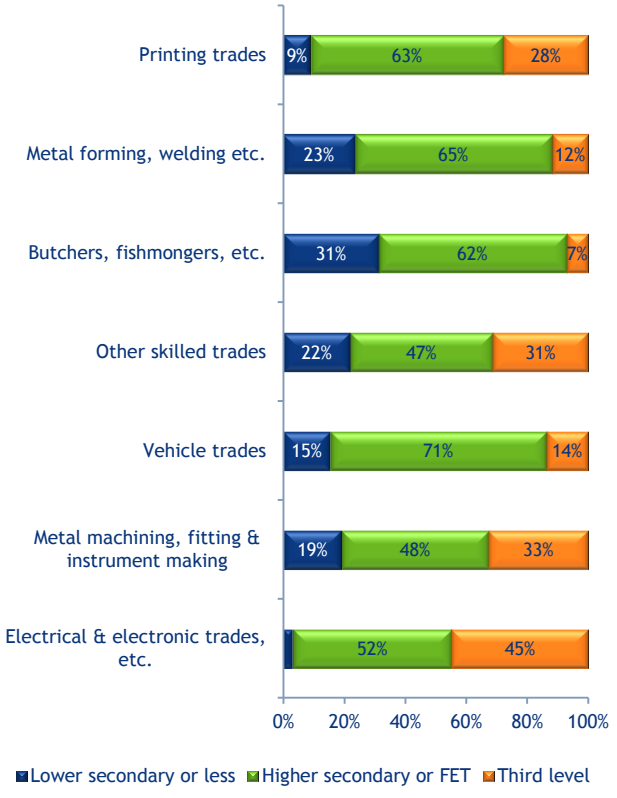
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.11.3 Age Profile of Selected Other Craft Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.11.4 Education Profile of Selected Other Craft Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

Electricians – the demand for electricians was evident in an increased number of vacancies in 2014; however, many vacancies were arising due to replacement demand and turnover (3,500 transitions between employers were observed in 2014); high turnover was also evident in the simultaneous presence of a large number of job seekers (2,700 in May 2015) and vacancies; supply from the apprenticeship system has declined sharply in recent times (from 729 in 2013 to 478 in 2014 alone), which may create an issue in the medium term; with growth emerging in construction and accelerating in other sectors, the demand for electricians is expected to increase.

Welders – in 2014, there were many vacancies for welders with TIG/MIG, arc, pipe, orbital and butt fusion skills; many of these vacancies were airing due to turnover (1,400 movements between employers were identified in 2014); in May 2015, there were 1,200 job ready welders who were seeking employment through the PES; in addition, 286 FET awards were made in 2014 in manual arc and oxy-acetylene welding; nonetheless, shortages of TIG/MIG welders continue to exist; the demand is expected to remain strong due to projected expansion of utilities, high tech and traditional manufacturing and construction.

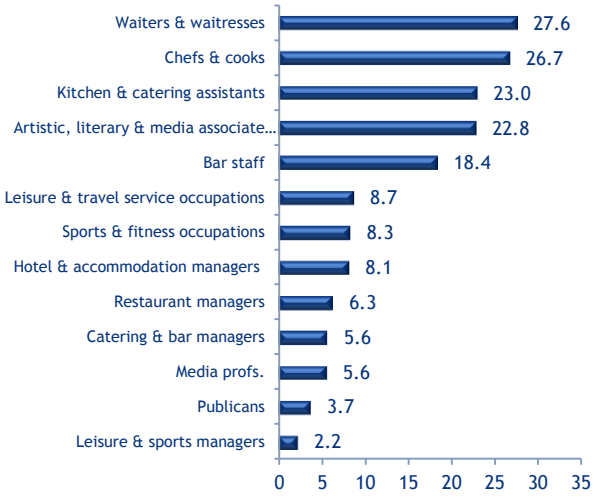
Tool makers/fitters – the demand for tool making skills has been increasing, owing mainly to the strong performance of the high tech manufacturing sector; in response to the growing demand, a new course was introduced by the Sligo, Mayo, Leitrim ETB in 2014, with 16 enrolments; this was in addition to the 20 awards made through FET courses in 2014 (an increase from 10 in 2013) and an increase in apprentice intake; nonetheless, shortages of tradespersons with expertise in making highly complex precision tools are expected to persist in the short run.

Butchers/de-boners – demand for butchers/de-boners has been driven by the strong performance of the meat processing industry; the industry has been reliant on non-EEA workers (the share of non-Irish nationals in the workforce was 31% in 2014); in response to the shortage, the Government, in collaboration with employers, established a National Butchery Academy in 2012; however, the retention of qualified butchers following the completion of training was identified as an issue; the problem with attracting and retaining skilled butchers/de-boners remains a challenge for the meat industry in Ireland, with the issue likely to be exacerbated by the greater availability of job opportunities across other sectors as the economy continues to recover.

9.12 Arts, Sports and Tourism Occupations

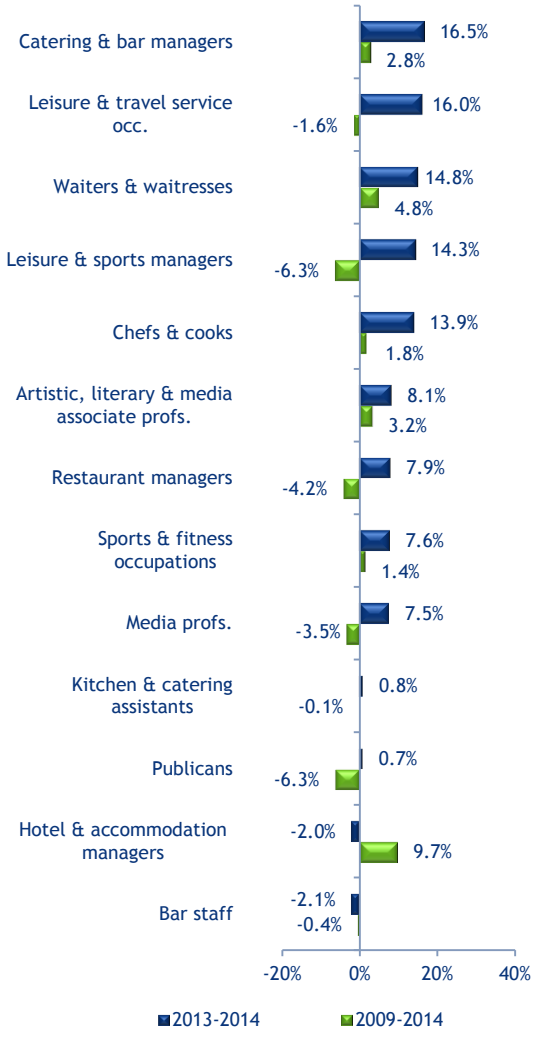
- In 2014, approximately 167,000 persons were employed in the selected arts, sports and tourism occupations (Figure 9.12.1), representing 8.7% of Ireland's workforce
- There were 119,000 persons employed in in hotel, restaurant & publican related occupations; 28,000 persons in artistic, literary & media occupations and 19,000 in sports & travel service occupations
- Between 2009 and 2014, overall employment expanded by 1.2% on average annually, compared to the national average rate of 0.5%; the strongest pace of employment growth was observed for hotel & accommodation managers (9.7% on average annually), waiting staff (4.8%) and artistic, literary & media professionals (3.2%); in contrast, the most rapid declines were observed for publicans and leisure & sports managers (jointly at 6.3%) and restaurant managers (4.2%) (Figure 9.12.2)
- Over that five-year period, there were approximately 9,500 net additional jobs; the largest absolute employment increases were observed for waiting staff and artistic, literary & media professionals and hotel & accommodation managers; in contrast, the largest absolute decreases were observed for restaurant managers and publicans
- The workforce of both waiting and bar staff was the youngest among the selected occupations – 44% and almost 40% of those employed were younger than 25 years respectively – among the youngest workforces nationally; in contrast, publicans had the most mature workforce, with two fifths of those employed aged 55 or older (Figure 9.12.3)
- Just over 80% of the overall workforce of media professionals had attained third level qualifications – the highest share among the selected occupations; on the other hand, only 12% of employed publicans had third level qualifications (Figure 9.12.4)
- While the overall workforce of the selected occupations was almost gender balanced, there was a higher representation of females in the workforce of both waiting staff and kitchen & catering assistants, at 80% and 60% respectively; conversely, at least 66% of the workforce of publicans, bar staff and leisure & sports managers was male
- The prevalence of part-time work was the highest for both waiting and bar staff – almost 60% and 55% of those employed worked part-time respectively – among the highest shares across all occupations in the national workforce
- Almost 40% of chefs & cooks were non-Irish nationals – one of the highest shares across all occupations in the national workforce; the share was also high for kitchen & catering assistants, at 36%.

Figure 9.12.1 Numbers Employed (000s) in Selected Arts, Sports and Tourism Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

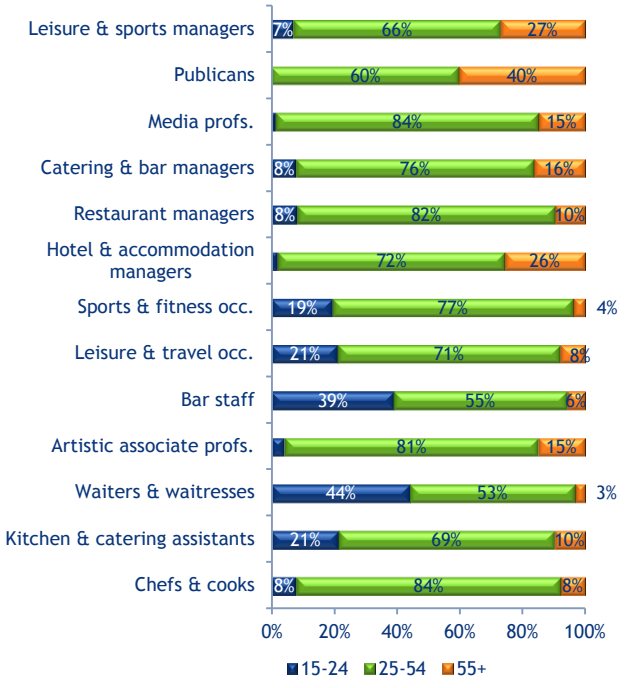
Figure 9.12.2 Average Annual Growth (%) in Selected Arts, Sports and Tourism Occupations



Source: SLMRU (SOLAS) analysis of CSO data

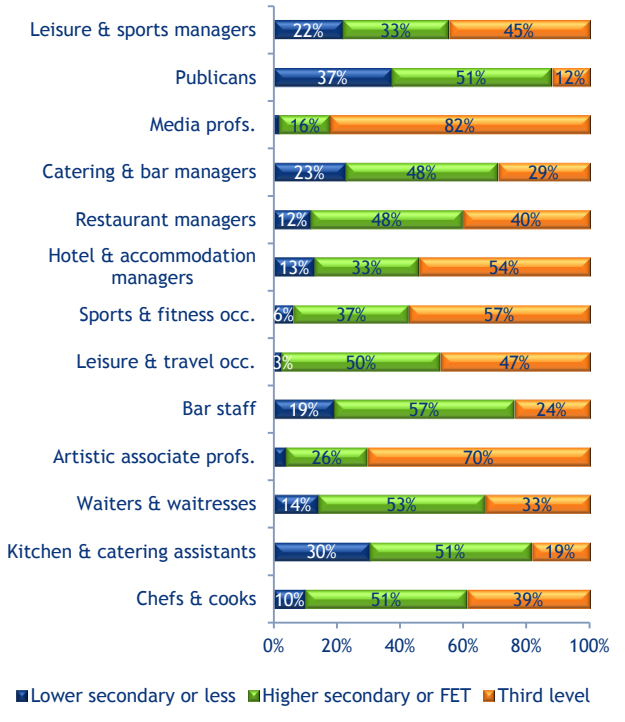
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.12.3 Age Profile of Selected Arts, Sports and Tourism Occupations, Quarter 4 2014

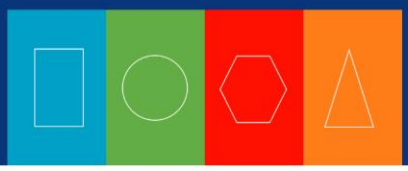


Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.12.4 Education Profile of Selected Arts, Sports and Tourism Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data



Shortage Indicators

In 2014, over 110,000 persons were employed in occupations providing hospitality services, such as hotels and restaurant managers, chefs, catering assistants and waiters. The transitions between employment, unemployment and inactivity for these occupations was typically higher than average.

In 2014, 2,700 transitions between employers and 1,000 transitions to inactivity (including retirement) were identified for chefs. Exits to inactivity were even higher in volume for catering assistants and waiting/bar staff, with an estimated 4,000 and 10,000 transitions respectively, with transitions due to changes of employer of a similar magnitude. Such a high level of transitions suggests that employment in many hospitality roles is casual in nature, which is also supported by the findings that the share of part-time workers in these occupations is more than twice the national average (46% for catering assistants and above 50% for waters/bar staff) and that there is simultaneously a large number of job seekers (2,500 catering assistants and 3,300 waiters/bar staff in May 2015) and a large number of vacancies (in 2014, there were thousands of vacancies advertised on the DSP and Irishjobs.ie portals alone).

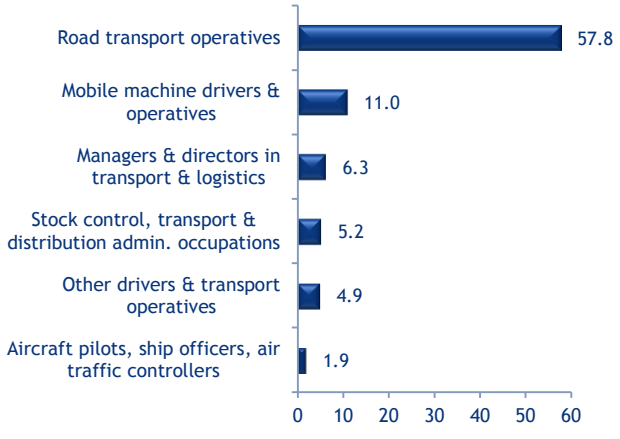
The demand for hospitality, sports and leisure services has been increasing with the recovery of the economy. While supply is sufficient to meet the demand for lower skilled hospitality roles (waiters/bar staff and catering assistants), a shortage of qualified chefs has been identified. Although there were almost 1,500 job ready chefs looking for work in May 2015, two thirds of them do not appear to be qualified in culinary skills, with Leaving the Certificate or less as the highest level of education attained. The number of chefs qualifying from courses at NFQ levels 5-8 was 600 in 2013/2014.

The economic recovery is expected to positively impact on the demand for artistic, literary and media skills. In May 2015, there were 1,500 third level graduates job-ready artistic, literary, media and design associate professionals. Given that these occupations can contribute significantly in driving innovation across a variety of sectors, they are an important resource for growth. However, augmenting artistic abilities with business and entrepreneurial skills is necessary in order to translate creativity into commercial opportunity within the creative arts sector (e.g. fine art, film industry), as well as other sectors (e.g. product development in manufacturing, sales and marketing etc.).

9.13 Transport and Logistics Occupations

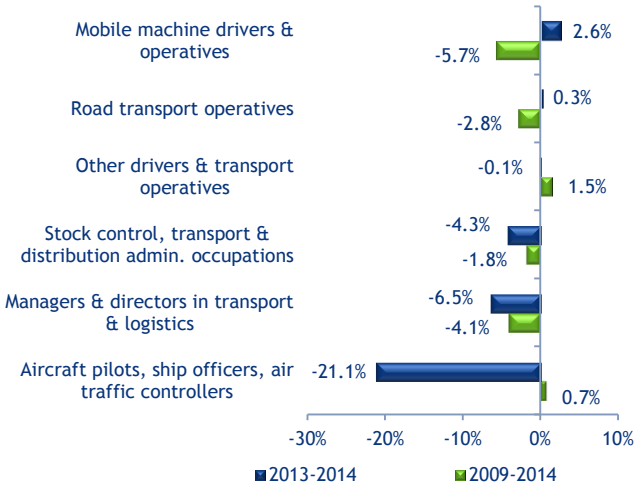
- In 2014, there were approximately 87,000 persons employed in transport and logistics occupations, representing 4.6% of the national workforce
- Two thirds of those employed (58,000 persons) were road transport operatives (predominantly taxi and large goods vehicle drivers) (Figure 9.13.1)
- Between 2009 and 2014, overall employment in the selected occupations contracted by 3% on average annually, compared to the national average of 0.5%; in 2014, the overall employment level was 14,000 below the 2009 level; however, since 2012, the level has remained relatively static
- Between 2009 and 2014, employment in most occupations contracted, with the strongest rates of decline observed for mobile machine drivers and operatives (5.7% on average annually), managers & directors in transport and logistics (4.1% on average annually) and road transport operatives (2.8% on average annually); the most pronounced decline in employment levels was observed for road transport operatives (almost 9,000); in contrast, there was a very modest employment increase observed for other drivers & transport operatives (Figure 9.13.2)
- Almost one third of all employed road transport operatives was aged 55 or older (particularly, bus & coach drivers and taxi drivers – with two fifths employed in both occupations aged 55 or older)
- The education profile of those employed in the selected occupations was concentrated at lower educational attainment levels: almost 40% had lower secondary or less qualifications – compared to the national average of 15%; 46% had higher secondary/FET qualifications, compared to the national average of 38%; only 15% had third level qualifications, considerably below the national average of 47%
- One quarter of employment in administrative occupations in stock control, transport & distribution was female.

Figure 9.13.1 Numbers Employed (000s) in Selected Transport and Logistics Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

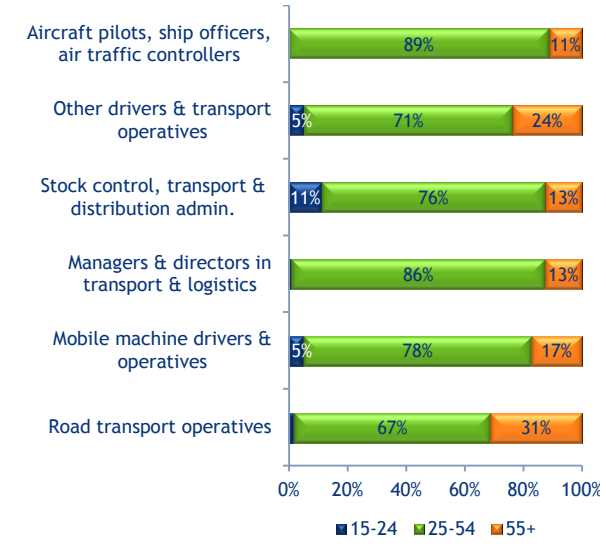
Figure 9.13.2 Average Annual Growth (%) in Selected Transport and Logistics Occupations



Source: SLMRU (SOLAS) analysis of CSO data

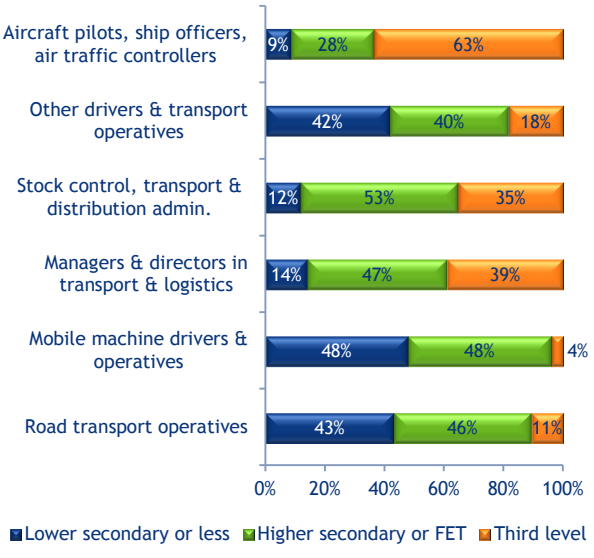
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.13.3 Age Profile of Selected Transport and Logistics Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.13.4 Education Profile of Selected Transport and Logistics Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

The transport sector will benefit from the economic recovery domestically and globally, as it enables the movement of goods nationally and internationally. Job creation specific to transport related skills has been announced by a number of companies in recent months including SEKO MedTec, Kedington Direct, Emerald Truck & Van and Dualway Group.

In 2014, shortages of skills relevant to supply chain management have been identified. These include inventory control/planning, order receivables and management, ERP skills, supply chain analysis, e-Sourcing solutions, SAP, SharePoint Supplier, Indirect Purchasing, freight forwarding and customs control. Persons holding professional qualifications (e.g. APICS, IIPMM (Irish Institute of Purchasing and Materials Management)) are particulary in demand. In addition to technical skills, a proficiency in foreign languages (EU languages in particular) is frequently required for supply chain roles (spanning administrative to managerial).

There are very few courses dedicated to transport and logistics skills. In 2014, there were 40 graduates at NFQ level 5 and a further 100 at NFQ levels 7 and 8.

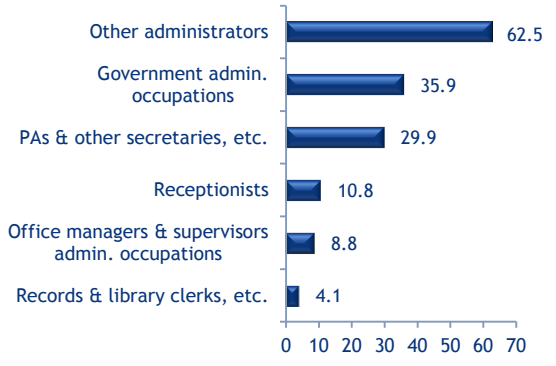
A shortage of drivers has also been identified. While there is a large number of job ready drivers seeking employment (7,000 truck drivers and 4,000 machine drivers in May 2015), some recruitment difficulties are arising due to issues such as age related insurance costs and the lack of experience in relation to the new entrants. An estimated 4,000 truck drivers transitioned to inactivity in 2014, which is not surprising given that almost one in three truck drivers was over 55. In addition, retention is also identified as an issue, with 7,000 intra-occupational transitions identified in 2014 for truck drivers and 1,700 for machine drivers. Difficulty in sourcing has been identified in relation to fork lift and special vehicle driving skills.

The estimates in the FET service plan for 2015 suggest that over 3,000 places will be available on transport and logistics courses (including driving, as well as supply chain administration). If achieved, graduate output from these courses will contribute to closing the existing gap between demand and supply.

9.14 Administrative and Secretarial Occupations

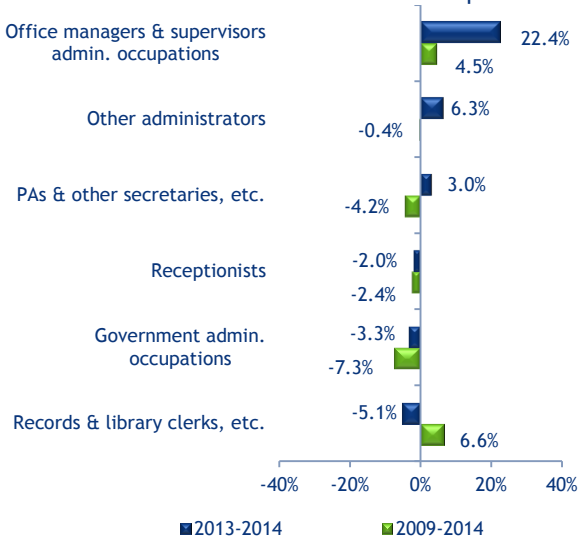
- In 2014, there were approximately 152,000 persons employed in administrative and secretarial occupations, accounting for 7.9% of Ireland's workforce (Figure 9.14.1)
- Between 2009 and 2014, overall employment in the selected occupations contracted by 2.8% on average annually, with the 2014 overall employment level 23,000 below the 2009 level (175,000); however, since 2012, employment has been increasing, reversing the downward trend recorded since the beginning of the recession
- Over the five-year period, employment decreased in all occupations (excluding records & library clerks and office managers & supervisors); the fastest rates of decline were observed for government administrative occupations (7.3% on average annually) and PAs & other secretaries (4.2% on average annually); the most significant absolute decline was observed for government administrative occupations (16,500) and PAs & other secretaries (7,000) (Figure 9.14.2)
- Between 2013 and 2014, overall employment expanded by 3.1%, with 4,500 net additional jobs created; the strongest increases (rates and levels) was observed for other administrators and office managers & supervisors; the decline in employment levels for government administrative occupations stabilised
- At least 70% of those employed in each occupation was aged 25-54; the workforce of PAs & other secretaries was the most mature, with one quarter aged 55 or older; in contrast, it was the youngest for receptionists, with 11% younger than 25
- With the exception of records & library clerks and office managers & supervisors, the share of persons employed in each occupation who were third level graduates was below the national average
- At least 70% of persons employed in each occupation was female
- The share of persons in part-time employment was the highest for receptionists (at 45%) and PAs & other secretaries (at 40%).

Figure 9.14.1 Numbers Employed (000s) in Selected Administrative and Secretarial Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

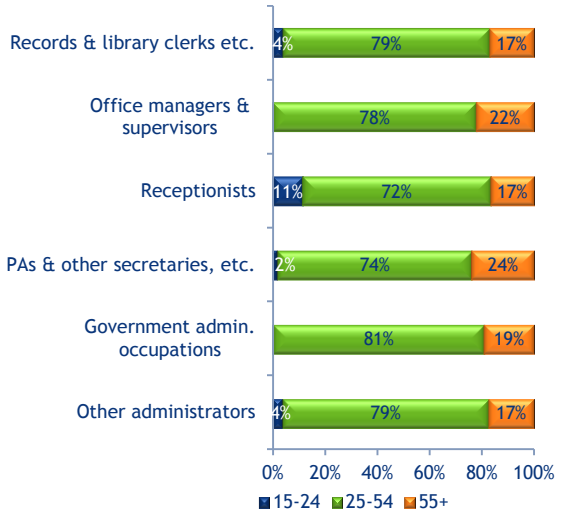
Figure 9.14.2 Average Annual Growth (%) in Selected Administrative & Secretarial Occupations



Source: SLMRU (SOLAS) analysis of CSO data

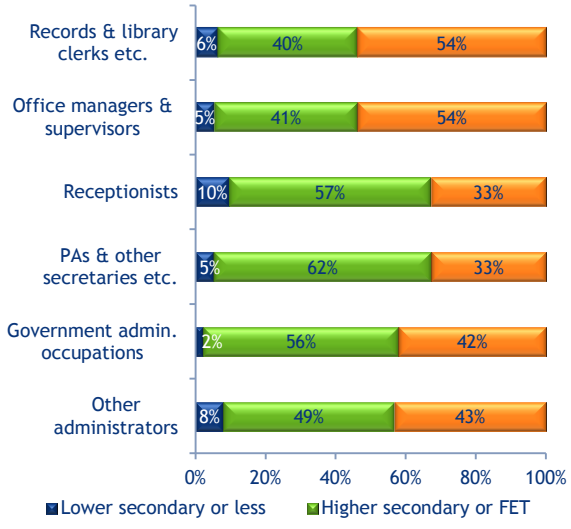
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.14.3 Age Profile of Selected Administrative and Secretarial Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.14.4 Education Profile of Selected Administrative and Secretarial Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In 2014, vacancies for administrative and secretarial roles were numerous. Many vacancies were arising due to replacement demand (5,500 transitions to inactivity were identified for general clerks in 2014) and turnover (9,000 transitions between employers). There were also over 10,000 job ready general clerks looking for work in May 2015. In addition, over 5,000 students graduated from FET courses in business and administration in 2014. Supply is estimated to be sufficient to meet the recruitment requirement and no shortages exist at present.

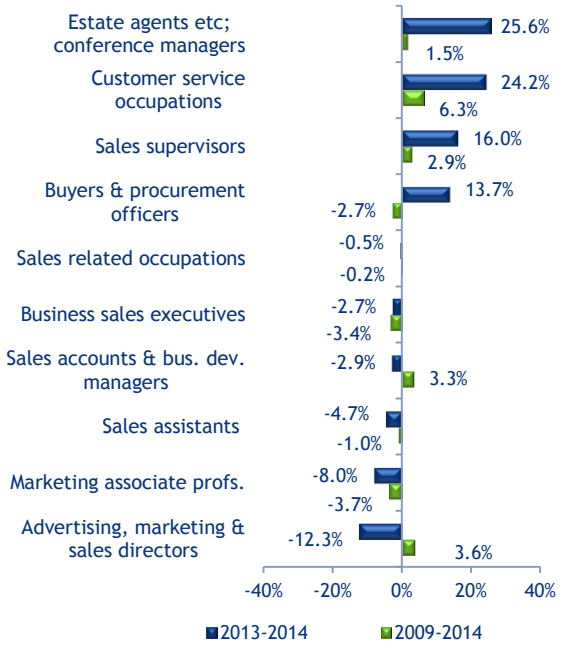
9.15 Sales and Customer Service Occupations

- In 2014, there were approximately 218,000 persons employed in sales and customer service occupations, representing 11.4% of Ireland's workforce
- There were 122,000 persons employed as sales assistants – the largest workforce nationally (Figure 9.15.1)
- Between 2009 and 2014, overall employment in the selected occupations decreased very modestly, by 0.3% on average annually, similar to the national average rate; there were 3,000 net job losses; the most pronounced employment decreases (in absolute terms) was observed for sales assistants (6,500) and business sales executives (4,500); on the other hand, the largest absolute increases was observed for customer service occupations (5,600) and sales accounts & business development managers (2,500)
- Between 2013 and 2014, overall employment also contracted, although modestly, by 1% or almost 2,500; the largest absolute decrease was observed for sales assistants, while the largest increase was observed for customer service occupations (Figure 9.15.2)
- Most persons employed in each occupation was aged 25-54; almost 30% of all employed sales assistants was aged 15-24 – the youngest workforce among the selected occupations (Figure 9.15.3)
- Almost 50% of all persons employed in the selected occupations had attained higher secondary/FET qualifications (above the national average), while almost 40% had third level qualifications (below the national average) and 14% had lower secondary or less qualifications (similar to the national average) (Figure 9.15.4)
- Almost 70% of persons employed as sales assistants was female, the highest share among the selected occupations and above the national average share; with almost three fifths of those employed female, the share was also higher than the national average for sales supervisors and customer service occupations
- Just over half of all employed sales assistants worked part-time – one of the highest shares among all occupations in the national workforce
- One quarter of those employed in both sales supervisory roles and customer service occupations were non-Irish nationals; at one fifth each, the share for both sales assistants and marketing associate professionals also exceeded the national average.

Figure 9.15.1 Numbers Employed (000s) in Selected Sales and Customer Service Occupations, 2014

Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.15.2 Average Annual Growth (%) in Selected Sales and Customer Service Occupations



Source: SLMRU (SOLAS) analysis of CSO data

Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.15.3 Age Profile of Selected Sales and Customer Service Occupations, Quarter 4 2014

Source: SLMRU (SOLAS) analysis of CSO data

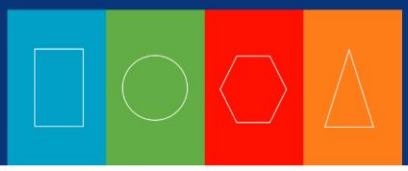
Figure 9.15.4 Education Profile of Selected Sales and Customer Service Occupations, Quarter 4 2014

Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

In 2014, there were almost 6,000 vacancies for sales roles at associate professional level and a further 9,000 for sales assistants and customer care roles advertised through the PES and Irishjobs.ie portals alone. Many of these vacancies were arising due to replacement of those who leave and the turnover of those in employment. However, with the economic recovery and the revival of domestic and global demand, employment growth is expected across all sales roles.

Employment of many sales assistants is casual in nature: 55% of employment is part-time, there is a large volume of transitions in all directions (between employment, unemployment, economic inactivity (mostly study), as well as between and within occupations) and a simultaneous presence of a large number of job seekers and vacancies. While the transitory nature of employment for sales assistants may not represent an issue for



employers, sourcing for management roles in retail may be a greater challenge. However, the availability of business graduates is likely to help in meeting employer requirements in this regard.

In the context of international trade, issues with the availability of the following skills relevant to sales and customer care have been identified:

- technical and product/service knowledge (e.g. pharmaceutical, medical devices, Software B2B, SaaS products, Salesforce.com, etc.)
- communication skills, cultural awareness and foreign languages.

In addition, a shortage of marketing experts required to lead product strategy development and management has also been identified. This is despite the graduate output of 1,500 from sales and marketing courses at levels 6 and above.

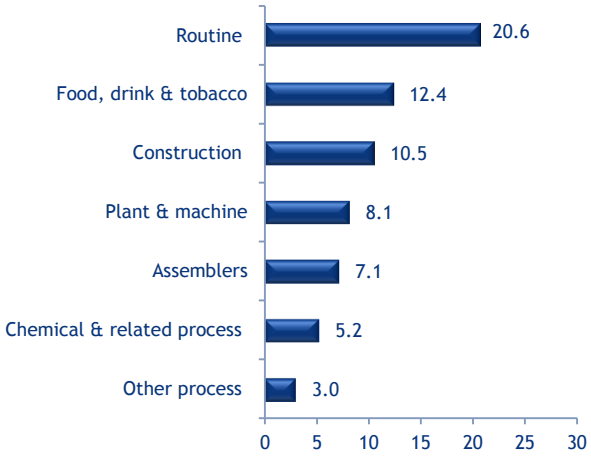
Sales and marketing skills are particularly important in Ireland's efforts to increase the global market share for its exports. In this context, foreign language skills are becoming a requirement for an increasing number of companies, with German, French and Spanish being most frequently cited as a requirement by both indigenous and multinational companies; Chinese is somewhat more relevant for the indigenous sector, while other EU languages and Russian for multinational companies. The Department of Education and Skills is in the process of developing a Foreign Language in Education Strategy under the Government's Action Plan for Jobs 2014, which represents a positive step towards improving foreign language capability of the Irish labour force.

The strong demand for sales skills is illustrated by the fact that almost all job announcements have sales and/or customer care roles mentioned as a requirement. Some of the recent job announcements for sales (including telesales) and customer care roles include Global Shares, SalesSense Int., StartingDot, Payback Loyalty, Ladbrokes, Qualtrics, Outsource, DMI, Vodafone, Intercall, etc.

9.16 Operatives

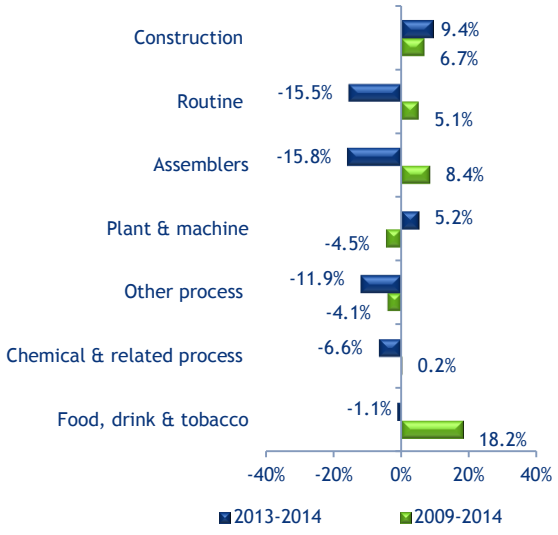
- In 2014, there were approximately 67,000 persons employed in operative occupations, representing 3.5% of Ireland's workforce (Figure 9.16.1)
- Two thirds of total employment of operatives (44,000 persons) was concentrated in manufacturing (mainly, food; machinery and equipment; pharmaceuticals; computer, electronic and optical products); the remainder was spread across several other economic sectors
- Between 2009 and 2014, overall employment in the selected occupations expanded by 4.8% on average annually; the strongest pace of growth recorded among the 17 broad occupational groups examined, and well above the national average annual rate of 0.5%; employment grew for most occupations (excluding other process operatives and plant & machine operatives (each contracted by just over 4% on average annually) and chemical & related operatives (remained virtually static); the strongest employment growth rates were observed for food, drink & tobacco operatives (18.2% on average annually); assemblers (8.4% on average annually) and construction operatives (6.7% on average annually (Figure 9.16.2)
- Over the five-year period, overall employment levels increased by 14,000; the largest employment increases (in absolute terms) were observed for food, drink & tobacco operatives (7,000) and routine operatives (4,500); the largest decrease was observed for plant & machine operatives (2,000)
- Between 2013 and 2014, overall employment decreased by 6.6%, or almost 5,000; the largest decline was observed for routine operatives, a reversal in the trend observed since 2009
- One quarter of employed construction operatives was aged 55 or older – double the national average share – and the most mature workforce among operative occupations (Figure 9.16.3)
- The education profile of employed operatives was skewed towards lower educational attainment levels; just over half of employed construction operative had lower secondary or less qualifications; the corresponding share was one third for both other process operatives and plant & machine operatives; the share employed in each occupation who had attained higher secondary/FET qualifications exceeded the national average (Figure 9.16.4)
- Half of construction operatives in employment were non-Irish nationals – one of the highest shares among occupations in the national workforce; the share was at or close to one fifth for those employed in most other operative occupations.

Figure 9.16.1 Numbers Employed (000s) in Selected Operatives and Related Occupations, 2014



Source: SLMRU (SOLAS) analysis of CSO data

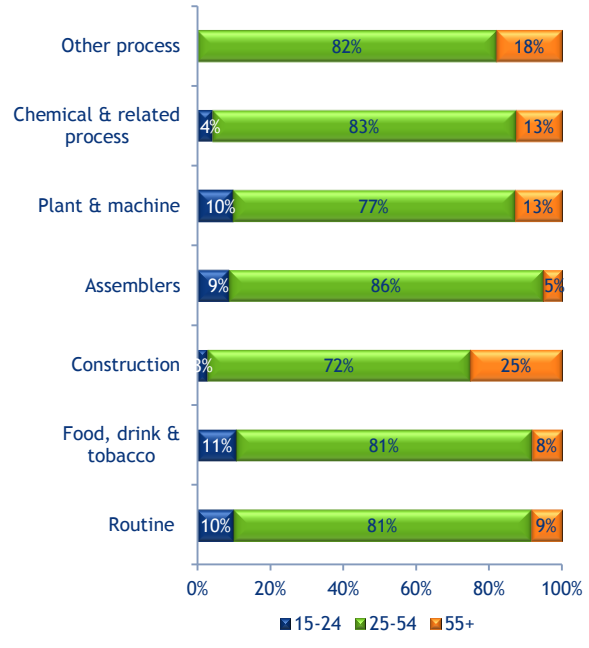
Figure 9.16.2 Average Annual Growth (%) in Selected Operatives and Related Occupations



Source: SLMRU (SOLAS) analysis of CSO data

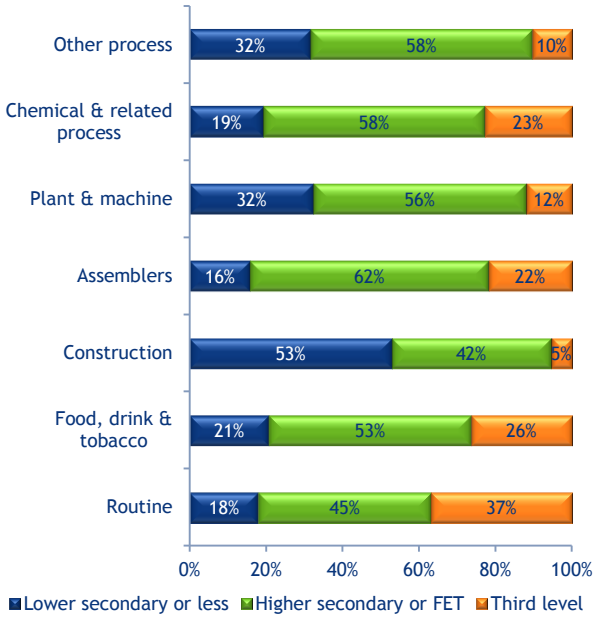
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.16.3 Age Profile of Selected Operatives and Related Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.16.4 Education Profile of Selected Operatives and Related Occupations, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

While over 3,500 vacancies were advertised for operatives through the PES and Irishjobs.ie portals alone in 2014, there were over 10,000 operatives (mostly process and construction) seeking employment through the PES in May 2015.

Many vacancies are arising due to turnover, with frequent changes of employers observed in 2014 for all types of operatives, including food, process and construction operatives.

Nonetheless, a shortage of CNC (computer numeric control) operatives has been identified, particularly in high technology manufacturing (e.g. medical devices and pharmaceuticals) and engineering. Many unemployed operatives have been trained in traditional operative skills and are deficient in technical and digital competencies required for high technology automated manufacturing.

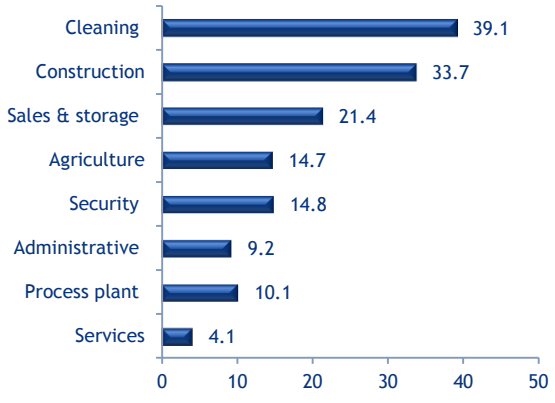
In response to the shortage, a new course was introduced in the Sligo, Mayo Leitrim ETB in Spring 2014. Approximately 30 qualified CNC operatives are expected to emerge from this course.

The demand for operative skills is expected to remain strong in the medium term due to the expected strong performance of the high tech manufacturing sector. Although the continued automation of manufacturing processes will result in the further substitution of labour by capital equipment, this will benefit skilled operatives at the expense of unskilled labourers. However, to avail of job opportunities, up-skilling of operatives will be necessary, as their roles become more knowledge and technology intensive and the distinction between technician and operative roles becomes less clear.

9.17 Elementary occupations[46]

- In 2014, approximately 147,000 persons were employed in elementary occupations, representing 7.7% of total employment nationally
- Almost two thirds (or 94,000 persons) were employed in elementary cleaning, construction and sales & storage occupations (Figure 9.17.1)
- Between 2009 and 2014, overall employment contracted by 3.2% on average annually; there were approximately 26,000 net job losses; this occupational group experienced the second strongest employment decline (both in relative and absolute terms) among the 17 broad occupational groups examined (after construction craft occupations)
- Over that five-year period, the strongest rates of employment decline were observed for elementary process plant and construction occupations (10.7% and 9.1% on average annually respectively); the largest absolute declines were also observed for these occupations (21,000 and 8,000 respectively); in contrast, the strongest increase (both in relative and absolute terms) was observed for elementary agricultural occupations
- Between 2013 and 2014, however, overall employment expanded by 1.8%, similar to the national average rate; there were approximately 2,500 net additional jobs, with the strongest absolute increase observed for elementary construction occupations (Figure 9.17.2)
- The age profile of those employed in elementary administrative occupations (i.e. postal workers, mail sorters) was the most mature – with 27% aged 55 or older – above the national average share
- The share employed in elementary occupations who had attained lower secondary or less qualifications and higher secondary/FET qualifications was above the national average; in contrast, the share with third level qualifications was well below the national average
- Employment in most occupations was predominantly male, with the exception of cleaners and elementary process plant occupations, with just over 70% and almost 40% female
- At almost 60%, the prevalence of part-time work was the highest for cleaners – one of the highest shares among all occupations in the national workforce
- Approximately 46% of employed elementary process plant labourers and 42% of cleaners were non-Irish nationals – among the highest shares across all occupations in the national workforce
- In quarter 4 2014, the unemployment rate for elementary construction occupations was 12% compared to 20% a year previously; however, it remained above the national rate.

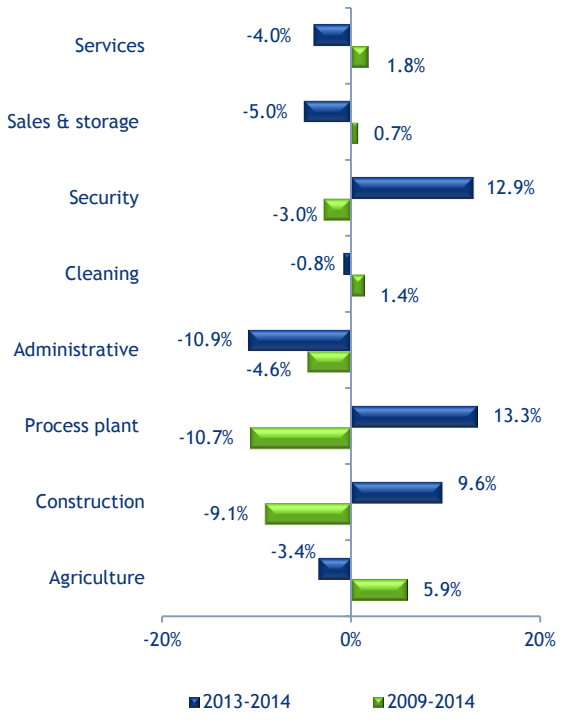
Figure 9.17.1 Numbers Employed (000s) as Labourers, 2014



Source: SLMRU (SOLAS) analysis of CSO data

[46] There are a number of occupations discussed in this section which, for simplicity purposes, are referred to as labourers; these include cleaners, porters, sorters, various types of mates and other occupations not elsewhere classified.

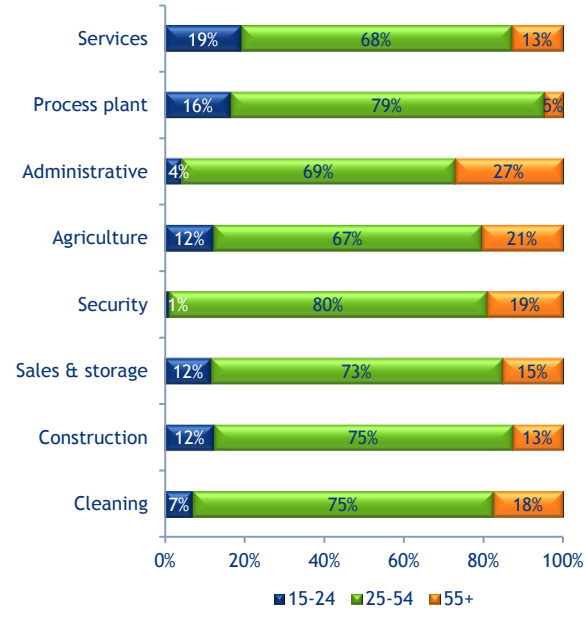
Figure 9.17.2 Average Annual Growth (%) of Labourers



Source: SLMRU (SOLAS) analysis of CSO data

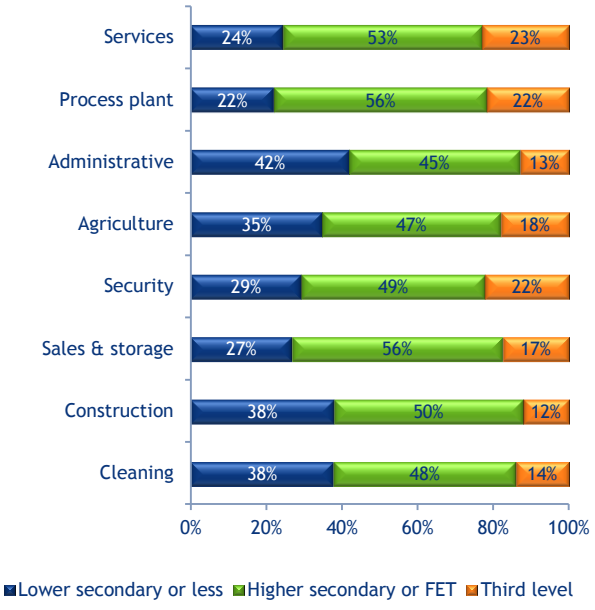
Note: Growth rates associated with occupations where employment is comparatively small are less reliable due to a greater risk of sampling error.

Figure 9.17.3 Age Profile of Labourers, Quarter 4 2014



Source: SLMRU (SOLAS) analysis of CSO data

Figure 9.17.4 Education Profile of Labourers, Quarter 4, 2014



Source: SLMRU (SOLAS) analysis of CSO data

Shortage Indicators

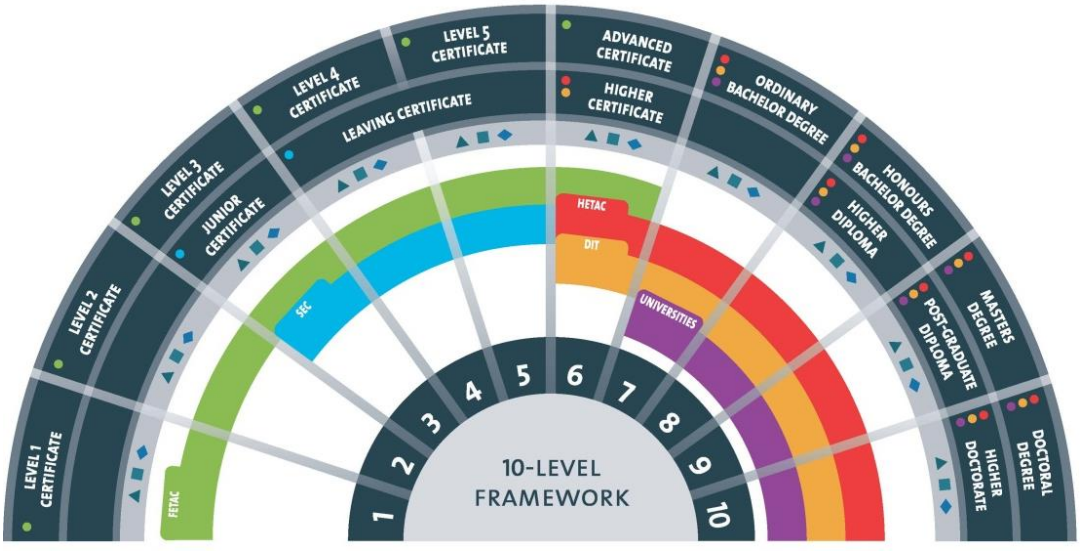
The data highlights the transitory nature of employment in elementary occupations (e.g. cleaners, security guards, routine testers, elementary construction workers, agricultural labourers etc.):

- frequent changes of employer
- frequent transitions between employment and unemployment
- frequent transitions between employment and economic inactivity
- the simultaneous presence of a large number of vacancies and a large number of job seekers.

There is a higher than average share of non-Irish nationals employed in elementary occupations. While there is currently no shortage of labourers, the issue of attracting and retaining elementary workers will become more challenging as job opportunities increase across all sectors of the economy.

APPENDIX A

Figure A: National Framework of Qualifications



Source: QQI

The structure of the Framework is based on levels and award types, which are outlined in Figure A above. There are ten award levels, which indicate the standard of learning (ranging from the most basic to doctoral awards). There are four award-type categories, which serve as an indicator of the purpose, volume and progression opportunities associated with a particular award.

- **A major award** is the main class of award made at any given level; examples of major awards include the Leaving Certificate, a QQI-FETAC major certificate or an honours bachelor degree.
- **A minor award** provides recognition for learners who achieve a range of learning outcomes but not the specific combination of learning outcomes required for a major award. A minor award is linked to a major award.
- **A Special Purpose award** is made for very specific purposes; an example of a special-purpose award is site suitability for wastewater treatment.
- **A Supplemental Award** is for learning which is additional to a previous award; it could, for example, relate to updating and refreshing knowledge or skills, or to continuing professional development.

APPENDIX B Members of the Expert Group on Future Skills Needs

Ms. Una Halligan	**Chairperson**
Marie Bourke	Head of Secretariat and Department Manager, DJEI
Inez Bailey	Director, National Adult Literacy Agency
Peter Baldwin	Assistant Secretary, Department of Education and Skills
Ray Bowe	IDA Ireland
John Burke	Department of Public Expenditure and Reform
Liz Carroll	Training and Development Manager, ISME
Ned Costello	Chief Executive, Irish Universities Association
Margaret Cox	Managing Director, I.C.E. Group
Bill Doherty	Executive Vice President, EMEA, Cook Medical
Tony Donohoe	Head of Education, Social and Innovation Policy, IBEC
Bryan Fields	Director, Strategy, Research and Evaluation, SOLAS
Joe Hogan	Founder, Chief Technology Officer & VP Openet Labs & IP Management
Declan Hughes	Assistant Secretary, Department of Jobs, Enterprise and Innovation
Colm Mac Fhionnlaoich	Manager CMD and Client Skills, Enterprise Ireland
Deirdre McDonnell	Principal Officer, Department of Education and Skills
Frank Mulvihill	Former President of the Institute of Guidance Counsellors
Brendan Murphy	President, Cork Institute of Technology
Alan Nuzum	CEO, Skillnets
Peter Rigney	Industrial Officer, ICTU
Mary-Liz Trant	Higher Education Authority

APPENDIX C Recent Publications by the EGFSN

Report	Published
Vacancy Overview 2014	May 2015
Lifelong Learning among Adults in Ireland, Quarter 4 2014	May 2015
A Study of the Current and Future Skills Requirements of the Marine/Maritime Economy to 2020	Apr 2015
The Expert Group on Future Skills Needs Statement of Activity 2014	Apr 2015
Addressing the Demand for Skills in the Freight Transport, Distribution and Logistics Sector in Ireland 2015 -20	Feb 2015
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2015	Jan 2015
Regional Labour Markets Bulletin 2014	Sep 2014
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2014	Aug 2014
National Skills Bulletin 2014	Jul 2014
Vacancy Overview 2013	May 2014
Assessing the Demand for Big Data and Analytics Skills, 2013 - 2020	May 2014
The Expert Group on Future Skills Needs Statement of Activity 2013	Mar 2014
Regional Labour Markets Bulletin 2013	Mar 2014
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2014	Feb2014
Addressing Future Demand for High-Level ICT Skills	Nov 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2013	Jul 2013
National Skills Bulletin 2013	Jul 2013
Future Skills Requirements of the Manufacturing Sector to 2020	Apr 2013
The Expert Group on Future Skills Needs Statement of Activity 2012	Apr 2013
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2013	Feb 2013
Vacancy Overview 2012	Feb 2013
Regional Labour Markets Bulletin 2012	Jan 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2012	Jul 2012
National Skills Bulletin 2012	Jul 2012
Key Skills for Enterprise to Trade Internationally	Jun 2012
EGFSN Statement of Activity 2011	Apr 2012
Vacancy Overview 2011	Feb2012
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise (Forfás report based on EGFSN identified future skills needs)	Feb 2012
Addressing High-Level ICT Skills Recruitment Needs: Research Findings	Jan 2012

Expert Group on Future Skills Needs
c/o Skills and Labour Market Research Unit
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