National Skills Bulletin 2018

National Skills Council

SOLAS
learning works

National Skills Bulletin 2018

A Report by the Skills and Labour Market Research Unit (SLMRU) in SOLAS on behalf of the National Skills Council

November 2018

Authors
Joan McNaboe
Nina Burke
David Walls
Nora Condon
Anne Marie Hogan
Caroline Shally
Izabella Wowczko

Foreword by the Minister for Education and Skills

The National Skills Bulletin provides an essential source of information on the labour market in Ireland and the skills needs of the economy. The analysis provides a wealth of information which can be utilised by policy makers as we aim to ensure we are responsive to labour market requirements.

2017 saw a continued growth in employment in Ireland with an additional 62,000 persons employed over the year. Growth was particularly strong in a number of sectors, including construction, accommodation and food, and education. In terms of occupations, an expansion was evident for those employed in professional occupations, skilled trades (including chefs and construction trades) and personal services (e.g. care workers). An increase in inward migration (including an increase in the number of new employment permits being issued) indicates that Ireland has indeed re-established itself as an attractive place to work.

Despite these positive trends shortages were identified across a breadth of occupations. What is evident is that there is no single action to take when addressing the shortages. An examination of the cause and the type of shortage will lead to varying interventions; whether it is attracting talent from abroad, or examining the current and future education and training provision. Many shortages in high skilled occupations relate to niche areas and require personnel with a significant level of experience. For labour shortages, which occur as a result of employers finding it difficult to attract and retain employees, a combination of actions may be required, including an investigation of the impact of pay and conditions along with examining other potential sources of supply to the labour market.

This edition of the National Skills Bulletin, for the first time, examines the potential additional labour force. It includes those who classify themselves as unemployed, on home duties, retired and students. With over 110,000 persons, this group could, with the right conditions and supports, provide a valuable resource to the labour market.

It is therefore essential that we reflect on the information in the National Skills Bulletin as we seek to build on the success of the Irish economy in recent years. By understanding the needs of the labour market we can identify new policies and actions necessary to ensure the best opportunities for our citizens.

Joe McHugh T.D.
Minister for Education and Skills

Table of Contents

Executive Summary

The National Skills Bulletin 2018 is the fourteenth in an annual series of reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS and the second to be produced on behalf of the National Skills Council (NSC). 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); it also aims to inform career guidance advisors, students and other individuals making career and educational choices.

For the most part, the analysis presented in the Bulletin is based on data held in the SLMRU National Skills Database; it spans 95 occupational groups and examines a range of labour market indicators.

Irish Labour Market in 2017

Ireland continued to experience a strengthening labour market during 2017 with further improvements in a number of labour market indicators:

- the labour force increased by almost 25,000 (annual average)
- employment increased by over 61,900 (annual average)
- the employment rate increased by 1.2 percentage points to 67.7% (annual average)
- the unemployment level declined by 37,000 (annual average)
- the unemployment rate declined by 1.7 percentage points to 6.7% (annual average)
- the long term unemployment rate declined by 0.8 percentage points to 2.5% (quarter 4)
- the broad unemployment measure (combining unemployed and part-time underemployed persons) declined by 0.3 percentage points to 11.0% (quarter 4)
- in terms of those aged 15-24 years, the youth unemployment rate stood at 12.2% in quarter 4 2017 while the NEET rate was at 8.8%; the rate for both of these measures declined between quarter 4 2016 and quarter 4 2017, by 2.6 and 2.7 percentage points respectively
- inward migration continues to exceed outward migration resulting in positive net migration of 19,800 persons, an increase of 3,600 persons since 2016
- the total number of redundancies declined to just over 3,000, compared to 77,000 in 2009.

Despite this, there remain areas that may require monitoring, including

- the dependency rate continues to increase, primarily related to an increase in the old age (those over 65 years) dependency rates.
- the participation rate decreased by 0.2 percentage points to 62.0% (annual average)
- the number of persons in part-time employment who were underemployed increased by over 19,000 in the year since quarter 4 2016, although this most likely relates to changes in the labour force survey during this period.

Sectoral Employment

Between quarter 4 2016 and quarter 4 2017, employment increased in all sectors, excluding the professional, scientific and technical activities and financial activities sectors (with declines of 5,800 and 2,000 persons respectively). The strongest absolute employment growth was observed in the accommodation and food services sector (+13,400 persons employed), followed by the construction sector (+12,300) and education (+11,400).

Compared to five years previously (quarter 4 2012 to quarter 4 2017), employment grew in all sectors, with the strongest relative growth in construction (+57%) and the accommodation and food services sectors (+37%).

Employment and Unemployment by Broad Occupation

The strongest absolute employment growth between quarter 4 2016 and quarter 4 2017 was observed for professional occupations (19,000), skilled trades (18,600) and caring and other services occupations (13,900).

In quarter 4 2017, the unemployment rate was highest for those previously employed in sales (7.5%) and elementary (6.8%) occupations and lowest for those previously employed in professional occupations (2.1%).

Potential Additional Labour Force (PALF)

This edition of the National Skills Bulletin examines a new indicator, namely the potential additional labour force (PALF). Of those classified as economically inactive, 8%, or 110,000, have been identified as PALF. This group consists of those who are available but not seeking work and those seeking but not available for work, and include those who classify themselves as unemployed, students, on home duties, and retired. The analysis indicates that a significant number of PALF could benefit from non-standard working arrangements in order to potentially transition from inactivity into labour force.

Labour market transitions and recent job hires

Due to challenges arising from the introduction of the new Labour Force Survey, along with the break in series that occurred at this time (Quarter 3 2017), it has not been possible to provide an analysis of transitions in the labour market for this edition.

However, an analysis of recent job hires (those hired within the previous three months) was utilised to examine the level of job churn occurring and to examine the profile of persons hired by occupational group. In 2017, there were almost 400,000 recent job hires (based on a summing up of the four quarters). Those employed in elementary occupations (82,000) accounted for the highest number of recent job hires, followed by sales (60,000) and professional (57,000) occupations.

For elementary occupations, those recently hired were primarily young (60% were aged 15-24), had attained higher secondary/FET education (57%), were in part-time roles (55%) and employed in the accommodation and food services sector (53%). Those recently hired in 2017 in professional occupations primarily held third level qualifications (91%), were aged 25-34 years (39%), were in full-time positions (86%) and employed in the education, IT, health and professional activities sectors.

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

Approximately 9,400 new employment permits were issued in 2017, a 22% increase on the previous year. New permits issued for critical skills accounted for over half (54%) of all new permits in 2017, with a further 31% for general permits and 7% for intra-company transfers.

The number of permits issued has been growing in recent years for most sectors, particularly in the health and ICT sectors. In 2017, the ICT sector accounted for 38% of all new permits issued, with the health sector accounting for 35%. In terms of occupations, professionals accounted for over three quarters of all new permits issued, for positions including doctors, software engineers/developers, nurses, engineers and business analysts.

Vacancies

In 2017, vacancies advertised through IrishJobs.ie were mostly concentrated in professional and associate professional occupations; newly advertised vacancies through DEASP Jobs Ireland were concentrated in elementary, personal services and skilled trades occupations.

The most recent SLMRU Recruitment Agency Survey points to an increase in the number of mentions of difficult-to-fill (DTF) vacancies. Although professional occupations (mostly IT programmers, but also for engineers, accountants, doctors etc.) account for the majority of all DTF mentions, there were also frequent mentions across all occupational groups, particularly for technician posts, multilingual sales and customer care.

Occupational employment outlook and shortages[1]

While shortages exist for a number of occupations across all sectors of the economy, many of these are small in magnitude and in particular niche areas requiring a number of years' experience.

Science & Engineering Occupations

The demand for those with science and engineering skills is not confined to these occupations. While output from science and engineering disciplines in the education system has been growing, in the main, in recent years, these graduates are in strong demand across a variety of occupations (e.g. education, finance, public administration etc.). Specialist skills for certain science and engineering roles require extensive experience and although small in number are required nationwide. Demand for those working in science and engineering occupations is driven chiefly by high-tech and related industries.

Shortages in these occupations were primarily in niche areas and required a high level of experience. Job titles where shortages were identified included:

- scientists (chemists, biochemists)
- engineers (electrical, chemical, automation, validation, mechanical, process, quality control, design)
- technicians (quality control, process (injection moulding/polymer), maintenance, extrusion)

ICT Occupations

The demand for ICT skills is a global phenomenon with skills required across an increasing number of sectors. Although the Irish education and training system appears to be producing a sufficient supply of IT graduates to meet replacement and expansion demand, the evolving nature of the skillsets and the international competition for these skills is resulting in shortages. A high level of experience is also a significant feature in the demand for skills.

Shortages were identified for:

- IT project managers
- software developers/engineers
- web developers, IT architects (systems, solutions, technical), test/ systems/ network/ security engineers
- technicians (technical support, systems/database administrators) with language skills

Business & Financial Occupations

The future demand for business and financial skills is likely to be affected by the impact of Brexit. Numerous financial services firms have applied for authorisations to operate in Ireland; should these companies relocate from the UK to Ireland, demand will increase for medium and high skilled persons to work in the financial sector. On the other hand, the demand for business skills may be negatively affected by exposure to a decrease in demand for exports of goods and services to the UK.

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).

Shortages were identified for:

- business intelligence/business analysts
- financial analyst
- data analysts

In addition, shortages were identified for accountants with experience in legislation, regulation and compliance; these shortages are considered to be niche and require industry specific experience. Issues were also identified for economists and data scientists although the numbers employed were too small to allow reliable analysis.

Healthcare Occupations

While demand for health services continues to grow in Ireland, recruitment in these occupations is dependent on government funding. As such, there are many occupations where shortages do not exist despite significant demand for services. Pay and conditions of employment remain an issue.

- medical practitioners (emergency medicine, anaesthetics, paediatric, orthopaedic, general practitioners)
- nurses (staff, registered, clinical nurse managers, advanced nurse practitioners)
- radiographers

Education Occupations

Employment for these occupations is driven both by government funding and the demographic profile of the population. The fall in the number of children born in recent years will mean a lower demand for primary school/nursery teachers. On the other hand, the second level school population is expected to peak in 2024-2025; this will result in increased demand at second level over the next ten years, and later at third level as this cohort moves up through the education system. In addition, government policy for lifelong learning will impact on demand for workplace and adult learning.

Issues have been identified for secondary teachers although shortages have not been signalled at this point.

Social & Care Occupations

Changing demographics is the primary driver of employment for these occupations; the demand for childcare workers will decline with the fall in the number of births and, conversely, the demand for care workers will increase due to the aging population.

Issues with attracting and retaining care workers have been identified as an issue for this group.

Legal & Security Occupations

Excluding security guards, there was very little employment growth in these occupations over the five years examined and there was no evidence in the analysis of difficulties sourcing candidates.

Construction Occupations

In terms of employment growth for these occupations, most relates to skilled trades and operative/elementary occupations. Growth for professional roles has been smaller. Despite this employment growth, however, there remain over 11,000 job ready job seekers who had previously worked in the construction sector, although most of these are in the lower skilled occupations.

Shortages have been identified for:

- professionals: civil engineers, construction project managers, quantity surveyors
- trades: shuttering carpenters, shift managers, glaziers, steel erectors, curtain wallers
- operatives: scaffolders, pipe layers

Other Craft Occupations n.e.c.

Further growth in these occupations is likely to be driven by activity in the medium-high and high tech manufacturing sectors, and to a lesser extent, by the construction (e.g. electricians) and wholesale/retail (e.g. mechanics) sectors.

Shortages have been identified for:

— welders (e.g. TIG/MIG)
— toolmakers, CNC programmers and fitters (e.g. mechanical/ maintenance) in niche areas e.g. high-tech manufacturing
— deboners (relates to a labour shortage)

In addition, although shortages have not been identified, issues relating to electricians may emerge until the output from the apprenticeship system recovers.

Agriculture & Animal Care Occupations

There was very little employment growth in these occupations over the five-year period examined and there was no evidence in the analysis of difficulties sourcing candidates. However, issues have been identified by employers through the Department of Agriculture, Food and the Marine in attracting and retaining persons in the areas of horticulture (e.g. fruit and mushroom pickers) and dairy farming. As such, a quota of employment permits has been issued for this sector in order to address the labour shortages that are occurring.

Employers have identified potential labour shortages in the following occupations:

— mushroom pickers, fruit pickers
— dairy farming

Hospitality Occupations

The accommodation and food services sector, for which the majority of employment in these occupations occurs, has experienced significant growth in recent years. However, job churn is also a significant factor for these occupations, with over 50,000 recent job hires occurring in 2017 for these occupations.

Shortages have been identified for chefs (executive, head chefs, sous chefs, chef de partie).

Arts, Sports & Tourism Occupations

Employment growth in these occupations is likely to be linked to Ireland's strong economic performance in recent years; increases in disposable incomes may be expected to drive the growth in many of these occupations (e.g. fitness instructors, beauty therapists).

Although shortages have not been identified, there are indications that employers are having difficulties recruiting animators.

Transport & Logistics Occupations

Employment for people working in these occupations is primarily in the transport sector, but is also spread across a number of other sectors including industry, wholesale/retail and construction. Four fifths of employment relates to drivers (e.g. truck, taxi, bus, mobile machine). Those working in the transport sector are likely to be affected by the impact of Brexit in terms of the import and export of goods. In the event of a hard Brexit, additional skills will be required in the areas of customs clearance and documentation. Regardless of Brexit, technological changes and automation of processes will result in a need for enhanced digital skills across all occupations in this field.

Shortages have been identified for:

— crane drivers, 360°/ Reach truck drivers, forklift (VNA) drivers
— HGV drivers (relates to labour shortages)

In addition, issues have been signalled for:

- supply chain managers, demand planning and forecasting analysts, senior planners
- logistics/supply chain operators & administrators

Administrative & Secretarial Occupations

Automation is likely to continue to impact the number of people required for these occupations. Outsourcing of certain tasks is also directly impacting this group. Job churn is also a factor.

Sales, Marketing & Customer Service Occupations

These occupations span a range of skills levels, from sales assistants to marketing executives. As such, the outlook varies significantly.

A shortage of those with **language skills** have been identified for:

- account strategists, inside sales representatives
- marketing specialists (including digital)
- contact centre agents, customer service representatives

Also shortages have been identified for product/account managers.

Operatives & Elementary Occupations n.e.c.

Industry accounts for over half of the employment in these occupations (e.g. manufacturing of food products and pharmaceutical products), with employment also in the wholesale/retail and accommodation and food services sectors (e.g. cleaners). These occupations are likely to be impacted by the automation of manufacturing processes, which will lead to a demand for upskilling of the existing workforce to evolve with new digitalisation and automation requirements. Job churn is a significant factor for these occupations as evidenced by the number of job ready job seekers previously employed in these occupations and the high number of recent job hires.

Introduction

The National Skills Bulletin 2018 is the fourteenth in an annual series of reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS and the second to be produced on behalf of the National Skills Council (NSC). 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); it also aims to inform career guidance advisors, students and other individuals making career and educational choices.

Changes to the CSO's Labour Force Survey

In quarter 3 2017, the CSO introduced a new Labour Force Survey (LFS), replacing the Quarterly National Household Survey (QNHS). The new LFS included changes in how the survey is carried out, including the introduction of computer assisted telephone interviewing, a modernised questionnaire, updated population estimates from Census 2016 and a new sample allocation (i.e. a different group of people were surveyed between quarter 2 and quarter 3 2017 and therefore there are no overlaps between the two surveys). In order to mitigate some of the issues that have arisen due to the break in series, a back-casting exercise was carried out by the CSO to link the QNHS and the LFS; this included variables such as ILO status (employed, unemployed, inactive) by gender and age, broad sector and occupation.

For this reason, when examining employment change, this edition of the Bulletin focuses only on a five-year change for any detailed sub-sector or occupational analysis, but includes a one-year change for the broad sector and occupation analysis. The criteria for reporting occupational employment have also become more stringent and, as such, a re-categorisation of the occupational groups examined was conducted. While previous reports examined over 130 occupations, the new categorisation includes fewer than 100 occupations. The revised groupings are defined in Appendix B.

Occupation-related data

Occupations are 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.

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) Labour Force Survey; 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)[2]
  - the trend analysis covers the five-year period 2012-2017, 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)
- an employment profile (i.e. age, gender, nationality, employment type and education level); the analysis is based on the LFS data for quarter 4 2017
- job ready job seekers registered with the Public Employment Service (PES) (Department of Employment Affairs and Social Protection (DEASP)); these are persons seeking employment who were previously employed in a specific occupation and are self-declared as job ready; the data refers to August 2018
- unemployment rate; the analysis is based on the LFS data for quarter 4 2017

---

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.

- vacancies advertised through the Department of Employment Affairs and Social Protection's (DEASP) Jobs Ireland vacancy portal (i.e. the Public Employment Service (PES)) and IrishJobs.ie (a private on-line vacancy advertising service) in 2017
- the level of difficulty in filling vacancies; the analysis is based on data from the SLMRU Recruitment Agency Survey conducted in April 2018
- the number of new employment permits issued to non-EEA nationals by the Department of Business, Enterprise and Innovation (DBEI)
- the current balance between demand and supply[3]; the analysis is based on all of the above data and other available information (e.g. feedback from the Regional Skills Fora managers); the occupations for which shortages[4] have been identified are highlighted and comments are made regarding the nature of the shortage (e.g. 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.

The National Skills Bulletin 2018 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 2017 is compared with the same period five years previously; in some instances, it is also compared with the same period in the preceding year)
- Section 4: analyses employment trends by broad occupational group (i.e. employment growth and the composition of employment)
- Section 5: examines recent trends in Irish unemployment (levels and rates) and the characteristics of the unemployed population (i.e. gender, age, educational attainment, nationality, occupation and sector)
- Section 6: presents analysis of labour market transitions between unemployment, employment and economic inactivity at occupational level and an analysis of recent job hires in 2017 in terms of age, education level, sector and occupation.
- 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 the DEASP Jobs Ireland vacancy portal and IrishJobs.ie; it also reports the findings of the April 2018 SLMRU Recruitment Agency Survey on difficult-to fill-vacancies
- Section 9: provides labour market indicators for 97 occupations presented in 16 occupational groups and highlights occupations in short supply
- Section 10: presents a new in focus chapter examining the potential additional labour force.

---

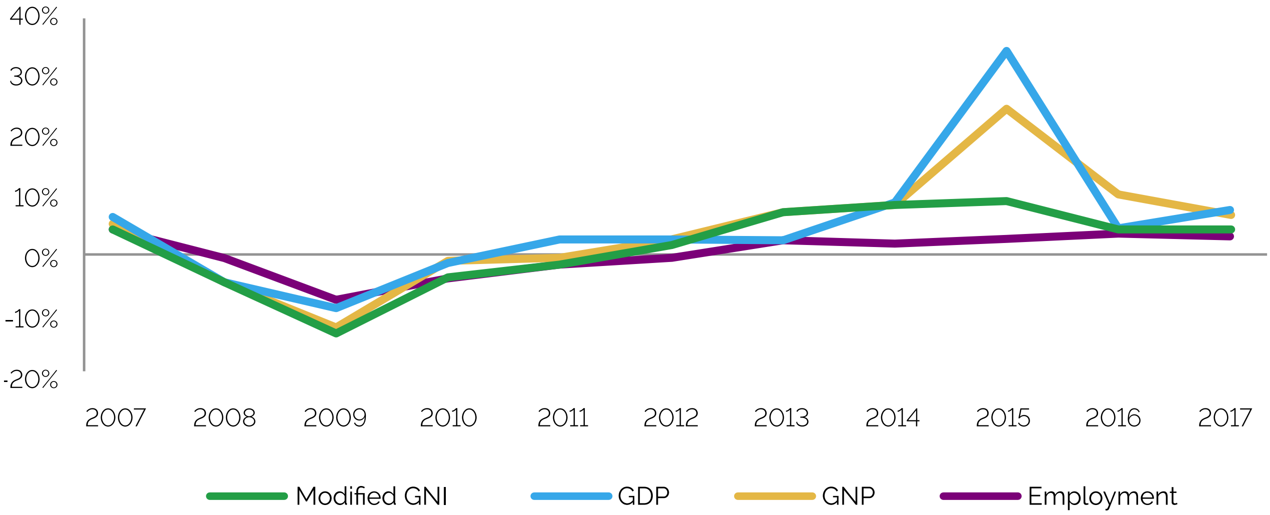
3 Forecasts of shortages are not provided, unless implicit in the available data.
4 The term 'shortage' in this report refers only to the situation where the supply of skills or labour from within the Irish labour force is insufficient to meet demand. It is possible that a sufficient supply of skills or labour for an occupation in question may be found within the European Economic Area (EEA).

Section 1
Macroeconomic Context

Economic growth

The Irish economy grew by 7.6% in gross domestic product (GDP) terms in 2017 compared to 2016, bringing GDP to over €296 billion, 50% above the pre-crisis peak reached in 2007[5]. Gross national product (GNP) increased by 6.4% in 2017, with factor income outflows up by 12.6% during the year[6]. Modified Gross National Income (GNI*), that corrects for the relocation of intangible assets, globalization of production processes and residential location of multinational firms, is widely accepted as a better measure of the domestic economy[7]. As measured by GNI*, the Irish economy showed positive growth of 3.1% between 2016 and 2017, albeit lower than the 8.9% recorded a year previous (Figure 1.1).

Figure 1.1 GDP, GNP, GNI* (at current market prices) and Employment, Annual Change, 2007-2017



Source: SLMRU (SOLAS) analysis of CSO data; Central Bank of Ireland, Quarterly Bulletin Q2 2017

Strong growth in Ireland in 2017 was achieved through a continued recovery in the domestic economy, albeit against a backdrop of an unfavourable external environment. Potential changes in international taxation, escalating trade tensions between the US and China and uncertainty surrounding Brexit, are external challenges facing the domestic economy.

Growth components

In 2017, net exports increased, due to an expansion of exports and contraction of imports. Personal consumption, which makes up nearly half of domestic demand increased slightly by 1.9%, while capital investment decreased by 22.3% during the year. The headline figure for capital investment is however distorted by a significant decline in aircraft purchases. Total domestic demand decreased by 7.9% in 2017.

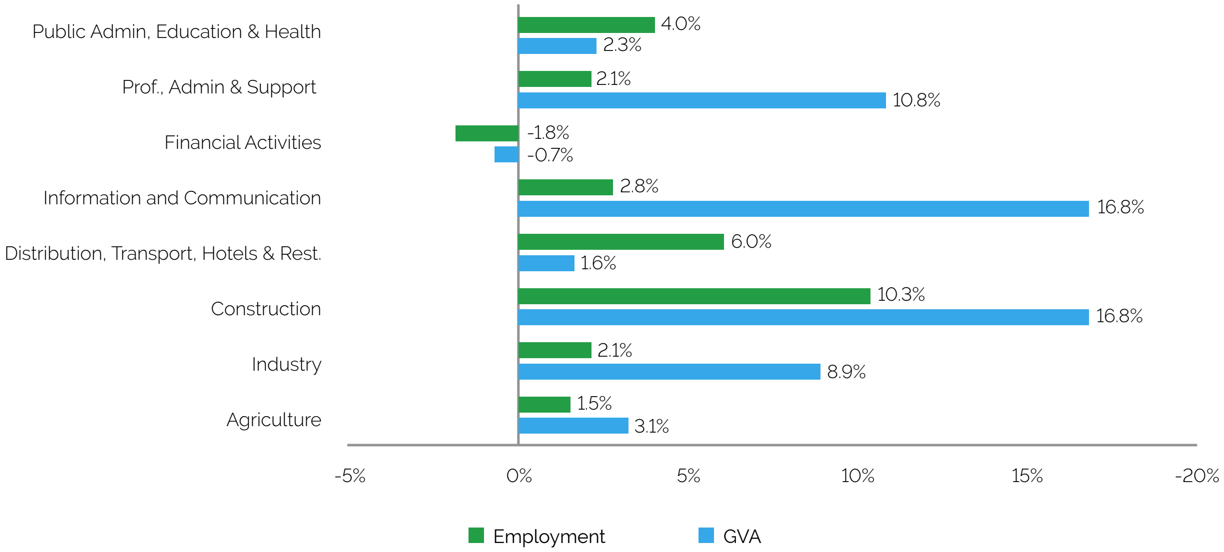
Although personal consumer spending increased modestly in 2017, there was strong growth in disposable income, modest inflation and improved consumer confidence during the year. Both GDP and GNP growth forecasts have been revised upwards for 2018 and 2019, to 5.6% and 4.0% for GDP and 5.6% and 3.7% for GNP[8].

---

5 Ameco database. SLMRU calculations of annual growth rates using GDP at current prices.
6 CSO, Statistical Release, 15 March 2018.
7 Central Bank of Ireland (2017), Quarterly Bulletin, April.
8 Department of Finance, Stability Programme Update 2018.

At a sectoral level, output growth was driven by a strong increase in gross value added (i.e. output) in the information and communication and construction sectors (see Figure 1.2). Gross value added in 2017 increased by almost 17% in both the ICT and the construction sectors compared to 2016.

Figure 1.2 Annual Percentage Change in Gross Value Added & Employment, 2016-2017



Source: SLMRU (SOLAS) analysis of CSO data

Note: Gross Value Added is seasonally adjusted and chain linked annually and referenced to 2015.

Foreign Direct Investment

Net foreign direct investment flows reached €25.7 billion as outflows slowed and inflows increased in 2017 compared to 2016. In 2017, multinationals invested €0.13 billion in equity and €51.3 billion in reinvested earnings in Ireland. However, several foreign affiliates also divested existing investment to the sum of €25.7 billion and reduced their intra-company loans. Many FDI projects provide benefits such as significant capital investment, job creation and increased exports.

According to the IDA, €5 billion was invested in capital projects in 2017. Over 10% of total employment in Ireland is accounted for by FDI companies.

In terms of attractiveness as an FDI location, A.T. Kearney's Foreign Direct Investment Confidence Index placed Ireland in 20th place in 2017. Strong economic growth and the low corporate tax rate were mentioned as favourable factors. Ireland may be placed in a good position as a result of Brexit to attract significant FDI opportunities.

In 2017, there was also strong growth among the indigenous firms. Between 2016 and 2017, total employment in Enterprise Ireland (EI) client companies increased to over 209,000 jobs, adding 10,309 net jobs to the economy[9].

Competitiveness

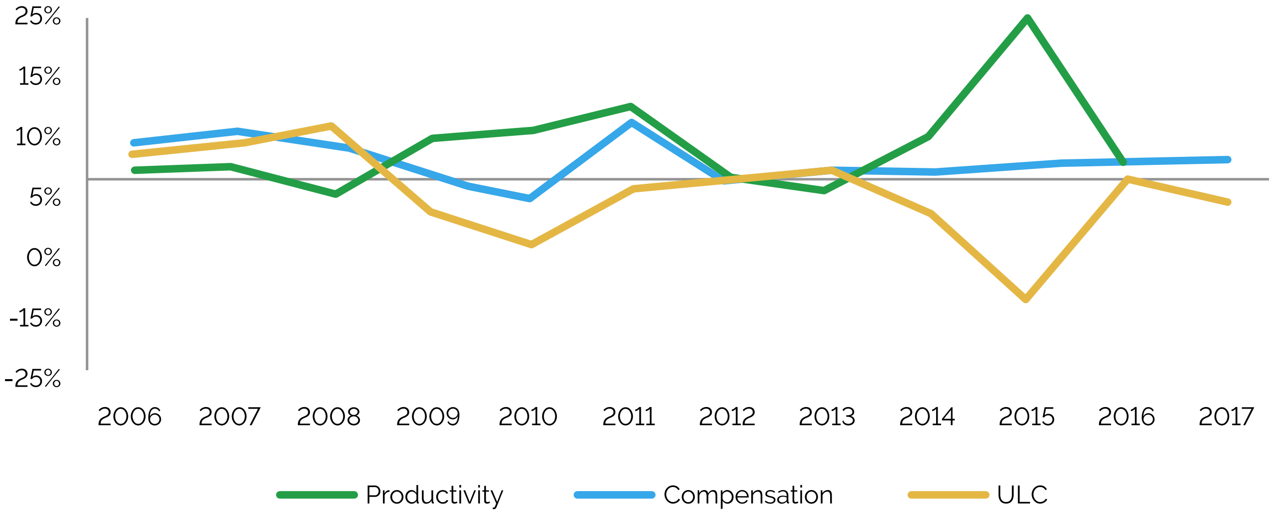
The 2018 IMD Global Competitiveness Yearbook rankings saw Ireland move down six places in overall competitiveness from 6th in 2017 to 12th place in 2018 among 63 countries benchmarked. Ireland followed a similar trend to other western European economies, with very few of these countries advancing in the rankings over the year.

In its Competitiveness Challenge 2017 report, the National Competitiveness Council (NCC) commented that Ireland was facing major challenges given global uncertainty and risks such as Brexit. The Council notes that to ensure competitiveness, Ireland must address barriers to investment and growth, pursue cost competitiveness and drive productivity performance. It also stressed the need to be responsive to competitiveness challenges and emerging opportunities.

9 Enterprise Ireland, 2017 End of Year Statement.

Labour productivity in Ireland has been strong compared to that of the Eurozone. Real labour productivity growth (per hour worked) was 2.4% in 2017, against the Eurozone average of -0.2% and the UK average of -1.8% for the same period. As seen in Figure 1.4, labour costs lagged behind productivity growth, both in terms of compensation of employees (per hour) and real unit labour costs (ULC) since 2013[10].

Figure 1.4 Competitiveness: Productivity versus Labour Costs in Ireland (Annual per cent change)

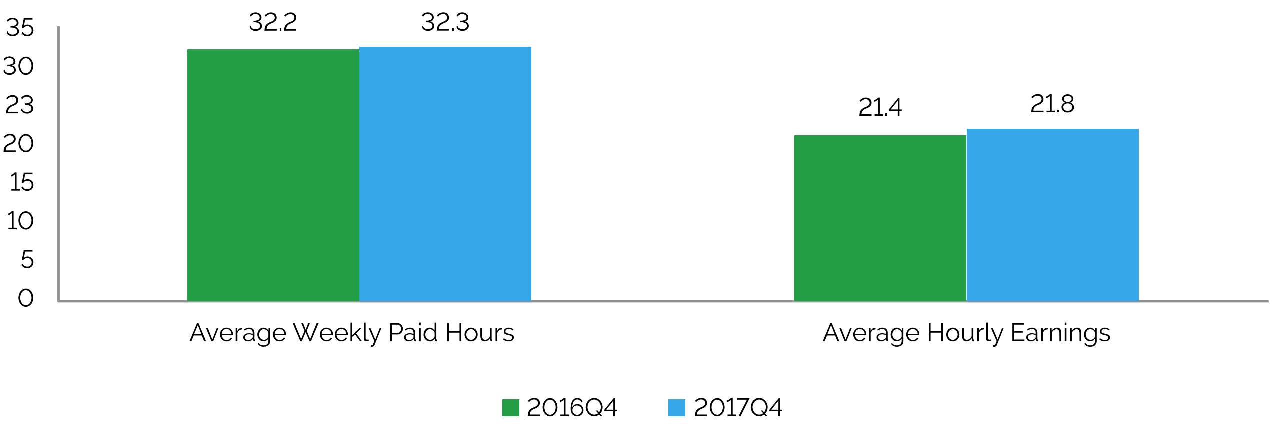


Source: Eurostat

Hours Worked and Earnings

Figure 1.5 presents the average weekly paid hours and average hourly earnings for the overall economy. In quarter 4 2017, the number of average weekly paid hours was 32.3, which was 6 minutes more than one year previously. In quarter 4 2017, average hourly earnings were €21.80, which was 40 cent more than in quarter 4 2016. Economy-wide averages may hide changes across sectors.

Figure 1.5 Average Weekly Paid Hours & Average Hourly Earnings

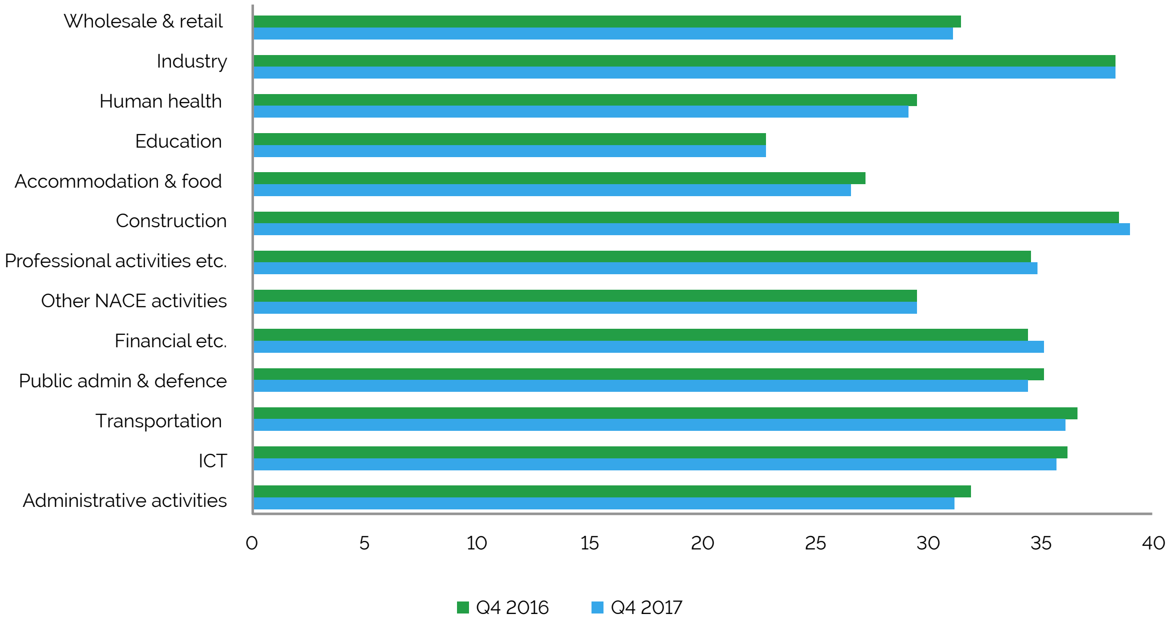


Source: CSO, Earnings, Hours and Employment Costs Survey

Figure 1.6 presents average weekly paid hours by broad sector. In quarter 4 2017, construction had the highest average weekly hours paid at 38.9. This was closely followed by industry (38.2 hours), transportation (36.1 hours) and ICT (35.7 hours). The least hours worked within a week was in the education sector (22.7 hours), followed by the accommodation and food sector (26.6 hours).

10 Unit labour costs are defined as the ratio of labour costs to labour productivity. Compensation of employees consists of wages and salaries, and of employers' social contributions.

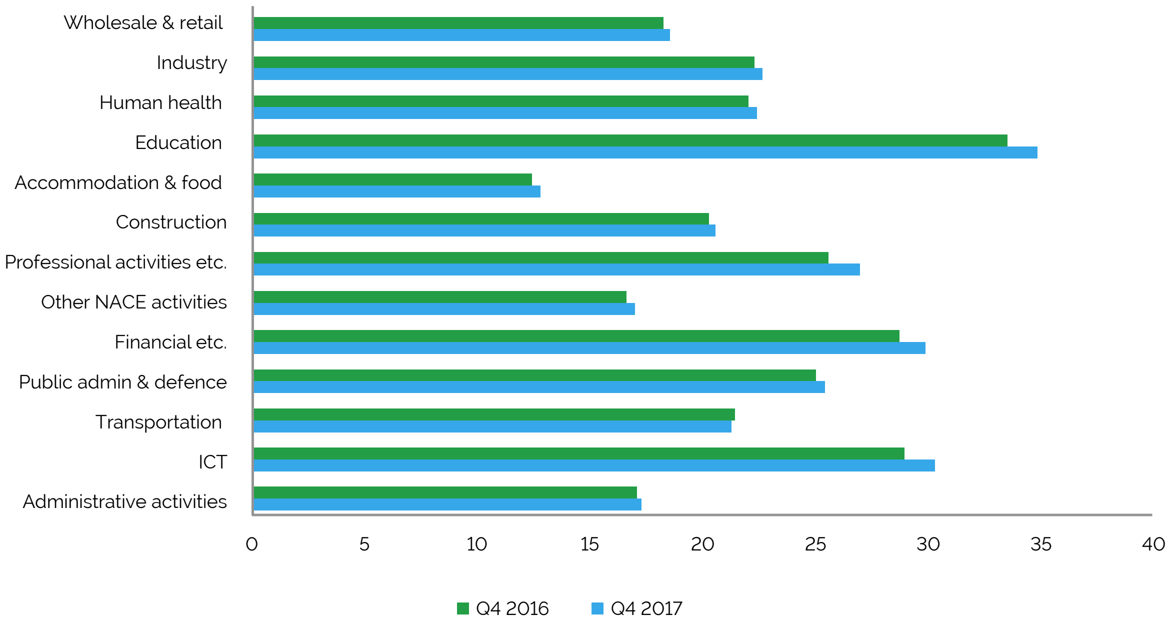
Figure 1.6 Average Weekly Paid Hours by Sector



Source: CSO, Earnings, Hours and Employment Costs Survey

In 2017, hourly earnings were highest in the education sector, at €35.12 per hour and lowest in the accommodation and food sector, at €12.90 per hour (Figure 1.7). This is in line with previous years. The sectors with the highest hourly earnings growth rates on an annual basis were, professional activities etc., followed by ICT and financial etc.

Figure 1.7 Average Hourly Earnings by Sector

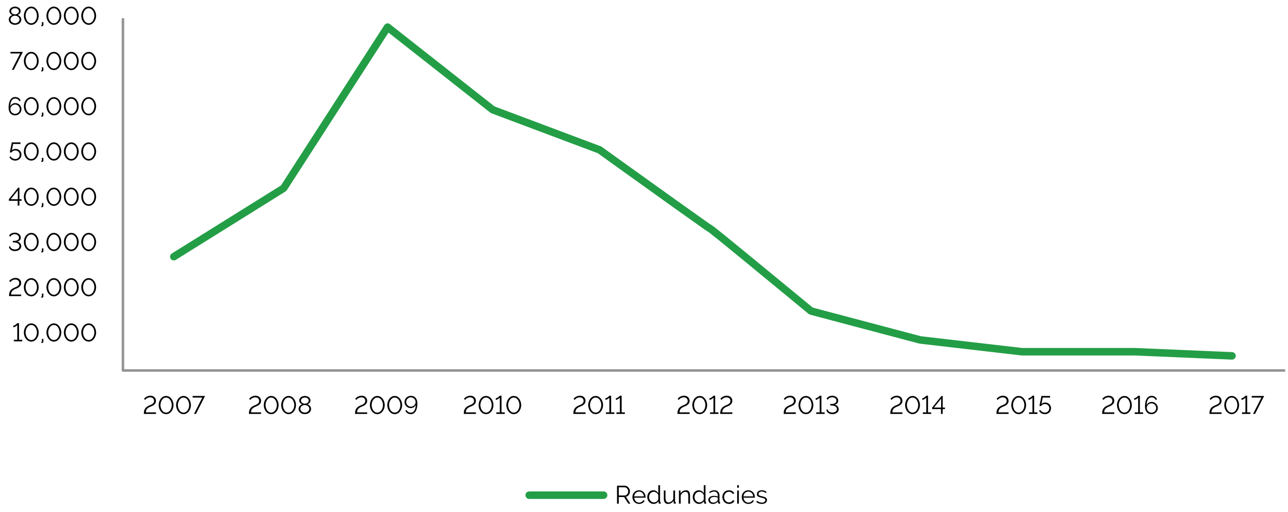


Source: CSO, Earnings, Hours and Employment Costs Survey

Redundancies

In 2017, 3,056 redundancies were registered with the DEASP, the lowest level since their peak in 2009. The number of redundancies continues to decline, the 2017 total being over 30% lower than the 4,372 reported in 2016 (Figure 1.8).

Figure 1.8 Redundancies, 2007-2017



Source: DEASP

Global Outlook

Global economic growth forecasts for 2018-2019 are higher than the 3.8 per cent achieved for 2017, mainly driven by growth in advanced economies, continued strong growth in emerging economies and a recovery in many commodity export markets. The recent acceleration in demand is reflected through the expectation that favourable global financial conditions and strong sentiment will be maintained, along with the repercussions of expansionary fiscal policy in the US.[11]

For Ireland, any risks to growth in the Eurozone, the UK or the US have a more direct impact, as these countries are its main trade and investment partners. The growth forecast for the US was revised upwards, as a result of stronger than forecast economic activity during 2017, tax reform and external demand. However, policy uncertainty remains high in the US.

Growth forecasts for the UK are 1.6% in 2018 and 1.5% in 2019, down from 1.8% in 2017. Post-Brexit negotiations lack transparency, from both a UK and EU perspective, adding to an increase in election risk in the UK.

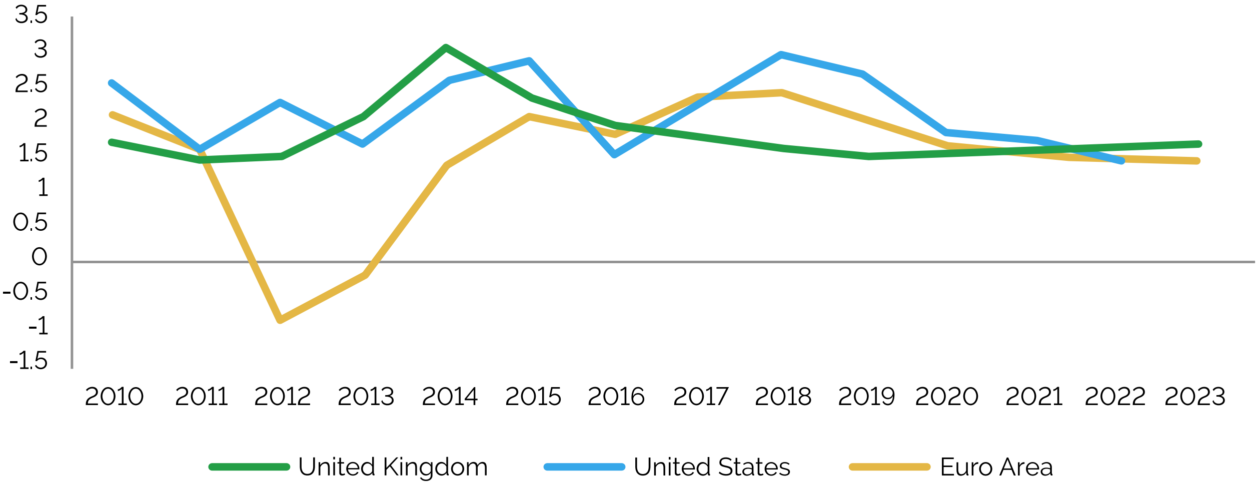
The outlook is positive for several Eurozone countries such as Germany and the Netherlands. Stronger than expected growth revisions in these countries are driven by positive momentum in domestic and external demand. Spain has had its growth forecast marked down slightly, due to the effects of increased political uncertainty on confidence and demand.

World growth increased to 3.8% in 2017 on the back of a rebound in global trade and an investment recovery in advanced economies. However potential risks on the horizon include heightened geopolitical animosity and inward looking policies that adversely affect global trade relations.[12]

Figure 1.9 presents the medium-term IMF growth projections of the major trading partners for Ireland. The medium term growth forecast in advanced economies is projected to decline to 1.5%, in line with modest potential growth. In developing and emerging market economies growth is projected to stabilize at about 5% over the medium term, reflecting a further strengthening in growth in commodity exporters. However, in relation to Ireland's main trading partners, the economies of the US, UK and the Euro area are expected to grow moderately in the medium term. The US and UK economies are both expected to grow at an average annual GDP rate of 1.6% from 2020-2023. The Euro area is expected to grow at an average of 1.5% over the same period.

11 World Economic Outlook Database, April 2018.
12 IMF (2018), World Economic Outlook, April, Washington DC.

Figure 1.9 GDP at Constant Prices



Source: IMF

Additional economic indicators

Residential Property Prices

Residential property prices in Ireland increased by 10.4% in the year to July 2018. In Dublin, residential property prices increased by 7.2%, with house prices growing by 6.5% and apartment prices increasing by 11% over the period. Residential prices in the rest of Ireland (excluding Dublin) were 13.7% higher, with house prices up by 13.1% over the period[13].

Government borrowing costs

Ireland's 10 year bond yield has remained, on average, below 1.0% over the past two years, keeping Irelands cost of borrowing at historically low levels. The bond has performed strongly relative to the Euro area 10 year benchmark bond and the UK 10 year Gilt since 2015. Low borrowing costs can facilitate increased investment in education and skills training.

Inflation

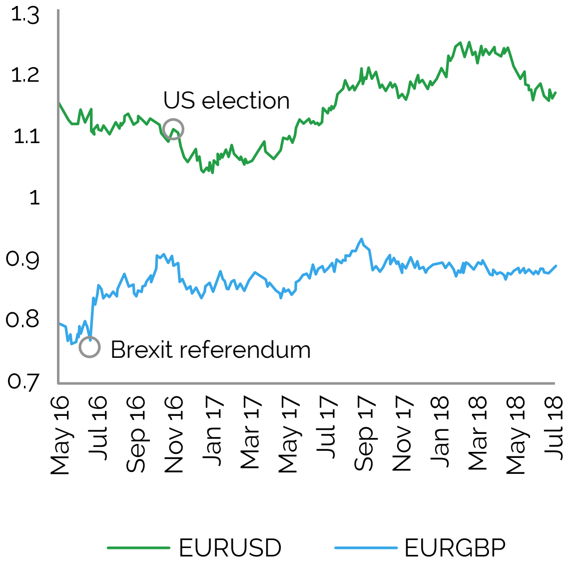
In June 2018, the Euro area annual inflation rate stood at 2%, its highest level since March 2017. The price level in Ireland has increased only moderately since 2015, with the annual inflation level being 0.7% for June 2018[14]. The benchmark spot price per barrel of oil has increased by over 60% from mid-2017, on an annual basis. The mid-2018 price is in the $75 per barrel range[15]. On the back of strong economic growth and a rise in oil prices, an increase in inflation levels in Ireland and the EU could materialise in the short to medium term.

13 CSO, Residential Property Price Index, July 2018.
14 Eurostat, Harmonised Index of Consumer Prices (HICP), June 2018.
15 US Energy Information Administration historical data, June 2018.

Currency

The euro has appreciated against sterling by approximately 15% since the Brexit referendum result in June 2016. On the eve of Brexit, one euro bought 0.77 sterling, but in the aftermath of the referendum result sterling weakened considerably, as shown in Figure 1.10. In September 2017 sterling had weakened to 0.93 against the euro. The US dollar has also weakened against the euro since late 2016. The price of the US dollar in euro terms has been volatile since the US election result in November 2016.

Figure 1.10 Euro exchange rates, 2016-2018



Source: SLMRU (SOLAS) analysis of EURUSD and EURGBP historical exchange rate data

A stronger euro, relative to sterling and the dollar, can have an adverse impact on Ireland's exports, tourism and competitiveness in the short term. This could lead to lower levels of demand for skills in sectors most exposed to sterling and dollar weakness.

Section 2
Labour Market Overview

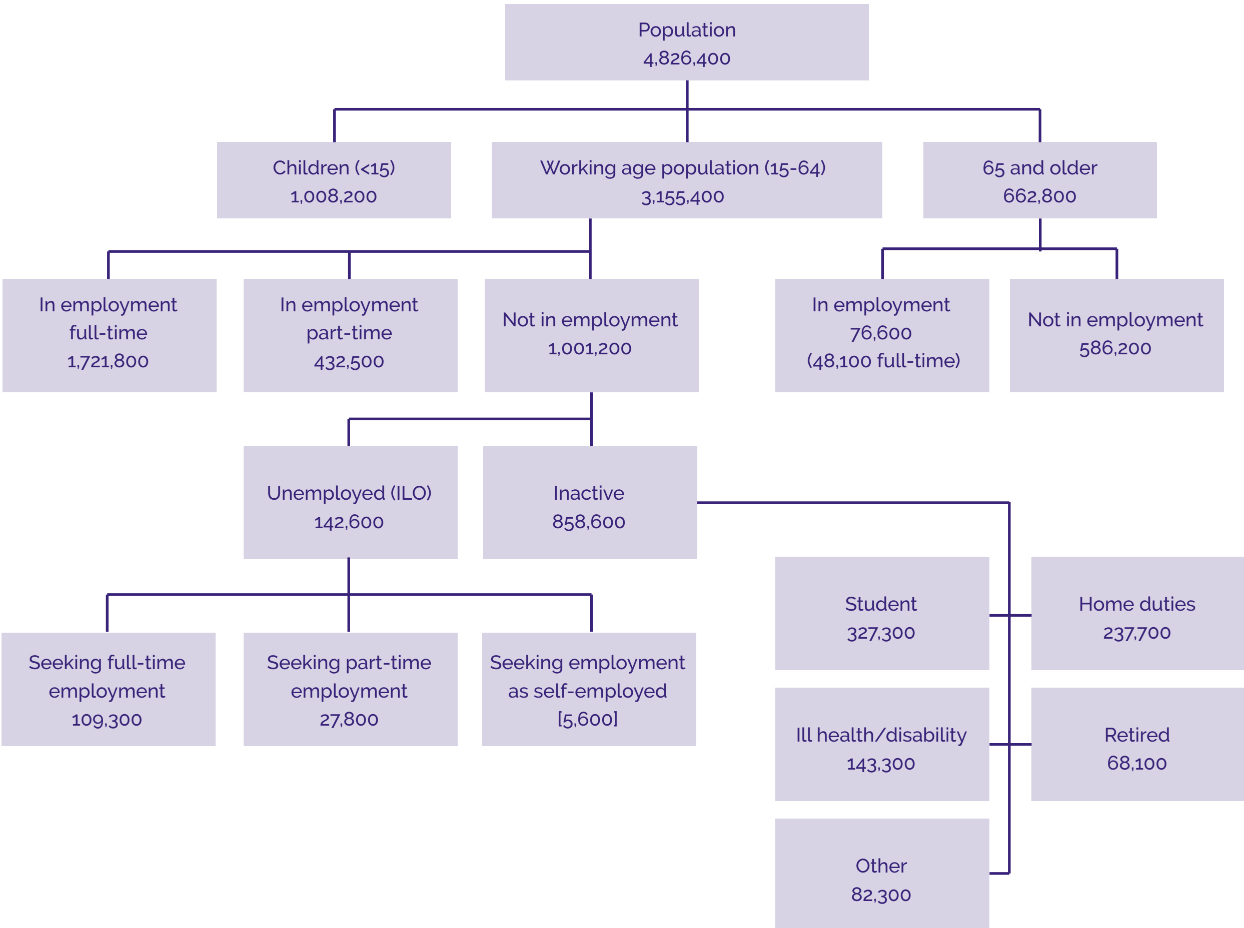
2.1 Population: Labour Market Status

In quarter 4 2017, there were an estimated 4.8 million persons living in Ireland, 54,000 more than in quarter 4 2016 (Figure 2.1).

The working age population (aged 15-64) was almost 3.16 million, which was over 32,000 more than in quarter 4 2016. Compared to the previous year, while the overall employment for this group grew by over 57,500, full-time employment increased and part-time employment decreased. The number of unemployed persons aged 15-64 years old declined in that period by over 24,000.

Between quarter 4 2016 and quarter 4 2017, the number of children (younger than 15 years old) remained unchanged at 1.01 million. Over the same period, the number of persons aged 65 and over reached nearly 663,000, an increase of 22,000 persons. As was the case for the working age population, the number of full-time workers increased. In this age cohort, compared to quarter 4 2016, there were an additional 9,700 persons in employment.

Figure 2.1 Population by Labour Market Status (ILO defined), Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

Note: Discrepancies are due to rounding.

[ ] brackets indicate small numbers and should be treated with caution

The total age dependency rate[16] (youth and older age) in quarter 4 2017 was 53%, which was 0.2 percentage points higher than one year previously. Over this period, the youth age dependency rate decreased by 0.3 percentage points to 32%, while the older age dependency rate increased by 0.5 percentage points to 21% (Table 2.1).

In quarter 4 2017, 2.15 million persons of working age were in employment while approximately 1 million were not in employment. Of the working age population not in employment, almost 143,000 were unemployed and almost 859,000 were economically inactive.[17] Compared to quarter 4 2016, the number of unemployed persons between 15 and 64 years old decreased by 14.5%; the number of those economically inactive decreased marginally.

Within the economically inactive group among the working age population (i.e. 15-64), there were:

— 327,300 students – 12,500 more than in quarter 4 2016

— 237,700 persons engaged in home duties – 24,700 less than in quarter 4 2016

— 68,100 retired persons – 3,500 more than in quarter 4 2016

— 143,300 persons were inactive due to ill health or disability – 26,700 more than in quarter 4 2016

— 82,300 persons were inactive for other reasons; of those inactive for other reasons, 12,300 were discouraged workers – 4,100 more than in quarter 4 2016.

In quarter 4 2017, the inactivity rate of the working age population[18] was 27.2%, 0.3 percentage points lower compared to quarter 4 2016. The economic dependency ratio[19] declined slightly to 1.03 (Table 2.1).

Table 2.1 Dependency and Inactivity Rates (Quarter 4)

	2016	2017
Total dependency rate (0-14 and 65+)	52.8%	53.0%
Youth dependency rate (0-14)	32.3%	32.0%
Old age dependency rate (65+)	20.5%	21.0%
Inactivity rate (15-64)	27.5%	27.2%
Economic dependency ratio	1.05	1.03

Source: SLMRU (SOLAS) analysis of CSO data

16 The age dependency rate compares the non-working age population to those of working age.
17 Economically inactive are defined as persons who are not in employment or unemployed (actively seeking employment).
18 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.
19 The economic dependency ratio compares the total population not in the labour force to the number of those who are in the labour force.

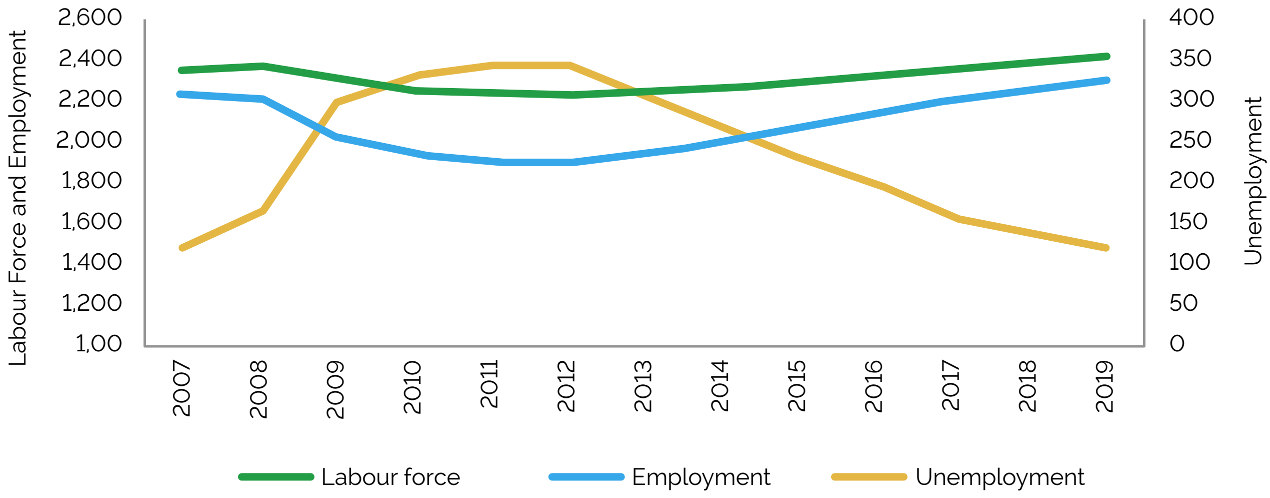
2.2 Labour Market and Related Indicators

In 2017, the number of persons in the labour force was 2.35 million (annual average). Compared to 2016, this represented an increase of 1.1% or almost 25,000 (Figure 2.2). The labour market participation rate was 62%, a marginal decrease from 62.2% in the previous year (Table 2.2). Expansion of the labour force is forecast, with the Central Bank of Ireland predicting a further increase of 1.2% in 2018 and the same in 2019 (Figure 2.2).

In 2017, there were 2.19 million persons in employment (annual average), which was 61,900 more compared to 2016. The employment rate was 67.7%, an increase of 1.2 percentage points compared to 2016 (Table 2.2).

In 2017, unemployment averaged at 157,900, which was 37,000 (19%) less than in 2016. The unemployment rate decreased in 2017 to an estimated 6.7%, 1.7 percentage points below the 2016 average. The decline is expected to continue into 2018 and 2019 (Figure 2.2).

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



Source: SLMRU (SOLAS) analysis of CSO data; Central Bank of Ireland, Quarterly Bulletin (April 2018)

Table 2.2 Participation, Employment and Unemployment Rates (Annual Averages)

	Participation rate (%) (15+)	Employment rate (%) (15-64)	Unemployment rate (%) (15-74)
2010	62.6	61.0	14.5
2011	62.0	60.0	15.4
2012	61.6	59.9	15.5
2013	62.0	61.7	13.8
2014	61.6	63.1	11.9
2015	61.8	64.7	9.9
2016	62.2	66.5	8.4
2017	62.0	67.7	6.7

Source: CSO

By April 2018, the seasonally adjusted monthly unemployment rate was estimated at 4.5%. In quarter 4 2017, the long term unemployment rate was 2.5%, a 0.8 percentage point decrease from quarter 4 2016 (Table 2.3).

The broad unemployment measure combining those unemployed and part-time underemployed, declined marginally from 11.3% in quarter 4 2016 to 11% in quarter 4 2017 (Table 2.3).

The youth unemployment rate contracted by 2.6 percentage points from 14.8% in quarter 4 2016 to 12.2% in quarter 4 2017. Over this period, the NEET rate which measures the share of

15-24 year olds who are not in employment, education or training, reduced by over nearly 3 percentage points to 8.8% (Table 2.3).

Table 2.3 Other unemployment indicators, Quarter 4 2017

	Long term UE rate (%) (15-74)	Broad UE rate (%) (15-74)	Youth UE rate (%) (15-24)	NEET* rate (%) (15-24)
Quarter 4 2016	3.3	11.3	14.8	11.5
Quarter 4 2017	2.5	11.0	12.2	8.8

Source: SLMRU (SOLAS) analysis of CSO data

*Not in employment, education or training; ILO defined; there is a discrepancy between ILO and PES (self-declared principal economic status) measure of participation in education with the former used in the NEET rate potentially overstating the non-participation in the case of Ireland.

Migration estimates for the period 2011 to 2017 are presented in Table 2.4. In 2017, as one year previously, inward migration exceeded outward migration. The positive net migration of 19,800 was 3,600 higher than in 2016.

Table 2.4 Migration Estimates (000s)

Year	Inward	Outward	Net migration
2011	53.3	80.6	-27.4
2012	57.3	83.0	-25.7
2013	62.7	81.3	-18.7
2014	66.5	75.0	-8.5
2015	75.9	70.0	5.9
2016	82.3	66.2	16.2
2017	84.6	64.8	19.8

Source: CSO

Note: 2011 and 2016 are based on Census of Population.

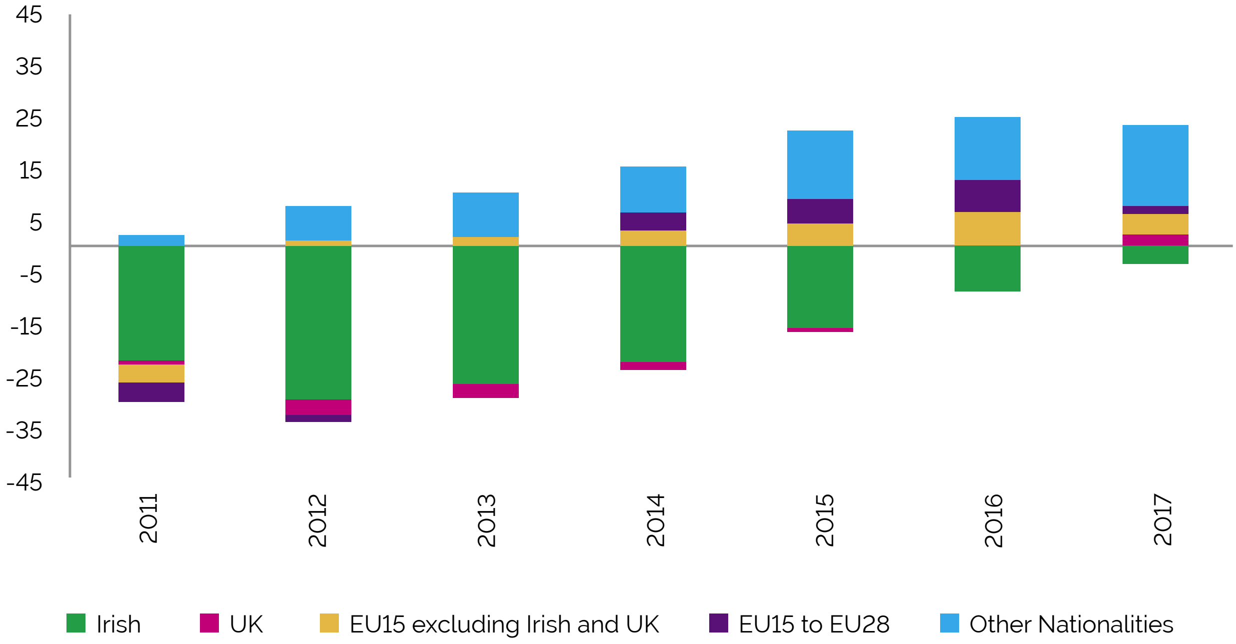
Irish nationals accounted for 32% of immigrants and 48% of emigrants, the largest share among emigrants. The largest share of immigrants were non-EU nationals who accounted for 34%.

Figure 2.3 presents net migration estimates by nationality. In 2017, net migration was dominated by non-EU nationals. As one year previously, it remained positive for all groups, excluding Irish nationals. Net migration for Irish nationals, although negative, has declined significantly from 8,800 in 2016 to 3,400 in 2017. This decline has been continuing since 2012.

Net migration was positive for all age groups in 2017 and comprised mostly of those aged 25-44 years. In terms of education attainment, the majority were those with a third level qualification. Among immigrants, over 64% held a third level qualifications, compared to 49% of emigrants.

In terms of economic status, net migration was positive for those at work (+15,500), while net migration for students was negative at 3,200.

Figure 2.3 Net Migration Estimates 2011-2017 by Nationality (000s)



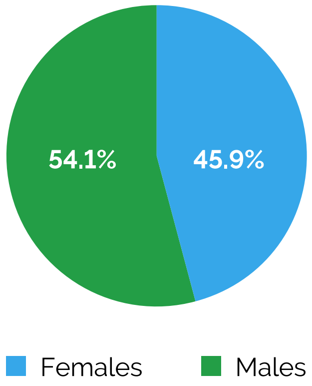
Source: CSO

Note: 2011 and 2016 based on Census of Population.

2.3 Employment Composition

In quarter 4 2017, there were a total of 2.23 million persons in employment (aged 15 and more). The gender distribution of those employed has not changed compared to quarter 4 2016 with males accounting for 54.1% (over 1.21 million persons) (Figure 2.4).

Figure 2.4 Employment by Gender, Quarter 4 2017

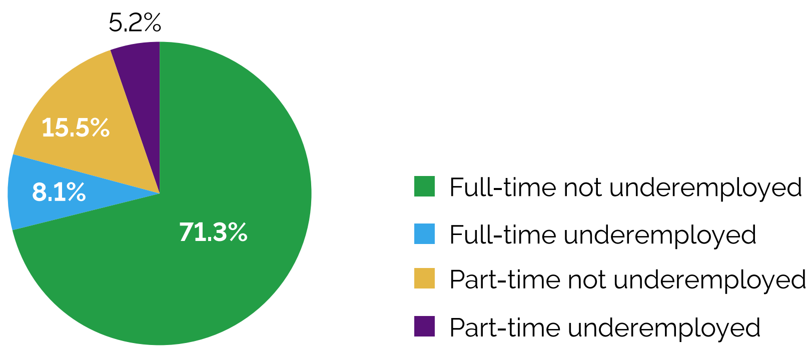


Source: SLMRU (SOLAS) analysis of CSO data

Full-time employment in quarter 4 2017 increased compared to the previous year by over 75,900 persons. The reverse was true for part-time employment which fell by over 8,700 persons. Full-time employment accounted for 79.4% of total employment (Figure 2.5).

While part-time employment declined between quarter 4 2016 and quarter 4 2017, the share of those who wished to work more hours and were available (underemployed) increased from 4.5% to 5.2% (19,100 persons); however, this increases appears to relate to the change to the new labour force survey. Of those working full-time, the number of underemployed doubled since quarter 4 2016 amounting to 180,000 persons in quarter 4 2017 (10.2% share).

Figure 2.5 Employment by Employment Type, Quarter 4 2017

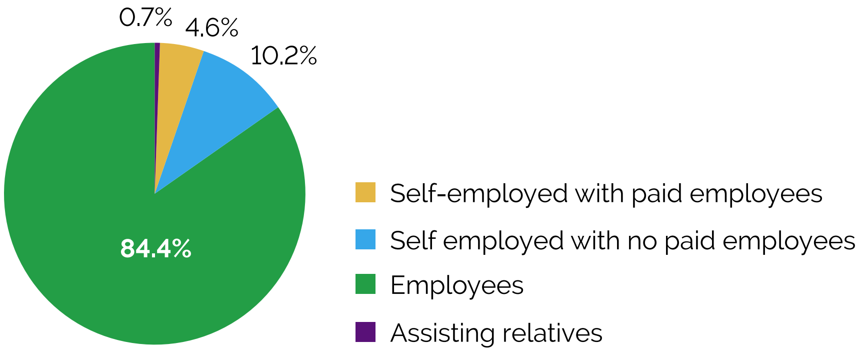


Source: SLMRU (SOLAS) analysis of CSO data

Figure 2.6 presents the distribution of employment by employment status. In quarter 4 2017, 84.4% of persons in employment were employees with 1.1% of them on Government supported employment schemes. Self-employment accounted for 14.9% of total employment, of which 68.8% were self-employed with no paid employees. There were no notable changes in the distribution of employment by employment status compared to quarter 4 2016.

Employment growth observed between quarter 4 2016 and quarter 4 2017 was predominantly due to the growth in the number of employees – an increase of 62,400. There were 16,300 fewer people employed on Government schemes than in the previous year.

Figure 2.6 Employment by Employment Status, Quarter 4 2017

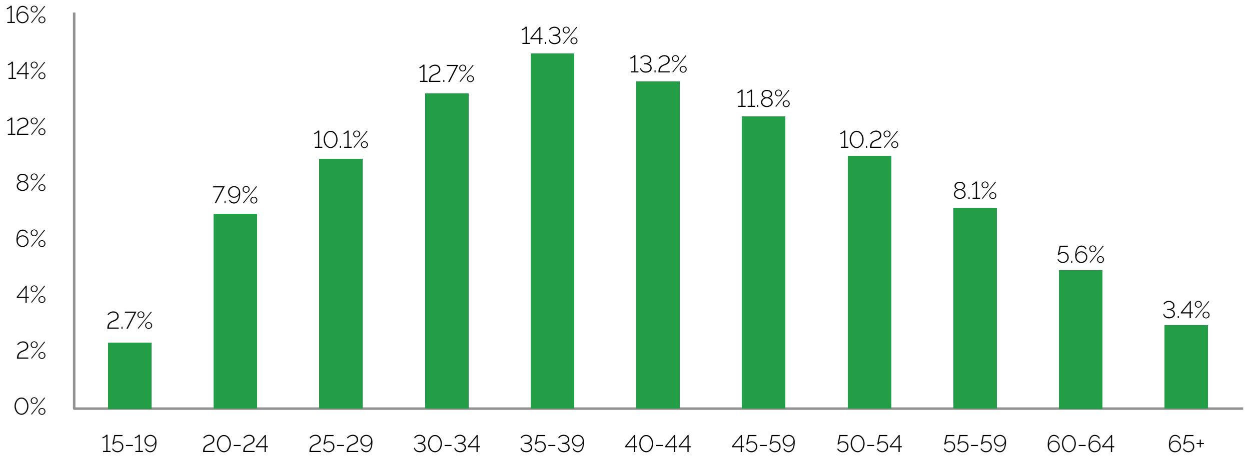


Source: SLMRU (SOLAS) analysis of CSO data

Figure 2.7 presents an age profile of those in employment. Between quarter 4 2016 and quarter 4 2017, the age distribution remained broadly similar.

In quarter 4 2017, almost three quarters of employment was concentrated in the 25-54 age category (72.2%); those aged under 25 years accounted for 11.3% and those aged 55 years and above for 17.2%. Of all working persons, 33.4% were less than 35 years old.

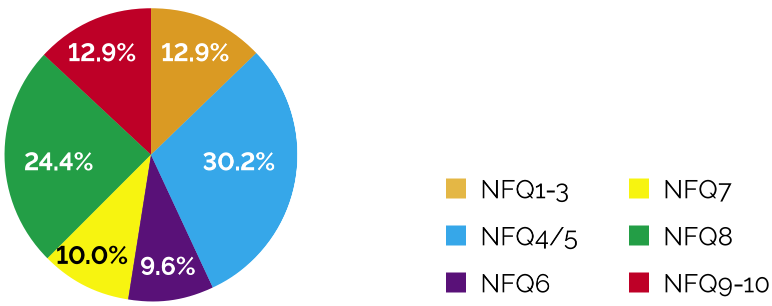
Figure 2.7 Employment by Age, Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

Figure 2.8 presents the education profile of those in employment in Ireland. In quarter 4 2017, 12.9% of persons in employment had at most qualifications at NFQ levels 1-3 (e.g. Junior Certificate); 30.2% had qualifications at NFQ levels 4-5 (e.g. Leaving Certificate); 9.6% had qualifications at NFQ level 6, while the remainder had the equivalent of ordinary degree level or higher (NFQ 7-10).

Figure 2.8 Employment by Education (NFQ), Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

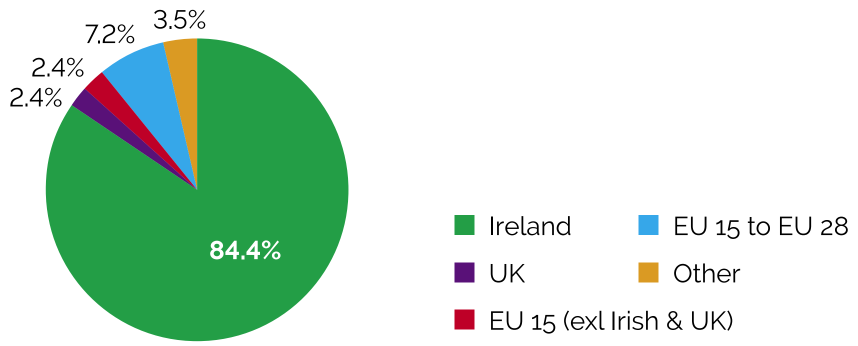
Note: excludes those who did not state their education level

Between quarter 4 2016 and quarter 4 2017, there were marginal shifts with the share of persons holding qualifications at levels NFQ 8 and NFQ 9 increasing; the share of those with levels NFQ 1-3 also increased by approximately 1 percentage point.

Employment by nationality is presented in Figure 2.9. In quarter 4 2017, non-Irish nationals accounted for 15.6% of total employment, while EU nationals accounted for 79.1% of all non-Irish nationals.

Between quarter 4 2016 and quarter 4 2017, the share of Irish nationals employed increased by 0.7 percentage points with marginal decreases in the shares of the other groups.

Figure 2.9 Employment by Nationality, Quarter 4 2017

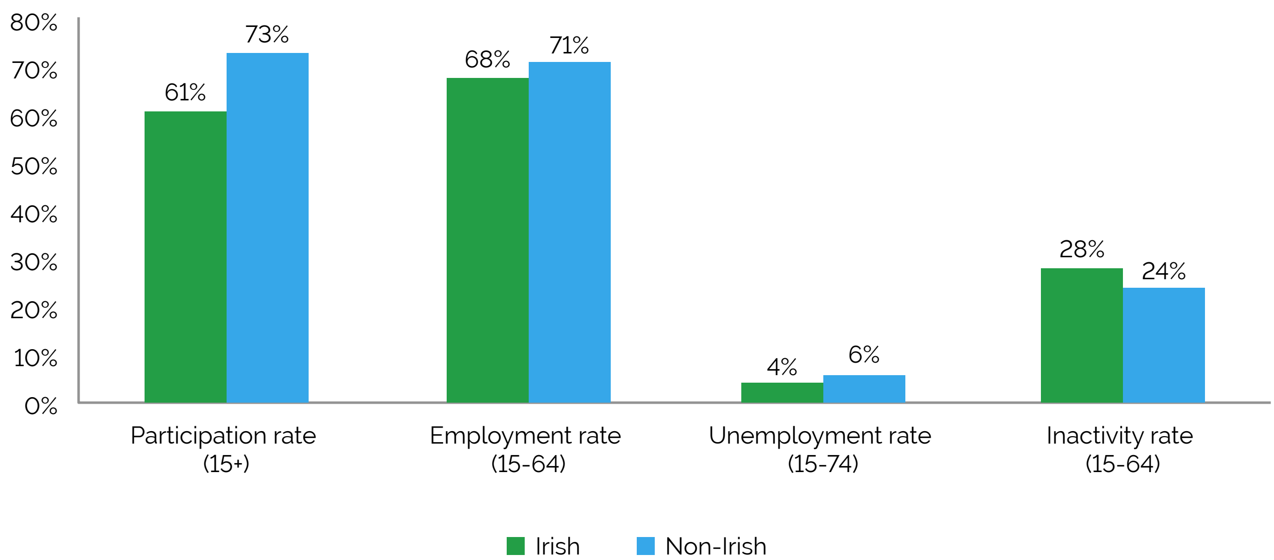


Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2017, non-Irish nationals had higher participation and employment rates than Irish nationals (72.8% compared with 60.5% and 70.6% compared with 67.8%). The inactivity for non-Irish nationals was lower while the unemployment rate was higher for this group (Figure 2.10).

Between quarter 4 2016 and quarter 4 2017, the unemployment rate of Irish nationals declined by 1 percentage point while it increased by 0.3 percentage points for non-Irish nationals. The employment rates for both groups slightly increased. Over this period, the participation rate of Irish nationals remained unchanged while it grew by 2.3 percentage points for non-Irish nationals.

Figure 2.10 Participation, Employment, Unemployment and Inactivity Rates by Nationality, Quarter 4 2017

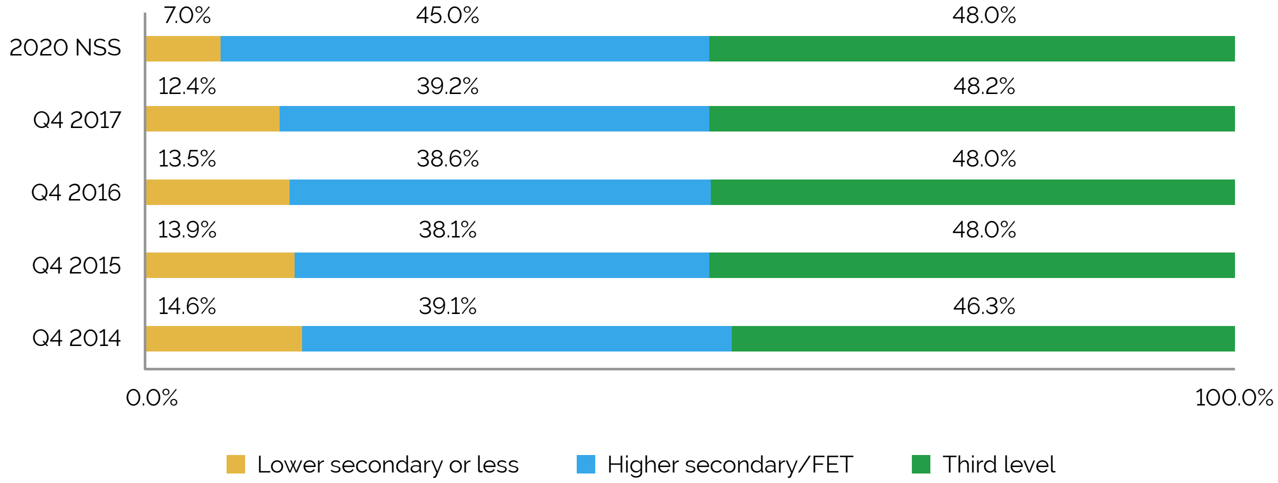


Source: SLMRU (SOLAS) analysis of CSO data

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 2007 National Skills Strategy (NSS) which were carried over in the 2016 National Skills Strategy[20]. Over the period quarter 4 2016 and quarter 4 2017, the share of persons with third level education was 48.4% which was slightly above the 48% NSS target (when excluding those who did not state their education level). The share of those with lower secondary education or less, at 12.4%, was higher than the NSS target for this group but it declined by 1.1 percentage point since quarter 4 2016.

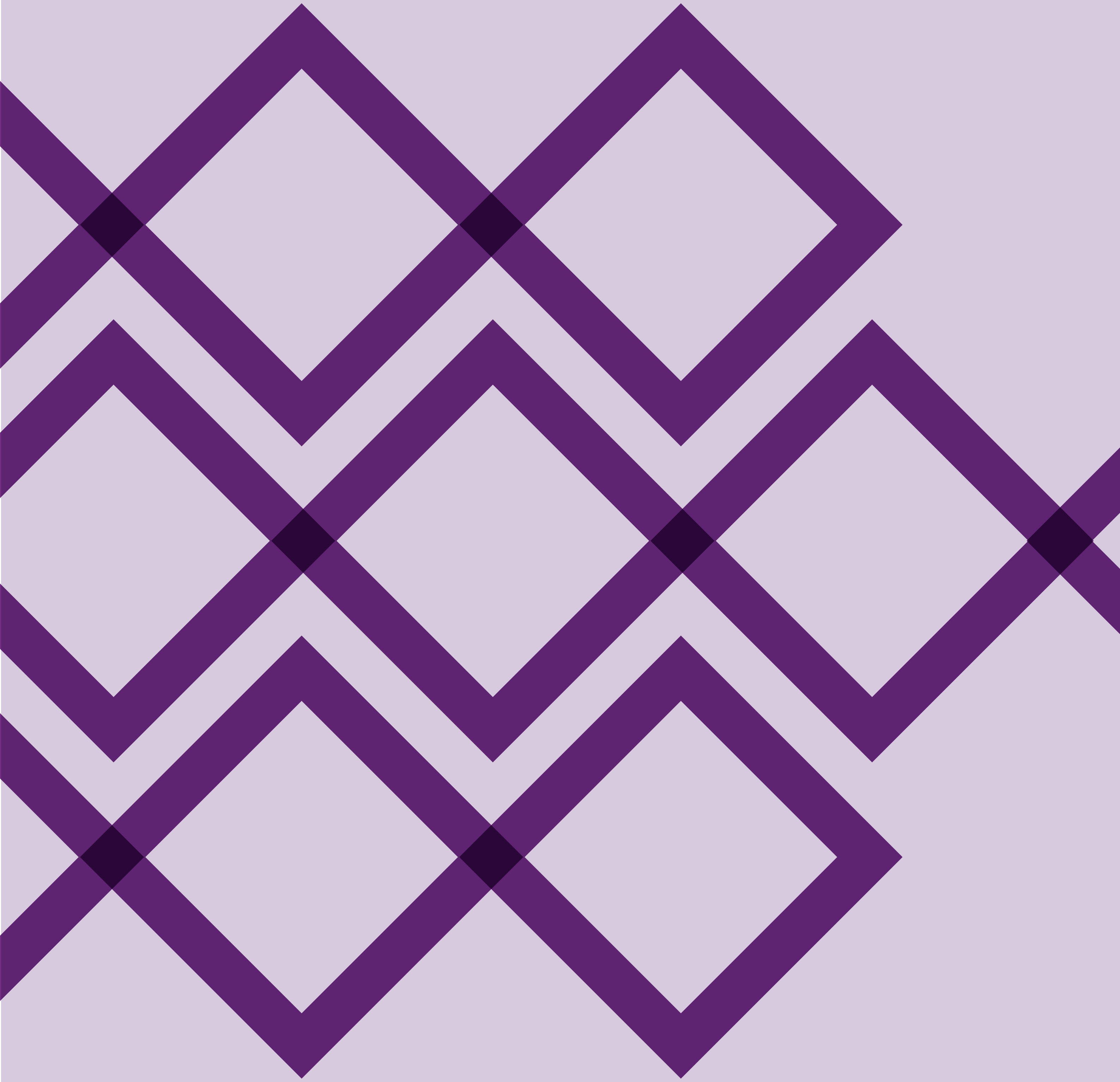
Figure 2.11 Labour Force (15-64 years) by Education and the NSS Target



Source: SLMRU (SOLAS) analysis of CSO data

Note: excludes those who did not state their education level

20 Ireland's National Skills Strategy 2025, January 2016

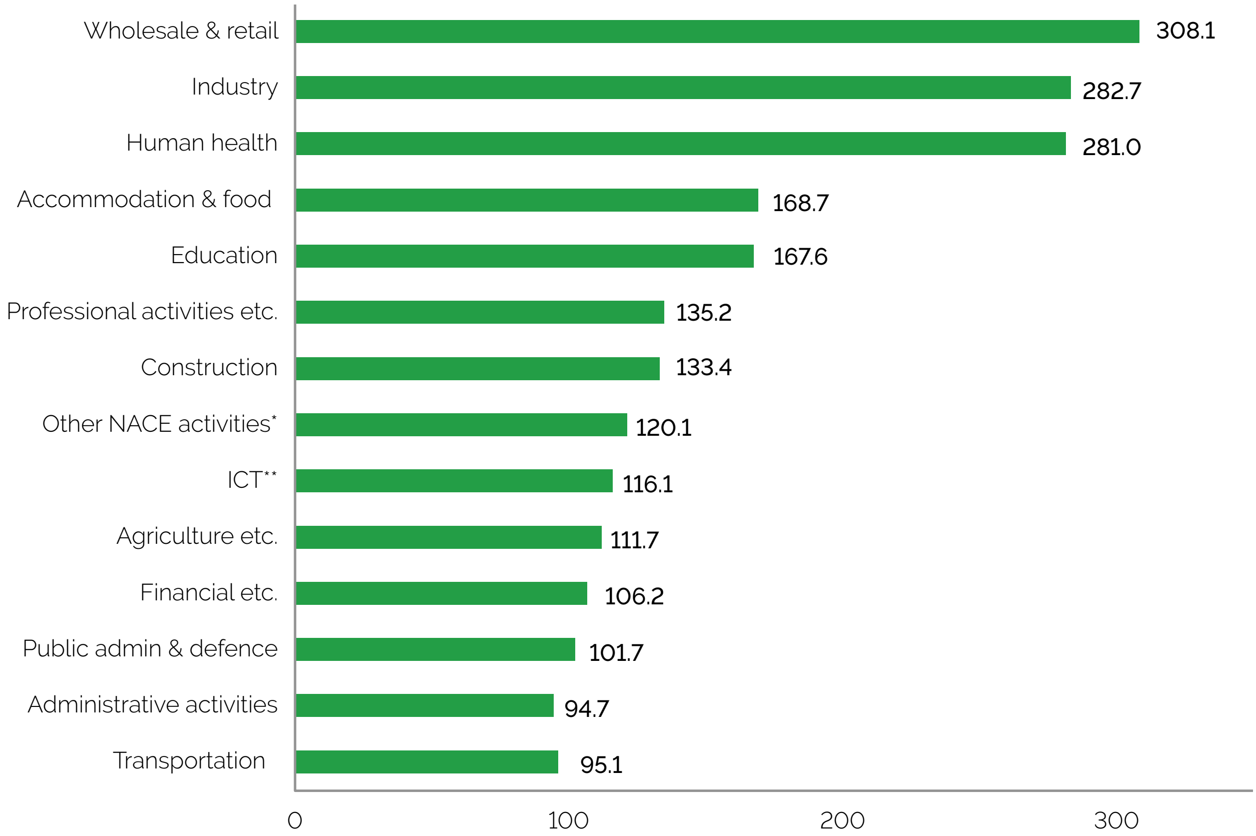


Section 3
Employment by Economic Sector

Due to the break in series of the CSO's Labour Force Survey (LFS), as detailed in the Introduction, employment changes at sub-sector level have not been subjected to a back casting exercise; as such, annual changes in employment are confined to sectoral level only, with sub-sector level excluded from this edition.

Figure 3.1 presents national employment by broad economic sector (NACE Rev 2 defined). In quarter 4 2017, the wholesale/retail sector was the largest employer followed by industry and health; each of these sectors employed over a quarter of a million persons or more. These sectors accounted for 13.8%, 12.7% and 12.6% of national employment respectively.

Figure 3.1 Employment by Sector (000s), Quarter 4 2017



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.

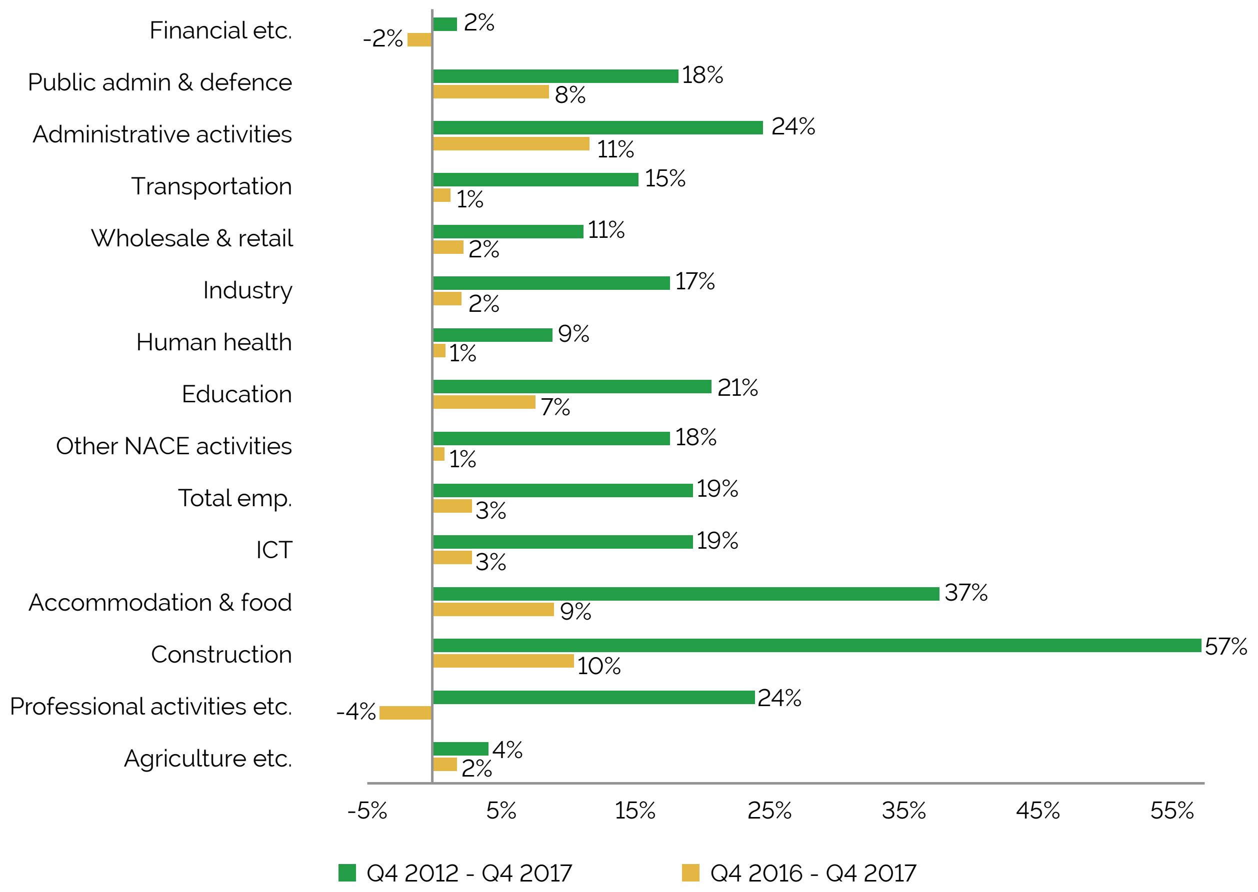
**The information and communication sector includes computer programming, telecommunications, information services, publishing and broadcasting; it does not include ICT equipment manufacturing or the wholesale of computers, computer peripheral equipment and software.

***Not stated excluded.

Employment growth by sector is presented in Figure 3.2. Between quarter 4 2016 and quarter 4 2017, employment increased in almost all sectors excluding financial services (-2%) and professional activities (-4%). The strongest growth was observed for administrative activities (11%) and construction (10%).

Over the five-year period from quarter 4 2012, all sectors experienced growth. The strongest growth was recorded in construction (57%) and accommodation and food (37%), followed by professional activities and the administrative services sectors (24% each).

Figure 3.2 Employment Growth by Sector



Source: SLMRU (SOLAS) analysis of CSO data

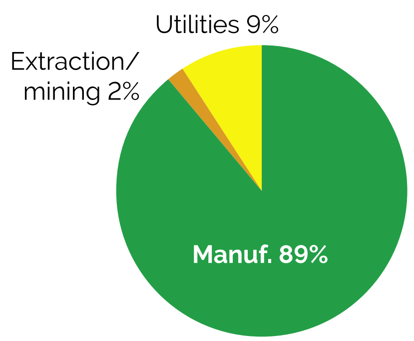
Industry

In quarter 4 2017, almost 283,000 persons were employed in the industrial sector. This accounted for 12.7% of the share of overall total national employment. There was an increase of 5,300 persons on the same quarter in the previous year in this sector.

When compared with quarter 4 2012, employment in industry increased by 42,000. Year on year the number of persons employed in industry has increased between 2012 and 2017.

Industrial employment by sub-sector is presented in Figure 3.3. In quarter 4 2017, 89% of industrial employment was in manufacturing (250,600 persons), with utilities and extraction/ mining accounting for 9% and 2% respectively.

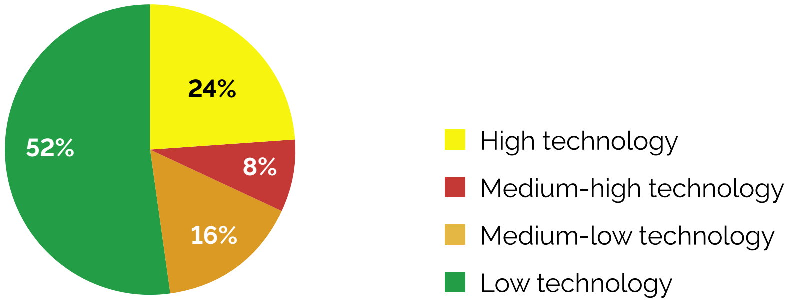
Figure 3.3 Industrial Employment by Sub-sector, Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

Manufacturing employment by technological intensity is presented in Figure 3.4. In quarter 4 2017, low technology manufacturing accounted for 52% of manufacturing employment, followed by high technology (24%), medium-high (8%) and medium-low (16%).[21] Since quarter 4 2016, there was a significant fall in the number of persons employed in the medium-high tech sub-sector, with a corresponding increase in employment in the low tech category; this appears to be caused by a reclassification in the new labour force survey between those employed in machinery and equipment manufacturing (medium-high tech) and those in the other manufacturing category (low tech).

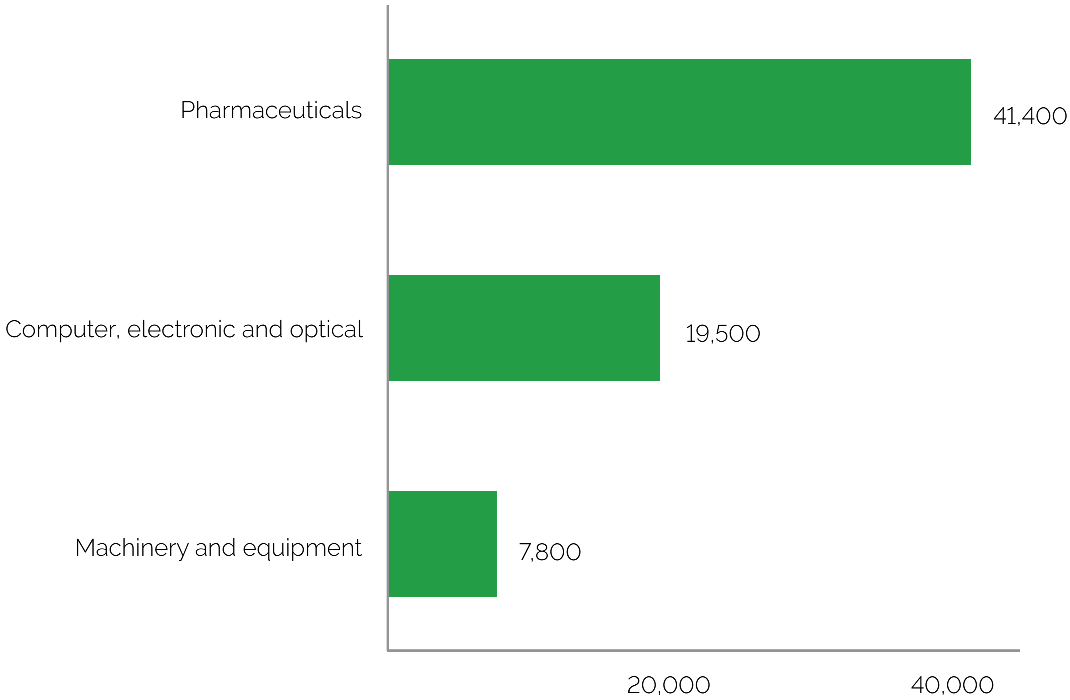
Figure 3.4 Manufacturing Employment by Technological Intensity, Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

Figure 3.5 presents employment in the high and medium-high technology manufacturing sub-sectors.[22] In quarter 4 2017, employment in high or medium-high tech manufacturing was over 105,000 persons which account for 45% of total manufacturing employment. Of these, pharmaceuticals accounted for 52% (or 41,200 persons). With the new labour force survey, there has been a significant fall in the number of persons employed in the machinery and equipment sub-sector, with a corresponding increase in employment in the other manufacturing category, which includes medical instruments and supplies; this other manufacturing category is classified as low-tech manufacturing.

Figure 3.5 High & Medium-High Tech Manufacturing Employment, Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

*Electrical and transport equipment is too small to report

21 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).

22 Manufacturing of chemicals is not presented because figures are too small for statistical inference.

Construction

In quarter 4 2017, 133,000 persons were employed in the construction sector, accounting for 6% of national employment. Between quarter 4 2016 and quarter 4 2017, construction was the second strongest growing sector of the economy, growing by 10% with an additional 12,000 persons employed. Of the total employment in the construction sector, 65% were in specialised construction activities (e.g. bricklaying, scaffolding, construction equipment renting), 28% in construction of buildings, with the remainder in civil engineering.

Agriculture

In quarter 4 2017, 111,700 persons were employed in agriculture, representing 5.0% of national employment. Of the total agricultural employment, 95% was in crop and animal production, with the remainder in forestry, fishing and agriculture.

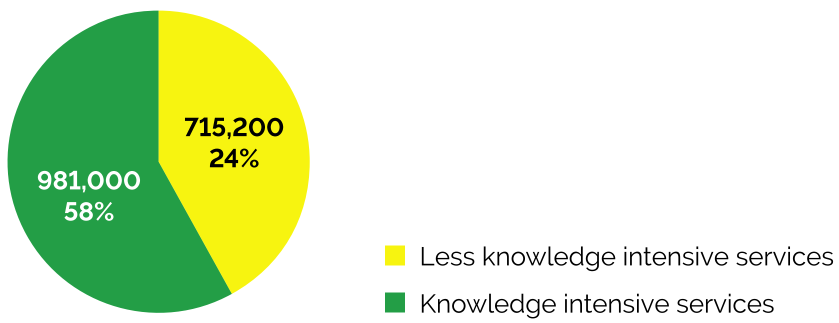
Between quarter 4 2016 and quarter 4 2017 there was very little change in agricultural employment overall. Compared to five years previously, employment has increased by 4,000.

Services

In quarter 4 2017, over 1.6 million persons were employed in the services sector, accounting for three quarters of national employment. Between quarter 4 2016 and quarter 4 2017, employment in the services sector increased by almost 47,000 (or 2.8%), while it grew by 13.1% (or 191,000 persons) in the five-year period since quarter 4 2012.

The composition of employment in the services sector in terms of knowledge intensity is presented in Figure 3.6. Of the total services sector employment, 58% (981,000) was in knowledge intensive services - KIS (ICT, financial, legal, accounting, engineering, R&D, education, health and arts),[23] and the remainder was in less knowledge intensive services – LKIS (wholesale & retail, warehousing & transport, accommodation & food, office administration, real estate, travel, etc.)[24].

Figure 3.6 Services Sector Employment, Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

Wholesale and Retail Trade

In quarter 4 2017, 308,100, persons were employed in the wholesale and retail trade sector, accounting for 13.8% of national employment. Of these, 221,800 persons were employed in the retail trade, 57,000 in wholesale and 29,300 in the motor trade.

Accommodation and Food Services

In quarter 4 2017, 168,700 persons were employed in accommodation and food services, accounting for 7.6% of national employment. Of this, food and beverage services accounted 69% of the sector, with accommodation accounting for the remainder of the sub-sector.

Between quarter 4 2016 and quarter 4 2017, the sector as a whole grew by 8.6%. Over the five-year period quarter 4 2012 to quarter 4 2017, this sector had strong employment growth of 45,900 additional persons employed.

---

23 NACE Rev. 2 50, 51, 58-66, 69-75, 78, 80, 84-93.
24 NACE Rev. 2 45-47, 49, 52, 53, 55, 56, 68, 77, 79, 81, 82, 94-99.

Professional, Scientific and Technical Activities

In quarter 4 2017, 135,200 persons were employed in professional, scientific and technical activities, accounting for 6.1% of national employment. Of this, 34% was in legal and accounting services, 31% was in engineering activities (including architectural activities and technical testing), 11% in other professional, scientific and technical activities, with the remainder spread across services such as scientific R&D, advertising and management consultancy.

Although this sector observed a decline in the most recent year, strong growth has been recorded over the five year period. Between quarter 4 2012 to quarter 4 2017, employment increased by 26,000 (29.1%) in this sector.

Financial, Insurance and Real Estate Services

In quarter 4 2017, 106,200 persons were employed in the provision of financial, insurance and real estate services, representing 4.8% of national employment. Of the total sectoral employment, 66% was in financial services (e.g. banking), 22% in insurance, with the remainder in auxiliary and real estate activities.

Over the five-year period quarter 4 2012 to quarter 4 2017, absolute numbers increased with the sector growing by 3.5%.

Transportation and Storage

In quarter 4 2017, 95,100 persons were employed in transportation and storage related activities, accounting for 4.3% of national employment. Land transport accounted for 53%, warehousing for 21%, postal activities for 16%, and the remainder was in air and water transport.

Between quarter 4 2016 and quarter 4 2017, employment increased in warehousing and land transport. Employment in this sector increased (1.5%), primarily in land transport and warehousing. In terms of absolute numbers, this sector saw an increase of 12,400 (13.3%) in employment between 2012 and 2017.

Information and Communications (ICT)

In quarter 4 2017, 116,100 persons were employed in the ICT sector, accounting for 5.2% of national employment. Of the total employment in the ICT sector, 66% were in computer programming with a further 13% in telecommunications. The remainder was spread across other ICT services, such as broadcasting, publishing and motion picture production.

Between quarter 4 2016 and quarter 4 2017, employment in the ICT sector increased by 2.7% (or 3,100). Strong employment growth was experienced by computer programmers (8,400). Over the five-year period from quarter 4 2012, employment in the ICT sector increased by 19% (18,600).

Administrative and Support Service Activities

In quarter 4 2017, there were 94,700 persons employed in administrative and support services, accounting for 4.2% of national employment. Buildings and landscape services accounted for 46% of employment in this sector; office administrative activities, 16%; security activities, 13%; and the remainder distributed between employment activities, travel services and renting/leasing.

Between quarter 4 2016 and quarter 4 2017, there was an increase of 9,700 persons (or 11.4%) working in this sector. Compared to quarter 4 2012, employment increased by 11.5% or 18,500 persons.

Health and Social work

In quarter 4 2017, 281,000 persons were employed in human health and social work activities, accounting for 12.6% of national employment. Employment in human health activities accounted for 59%, social work activities for 25% and residential care activities accounted for the remaining 16%.

Between quarter 4 2016 and quarter 4 2017, overall employment levels increased modestly (0.7%) in the health and social care sector. Between quarter 4 2012 and quarter 4 2017 this sector experienced a growth of 8.7%.

Education

In quarter 4 2017, at 167,600 persons employed, the education sector accounted for 7.5% of national employment. Employment in the education sector increased by 7.3% from 2016 to 2017 and 20.6% from 2012 to 2017, resulting in an additional 11,400 persons employed.

Public Administration and Defence (PAD)

In quarter 4 2017, there were 101,700 persons employed in PAD, accounting for 4.6% of national employment. Employment levels in PAD experienced an 18% growth over the five year period, with an increase of 15,500 persons employed.

Other Sectors

In quarter 4 2017, employment in all other sectors of the economy amounted to 120,100, representing 5.4% of national employment. Personal services activities accounted for 27%, followed by 26% in sports activities and 14% in activities of membership organisations, with the remainder distributed between other activities, such as cultural, gambling, domestic etc. Compared to five years previously, employment in quarter 4 2017 increased by 17.5% or 18,000 persons.

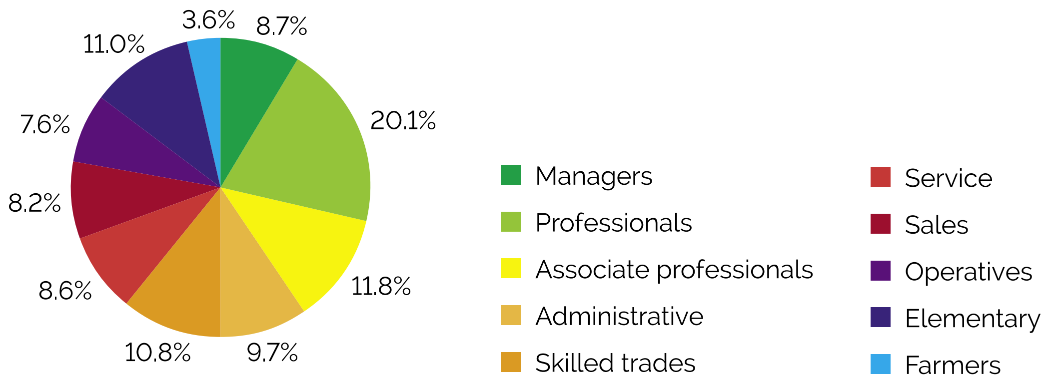
Section 4
Employment by Broad Occupation

4.1 Employment

Figure 4.1 presents employment by broad occupational group. In this section farmers are presented as an occupation separately from other skilled trades in reference to quarter 4 2017; for time comparisons, they are grouped. In quarter 4 2017, persons employed as managers, professionals, associate professionals and administrators accounted for half (50.3%) of the national workforce. Skilled tradespersons accounted for 10.8% of all persons employed with elementary workers accounting for 11%. Farmers accounted for 3.6%.

Between quarter 4 2016 and quarter 4 2017, the distribution of employment by broad occupational group remained largely unchanged.

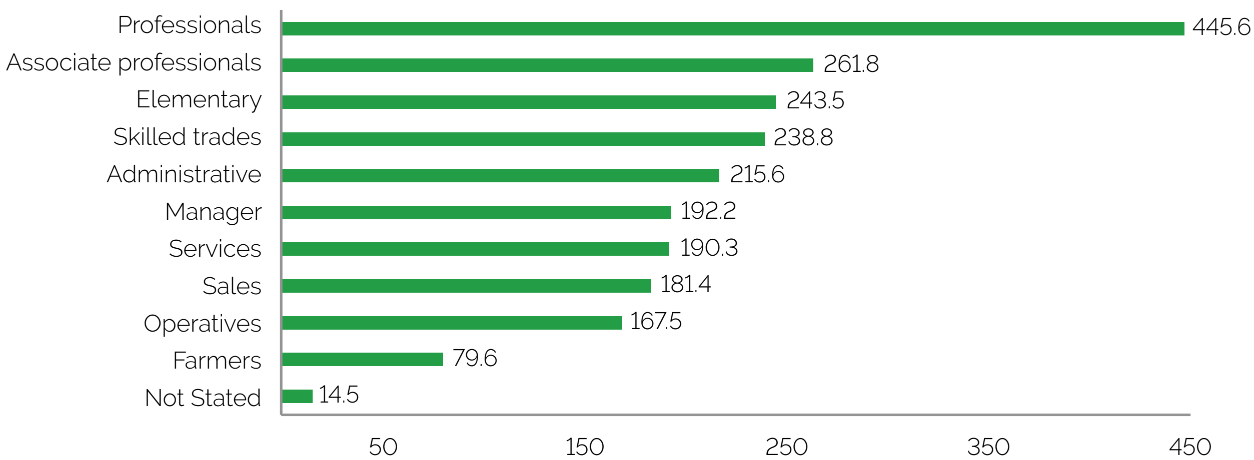
Figure 4.1 Employment by Broad Occupational Group (%), Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

Employment levels by occupational groups are presented in Figure 4.2. In quarter 4 2017, at 446,000, the highest level of employment was in professional occupations. Associate professionals accounted for the second highest with elementary, skilled trades and administrative occupations each accounting for over 200,000 employed persons.

Figure 4.2 Employment by Broad Occupational Group (000s), Quarter 4 2017



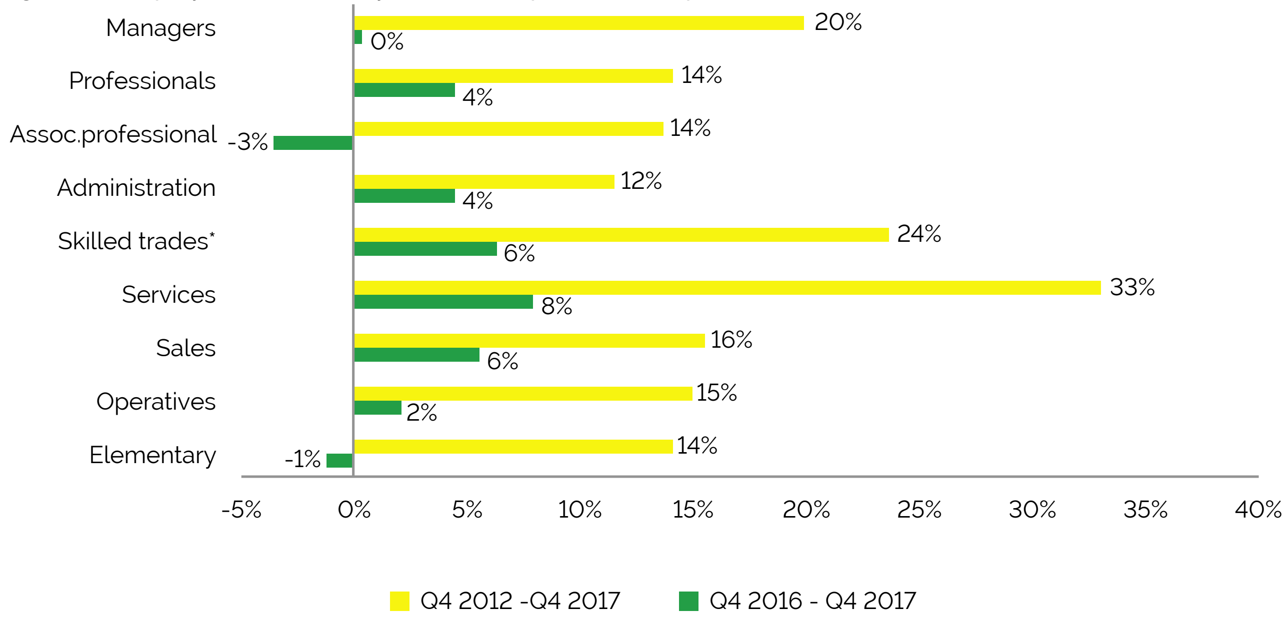
Source: SLMRU (SOLAS) analysis of CSO data

4.2 Employment Growth

Employment growth by broad occupational group is presented in Figure 4.3. Between quarter 4 2016 and quarter 4 2017, all occupations observed an increase in employment, excluding associate professionals (-3%) and elementary (-1%) occupations. The largest increases in employment were observed for those employed in services occupations (8%), followed by sales and skilled trades occupations (6% each).

Between quarter 4 2012 and quarter 4 2017, employment increased for all occupations. Those employed in services occupations, skilled trades and managers experiencing the greatest increases.

Figure 4.3 Employment Growth by Broad Occupational Group

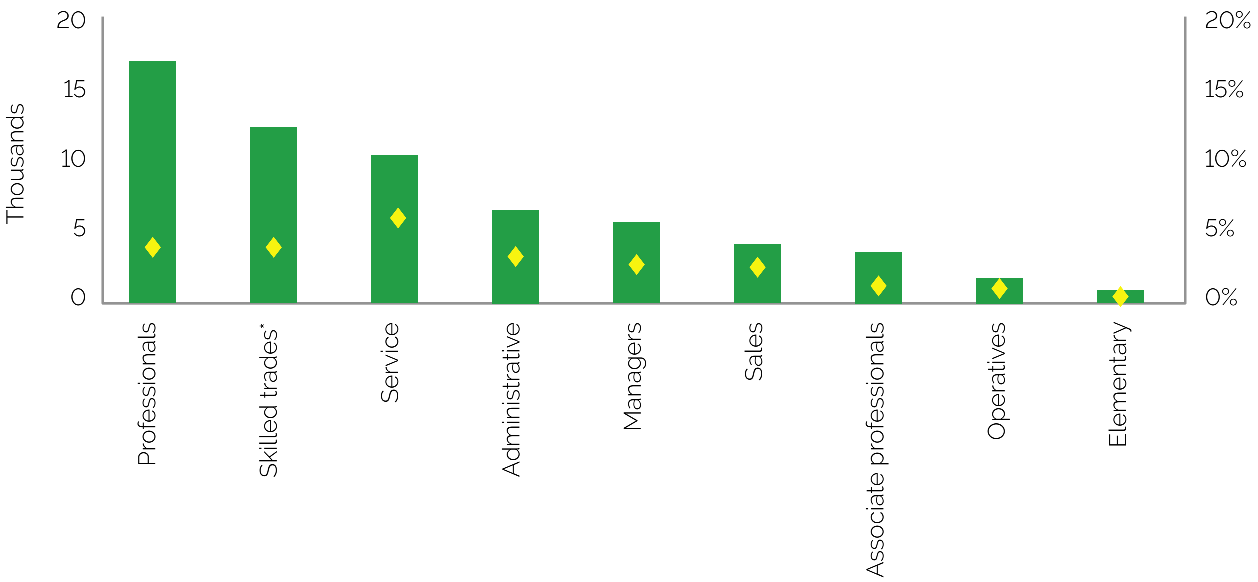


Source: SLMRU (SOLAS) analysis of CSO data

*Skilled trades includes farmers

Figure 4.4 presents the absolute and relative change in employment by broad occupational groups. Between 2016 and 2017 (annual average data), all occupational groups experienced an increase in employment growth. Professionals observed the strongest absolute employment growth, followed by skilled trades and services. At 6% services observed the strongest growth rate followed by skilled trades and professionals (4% each).

Figure 4.4 Employment Growth by Broad Occupational Group, Annualised Data, 2016 - 2017



Source: SLMRU (SOLAS) analysis of CSO data

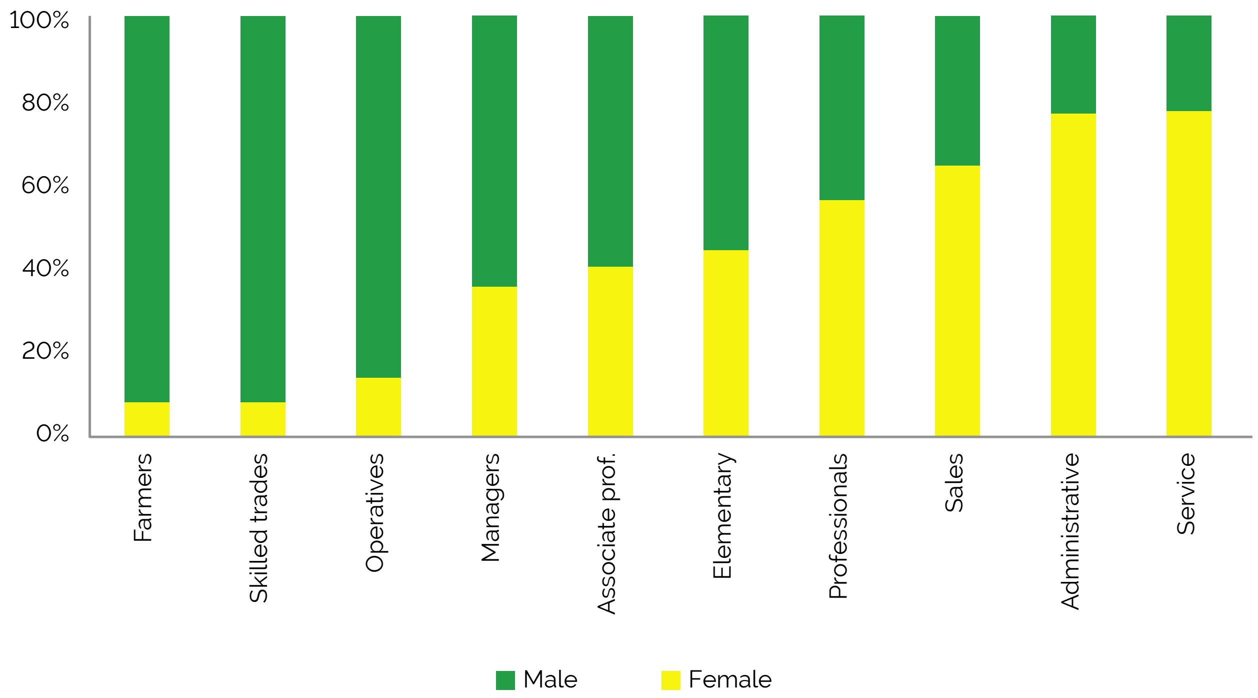
*Skilled trades includes farmers

4.3 Employment by Gender

Figure 4.5 presents the distribution of employment by gender for broad occupations. In quarter 4 2017, males accounted for the highest share in farming, skilled trades and operative occupations. Females were predominant in services, administrative and sales occupations. The share of females and males was most evenly distributed amongst the professional occupations.

Between quarter 4 2016 and quarter 4 2017, females employed in elementary occupations increased by six percentage points. The share of female managers and professionals increased by one percentage point each for the time period, with service workers experiencing the greatest increase of female workers (five percentage points).

Figure 4.5 Employment by Gender and Broad Occupational Group (%), Quarter 4 2017



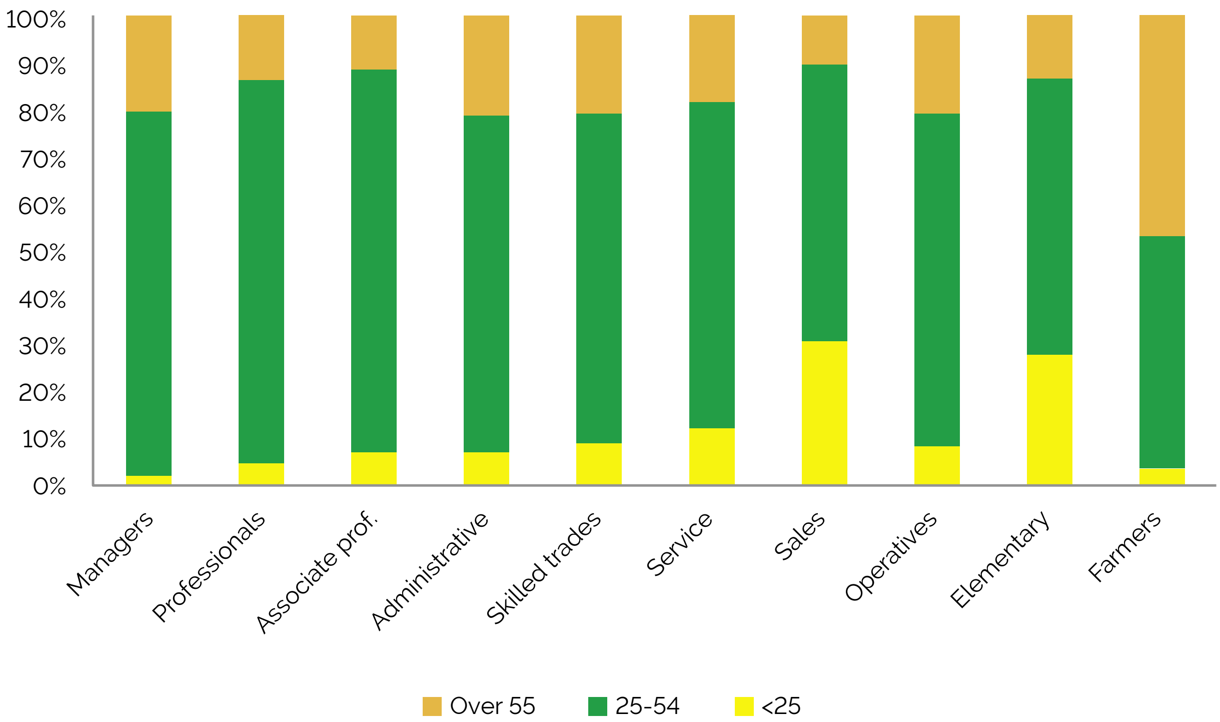
Source: SLMRU (SOLAS) analysis of CSO data

4.4 Employment by Age

The age distribution of employment by broad occupational groups is presented in Figure 4.6. In quarter 4 2017, with the exception of farmers, employment in all occupational groups was greatest in the 25-54 age cohort. The highest share of workers aged 15-24 was in sales and elementary occupations. Managers, professionals and associate professionals had the lowest share of those aged 15 – 24 years. Farmers observed the greatest share of workers aged over 55 (47%).

Between quarter 4 2016 and quarter 4 2017, there was an increase in the share of those aged under 25 in elementary occupations (two percentage points). Managers and associate professionals increased their share of those aged 25 – 54 years (one percentage point each).

Figure 4.6 Employment by Age and Broad Occupational Group (%), Quarter 4 2017

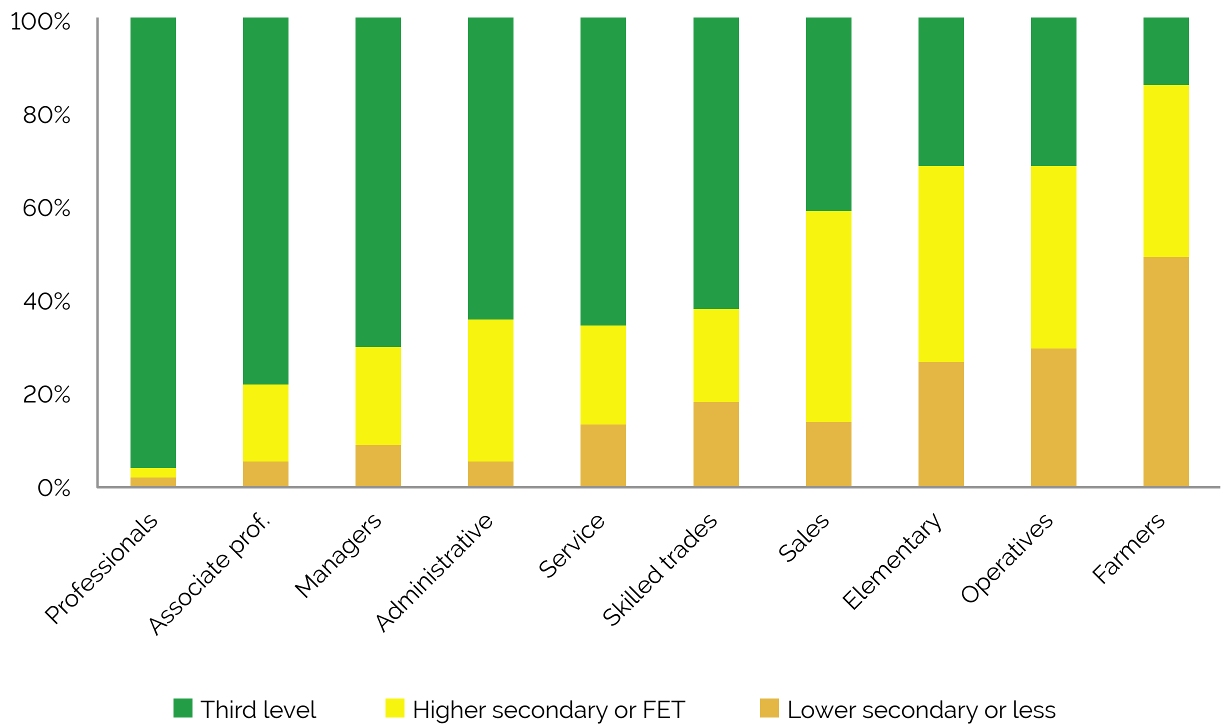


Source: SLMRU (SOLAS) analysis of CSO data

4.5 Employment by Education

The educational distribution of employment by broad occupational groups is presented in Figure 4.7. In quarter 4 2017, professionals (96%), associate professionals (78%) and managers (70%) had highest share of third level graduates. Farmers, followed by operatives, had the highest share of persons with a lower secondary or less level of education.

Figure 4.7 Employment by Education and Broad Occupational Group (%), Quarter 4 2017



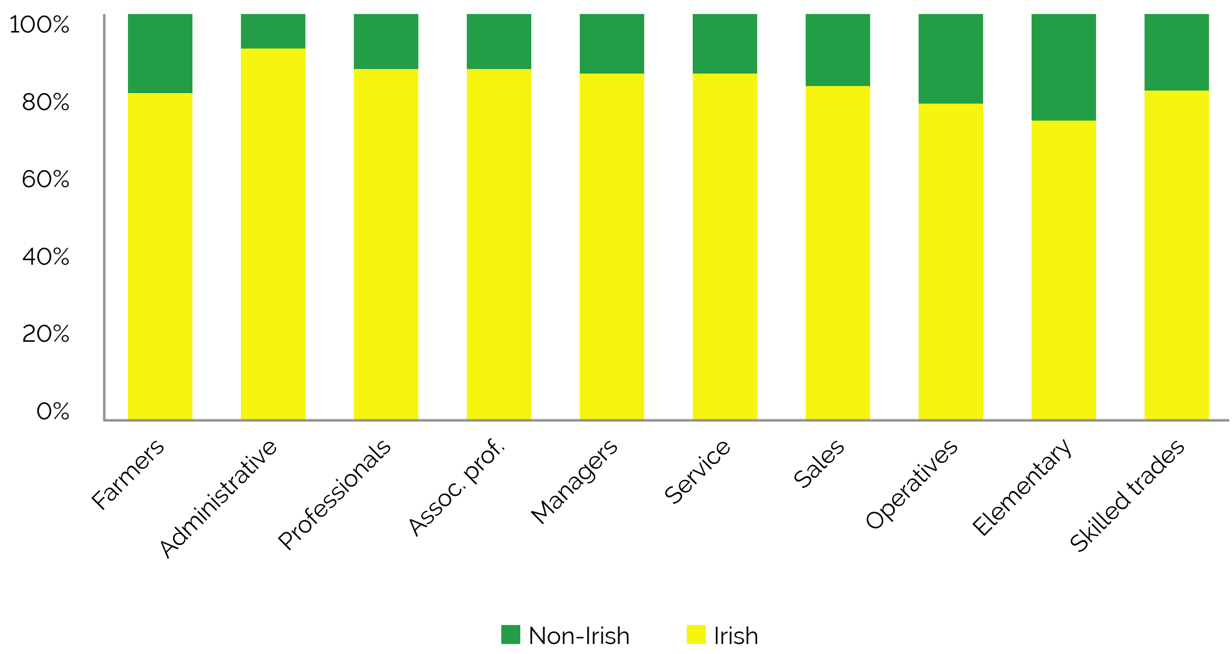
Source: SLMRU (SOLAS) analysis of CSO data

4.6 Employment by Nationality

The distribution of employment in broad occupational groups by nationality is presented in Figure 4.8. In quarter 4 2017, the share of non-Irish nationals was the highest in elementary (26%) and operatives (22%) occupations. In contrast, the share of non-Irish nationals was lowest for administrative workers (8%), professionals (13%) and associate professionals (13%).

Between quarter 4 2016 and quarter 4 2017, the number of non-Irish nationals employed increased across a number of occupational groups with operative workers observing the greatest increase (six percentage points). Non-Irish nationals employed in the services, professional and managerial occupations also observed an increase of between two and one percentage points respectively.

Figure 4.8 Employment by Nationality and Broad Occupational Group (%), Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

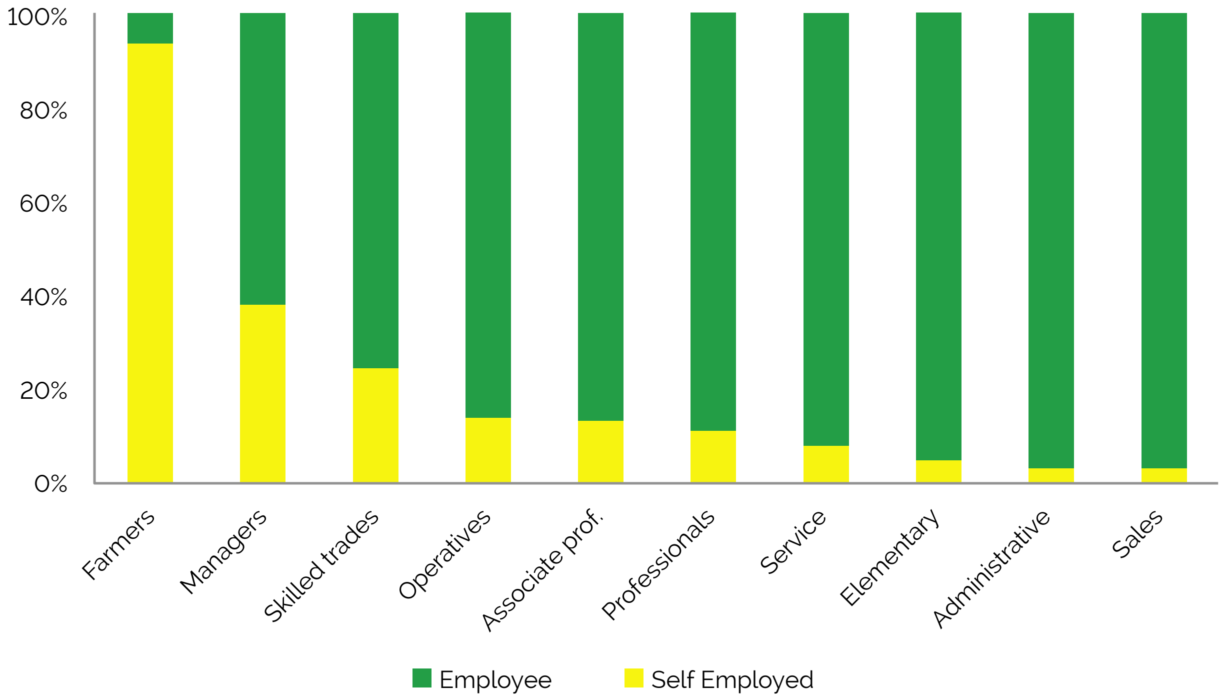
4.7 Employment Status

Employment in broad occupational groups by employment status is presented in Figure 4.9. In quarter 4 2017, the majority of workers across all occupations were employees, with the exception of farmers. After farmers, the greatest share of persons classified as self-employed were managers (37%) followed by skilled tradespersons.

This graph does not include those assisting relatives as the numbers were too small to report by occupational group. Of the 16,000 in this category, farmers and elementary occupations observed the greatest share of persons 'assisting a relative'. Of those classified as employees, 4% employed within services occupations were on either government or non-government schemes.

Between quarter 4 2016 and quarter 4 2017, the distribution of employment between employees, self-employed and those assisting relatives remained broadly unchanged across occupational groups.

Figure 4.9 Employment by Employment Status and Broad Occupational Group (%), Quarter 4 2017



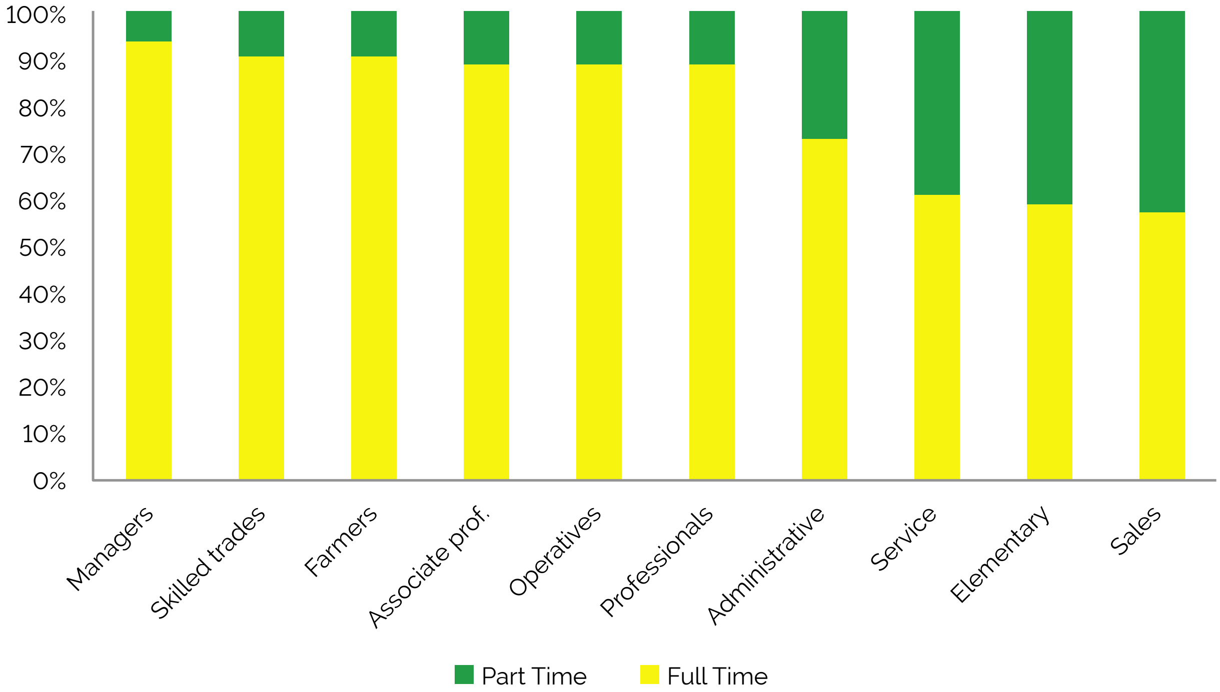
Source: SLMRU (SOLAS) analysis of CSO data

Note: This table excludes those assisting relatives based on the CSO's standard employment status classification as the numbers were too small to include.

Figure 4.10 presents the breakdown of employment in broad occupational groups by full-time and part-time work. In quarter 4 2017, the majority of workers across all occupational groups were in full-time employment. The highest share of part-time workers was found in sales (43%), elementary (41%) and services (40%) occupations.

Between quarter 4 2016 and quarter 4 2017, the share of full-time workers increased for almost all occupations, with the exception of elementary occupations which decreased by two percentage points. Sales and operatives observed the greatest increase in full-time employment (five percentage points and four percentage points respectively).

Figure 4.10 Full-Time and Part-Time Employment by Broad Occupational Group (%), Quarter 4 2017



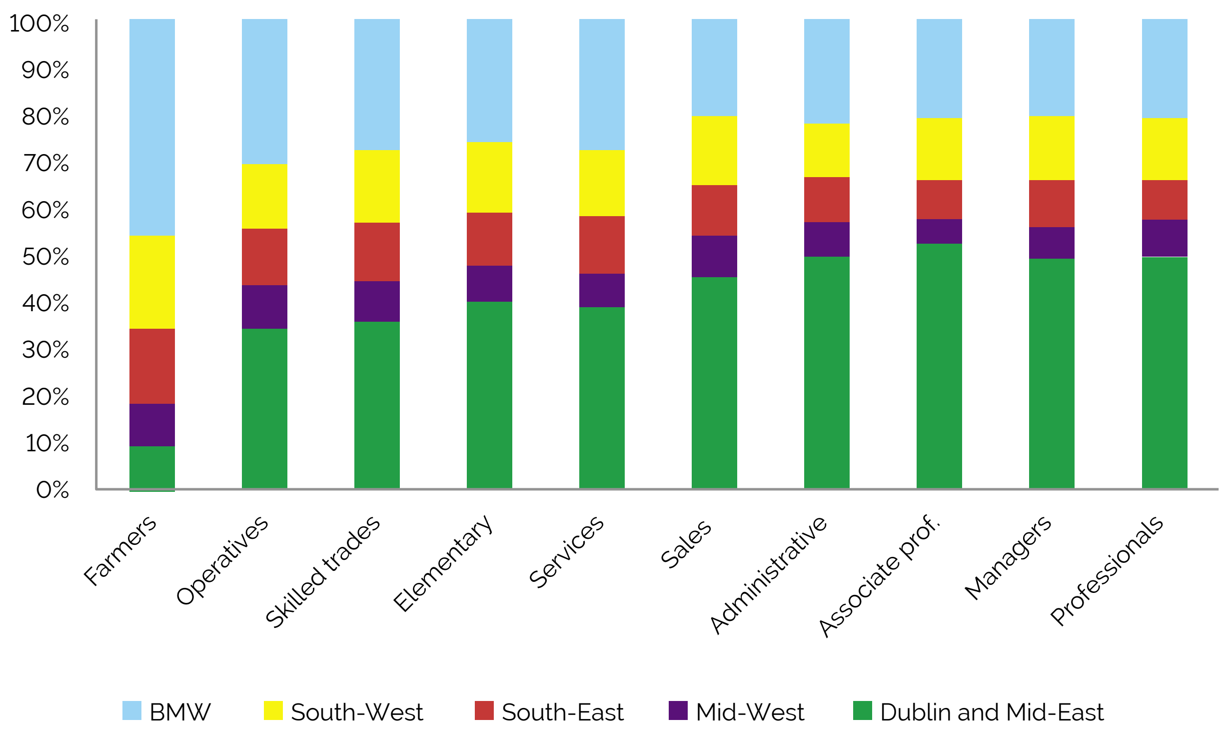
Source: SLMRU (SOLAS) analysis of CSO data

4.8 Employment by Region[25]

Figure 4.11 presents the regional distribution of employment in broad occupational groups. In quarter 4 2017, with the exception of farmers, Dublin and the Mid-East accounted for more than 34% of employment in each occupational group. The greatest share of white collar employment (managers, professionals, associate professionals and administrative workers) was located in Dublin and the Mid-East. Over 30% of those employed as operatives were located in the Border, Midlands and West.

Between quarter 4 2016 and quarter 4 2017, the share of salespersons and administrative workers in Dublin and the Mid-East observed the greatest increase (four and two percentage points each) while managers decreased by three percentage points for the same region. In the Border, Midlands and West region, the share of managers increased by two percentage points. In contrast, sales workers decreased by four percentage points for the same region.

Figure 4.11 Employment by Region and Broad Occupational Group (%), Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

25 For presentation purposes, the Border, Midlands and Western regions were grouped into the BMW region while the Dublin and Mid-East regions were grouped into the Dublin & Mid-East region.

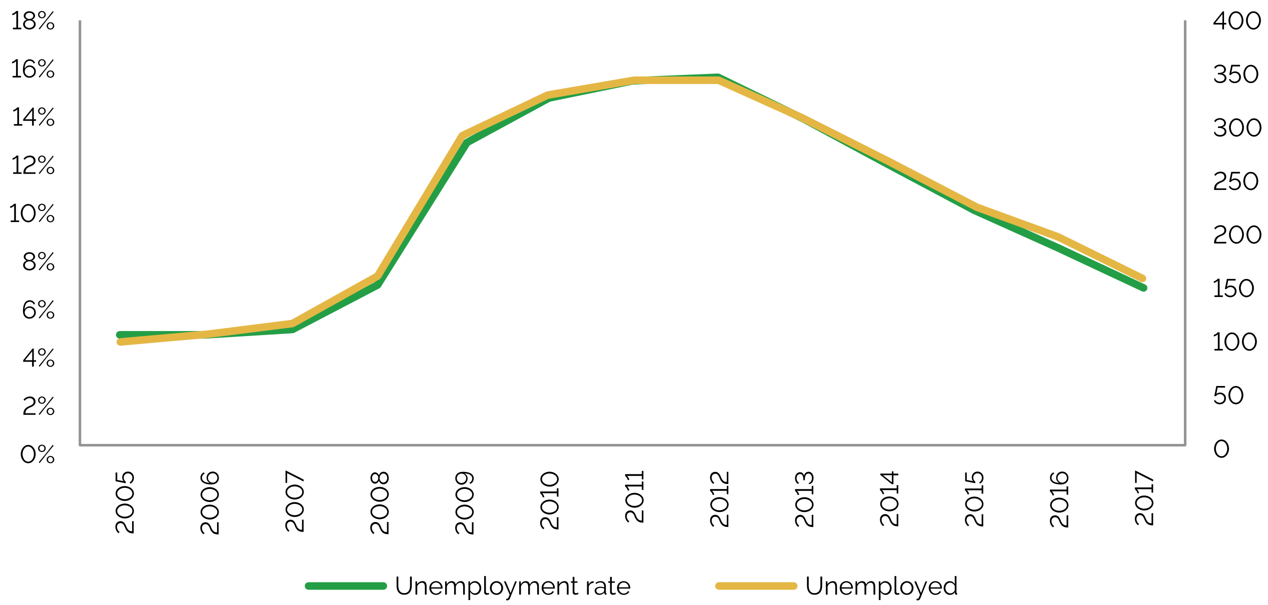
Section 5
Unemployment

5.1 Unemployment and Unemployment Rate

The average annual unemployment levels and unemployment rates for the period 2005–2017 are presented in Figure 5.1. The number of persons unemployed has fallen since the peak in 2011-2012 by approximately 185,000. By quarter 4 2017, the number of persons looking for employment had fallen to 144,000, reflecting a continued decline in unemployment.

In 2017, the average annual unemployment rate was 6.3%, a decline of 1.7 percentage points on the average rate in 2016.

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



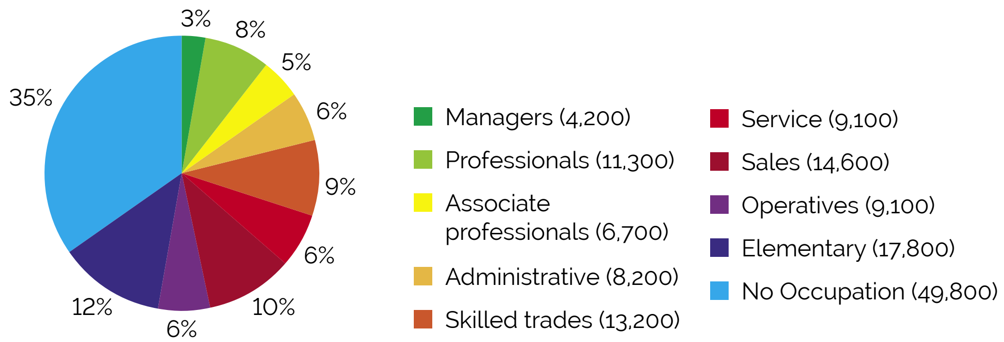
Source: SLMRU (SOLAS) analysis of CSO data

5.2 Unemployment by Occupation

The distribution of unemployment by broad occupational group is presented in Figure 5.2. Unemployed persons who did not state their previous occupation (e.g. looking for work for the first time, entering employment from inactivity) accounted for over one third of all unemployed persons. In quarter 4 2017, the greatest share of unemployed persons who stated a previous occupation had previously worked in elementary (12%), sales (10%) and skilled trades (including farmers) (9%) occupations. In contrast, managers (3%) continued to have the lowest share of unemployment.

Between quarter 4 2016 and quarter 4 2017, the number of unemployed persons decreased in almost all occupations with the exception of professionals, sales and operatives. The share of those previously working as associate professionals observed the greatest decline (two percentage points).

Figure 5.2 Unemployment by Occupation (000s; %), Quarter 4 2017

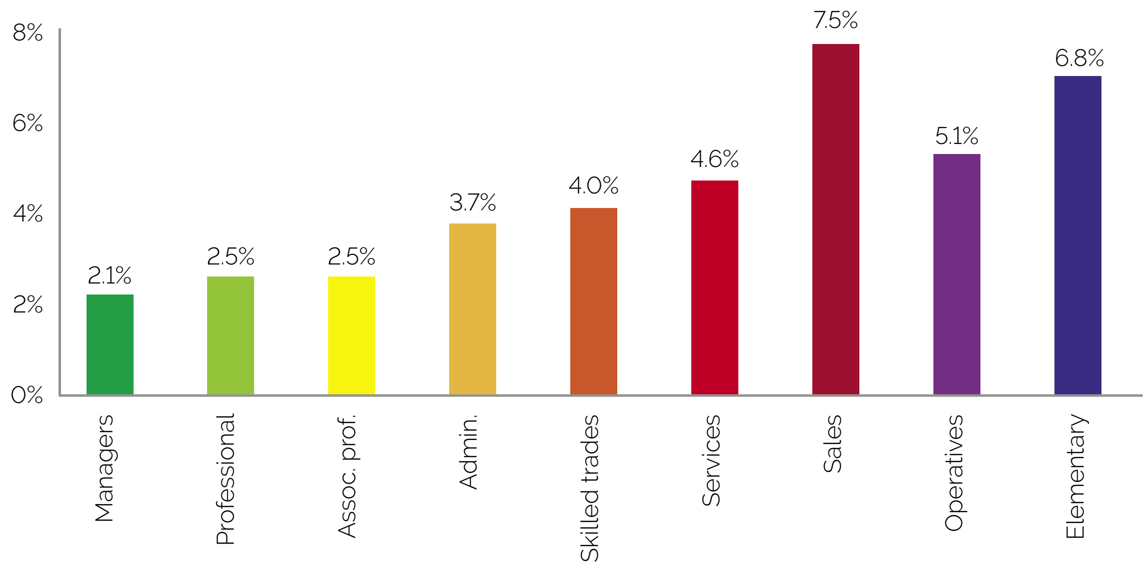


Source: SLMRU (SOLAS) analysis of CSO data

The unemployment rate by broad occupation is presented in Figure 5.3. In quarter 4 2017, sales and elementary occupations had the highest unemployment rate at 7.5% and 6.8% respectively. In contrast managers (2.1%), professionals (2.5%) and associate professionals (2.5%) had the lowest unemployment rates.

Between quarter 4 2016 and quarter 4 2017, the unemployment rate declined for a number of occupational groups with the rate for administrators and service workers observing the greatest decline (1.5 percentage points each). Professionals, sales and operative workers observed a marginal increase in unemployment rates (less than one percentage point each).

Figure 5.3 Unemployment Rate by Occupation, Quarter 4 2017



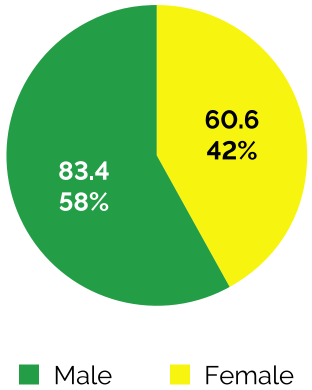
Source: SLMRU (SOLAS) analysis of CSO data

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

5.3 Unemployment by Gender

The gender distribution of unemployed persons is presented in Figure 5.4. In quarter 4 2017, the share of unemployed males was less than two thirds of the total unemployed. There is less than eight percentage points between the number of unemployed females and the number of unemployed males.

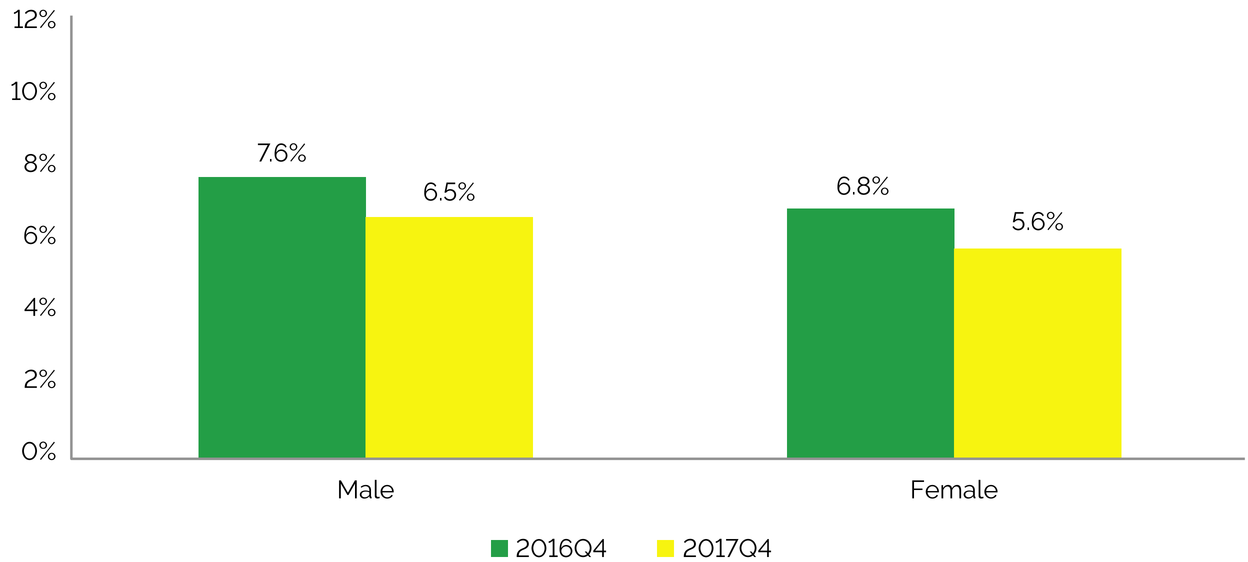
Figure 5.4 Unemployment by Gender, Quarter 4 2017 (000s; %)



Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2017, the unemployment rate for females was less than a percentage point lower than males, as shown in Figure 5.5. Between quarter 4 2016 and quarter 4 2017, the unemployment rate for males, as shown decreased by one percentage point, with females observing a decrease of 1.2 percentage points.

Figure 5.5 Unemployment Rate by Gender, Quarter 4 2016 & Quarter 4 2017



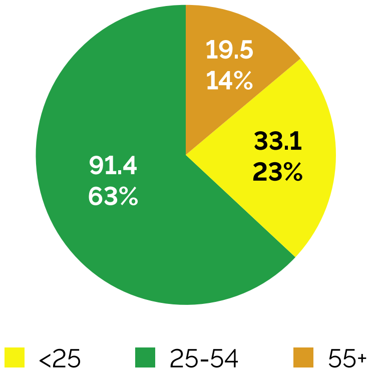
Source: SLMRU (SOLAS) analysis of CSO data

5.4 Unemployment by Age

Figure 5.6 presents the age distribution of unemployed persons. In quarter 4 2017, almost one in every four persons unemployed was aged under 25. The greatest share of unemployed persons was aged 25 to 54.

Between quarter 4 2016 and quarter 4 2017, those unemployed in all age cohorts observed a decline in terms of absolute numbers, with those aged 25 – 54 experiencing the greatest decline (of 13,100). The shares of unemployed persons both under 25 years and 55 years and over increased by one and two percentage points respectively.

Figure 5.6 Unemployment by Age, Quarter 4 2017 (000s; %)

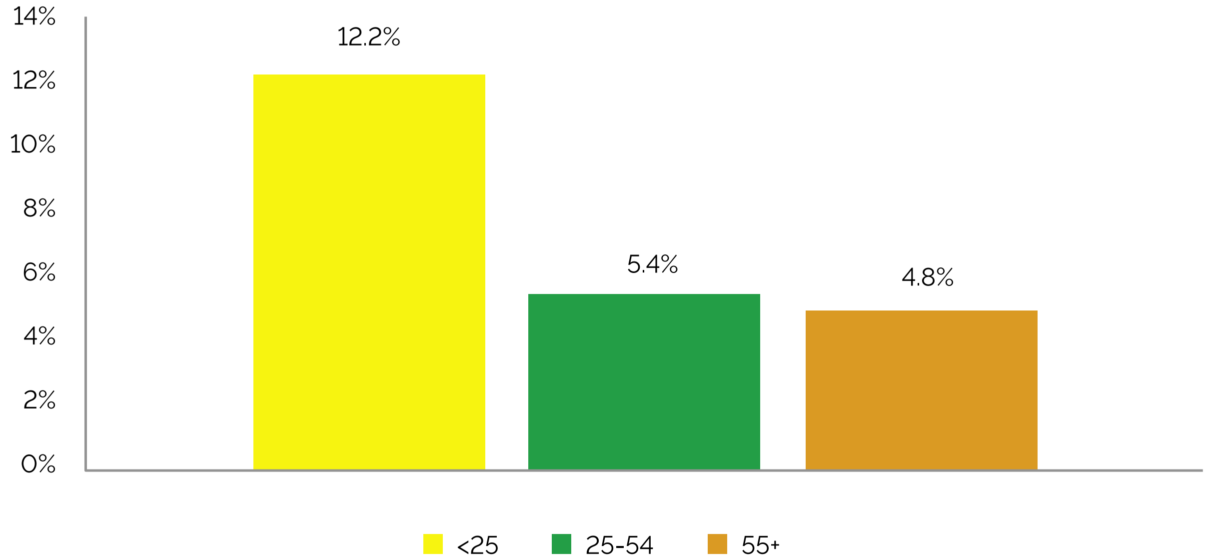


Source: SLMRU (SOLAS) analysis of CSO data

*Excludes not stated

Figure 5.7 presents unemployment rates by age. In quarter 4 2017, the unemployment rate for those aged under 25, was more than double that of persons aged between 25 and 54. Between quarter 4 2016 and quarter 4 2017, the unemployment rate for all age groups declined. Those aged less than 25 years observed the greatest decline of 2.6 percentage points.

Figure 5.7 Unemployment Rate by Age, Quarter 4 2017



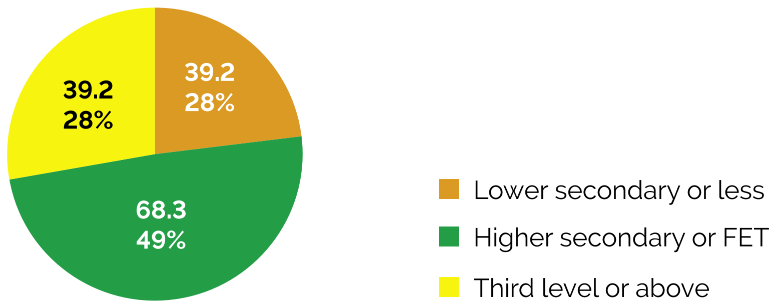
Source: SLMRU (SOLAS) analysis of CSO data

5.5 Unemployment by Education

Unemployment by education level is presented in Figure 5.8. In quarter 4 2017, just under half (49%) of all those unemployed had higher secondary or FET qualifications. Of those unemployed, 23% of individuals had lower secondary education or less.

Between quarter 4 2016 and quarter 4 2017, while the number of unemployed persons declined across all education levels, it was most pronounced for those with lower secondary or less education, with a decline of 8,700 persons.

Figure 5.8 Unemployment by Education, Quarter 4 2017 (000s; %)



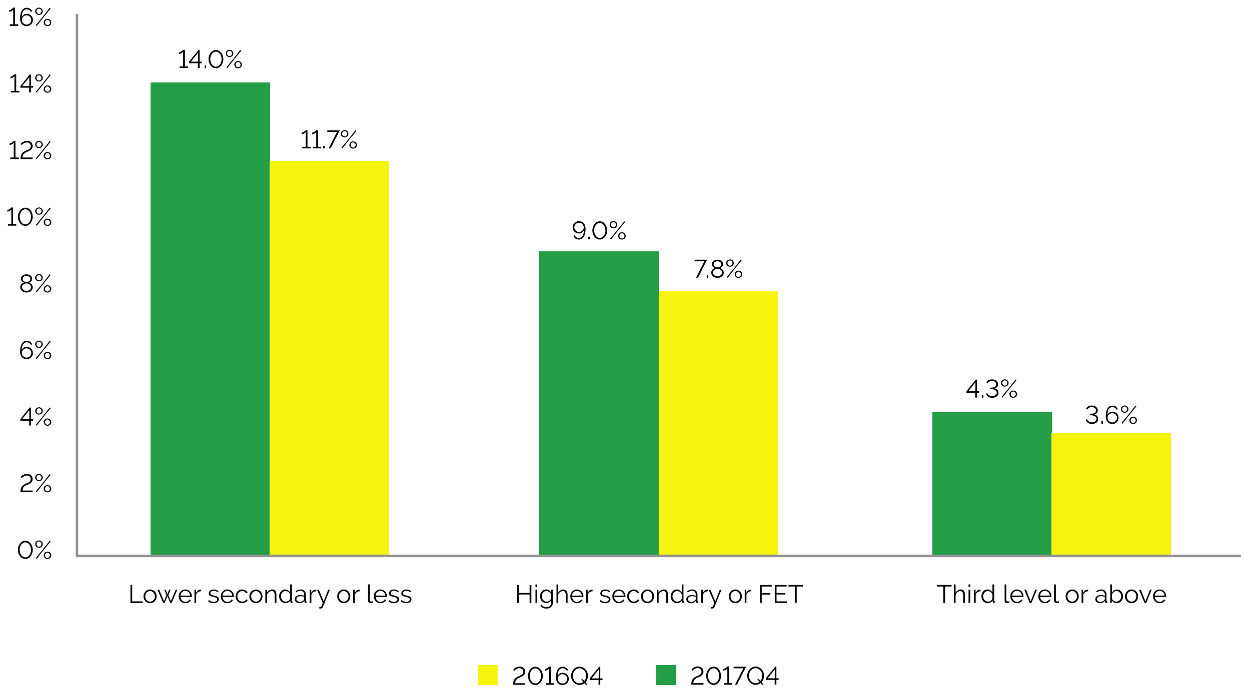
Source: SLMRU (SOLAS) analysis of CSO data

*Excludes not stated

Unemployment rates by education level are presented in Figure 5.9. In quarter 4 2017, persons with a lower secondary education or less had the highest rate of unemployment. Third level graduates had the lowest unemployment rate (at 4.3%).

Between quarter 4 2016 and quarter 4 2017, the unemployment rate for persons with lower secondary or less and higher secondary or FET levels of education observed a decrease (two and one percentage points respectively). Those with a third level education observed a decline of 0.7 percentage points in unemployment rates.

Figure 5.9 Unemployment Rate by Education, Quarter 4 2016 & Quarter 4 2017



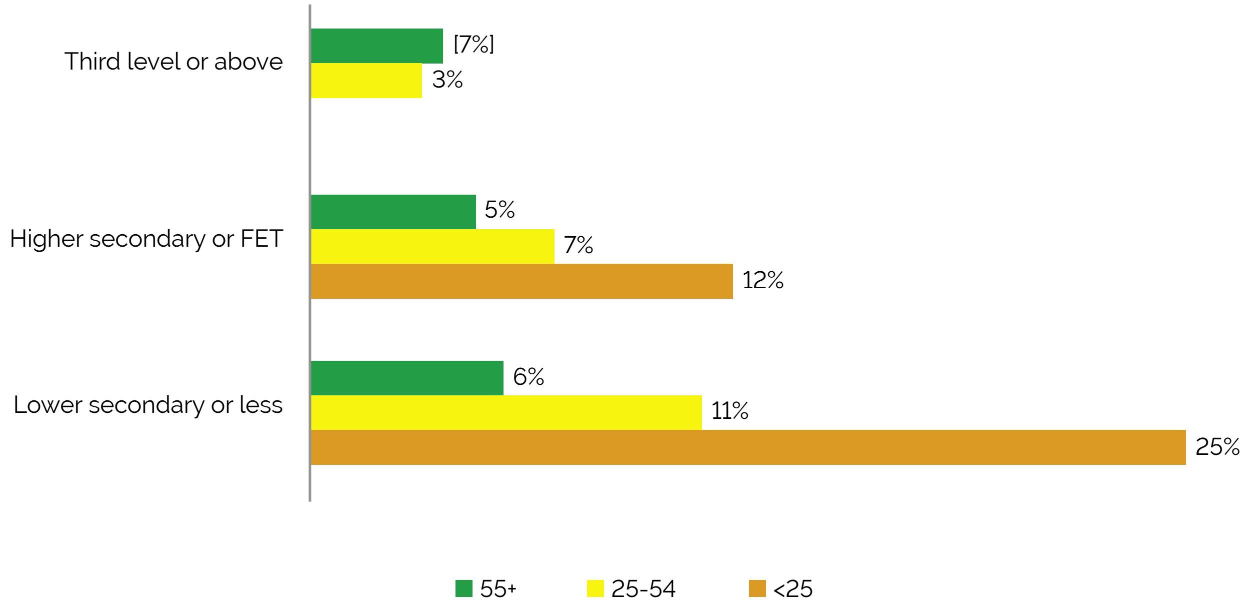
Source: SLMRU (SOLAS) analysis of CSO data

*Excludes not stated

Unemployment rates by education and age, is presented in Figure 5.10. In quarter 4 2017, persons aged under 25 with less than higher secondary education observed the greatest unemployment rates and had the highest risk of unemployment regardless of education level. Unemployment rates were lowest for third level graduates across all age cohorts.

Between quarter 4 2016 and quarter 4 2017, the unemployment rate decreased for almost all age and education categories with the exception of those with a lower secondary or less level of education (increased by 2.5 percentage points) and third level graduates over 55 (0.5 percentage point).

Figure 5.10 Unemployment Rate by Education and Age, Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

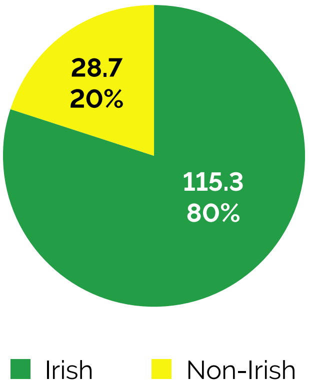
*Excludes not stated

**The rate for those aged <25 at third level were excluded as numbers were too small to report

5.6 Unemployment by Nationality

The distribution of unemployment by nationality is presented in Figure 5.11. In 2017, the share of Irish nationals in total unemployment was 80%. Between quarter 4 2016 and quarter 4 2017, the number of unemployed Irish nationals decreased by 29,000 persons whereas the number of unemployed non-Irish nationals increased by over 3,000 persons.

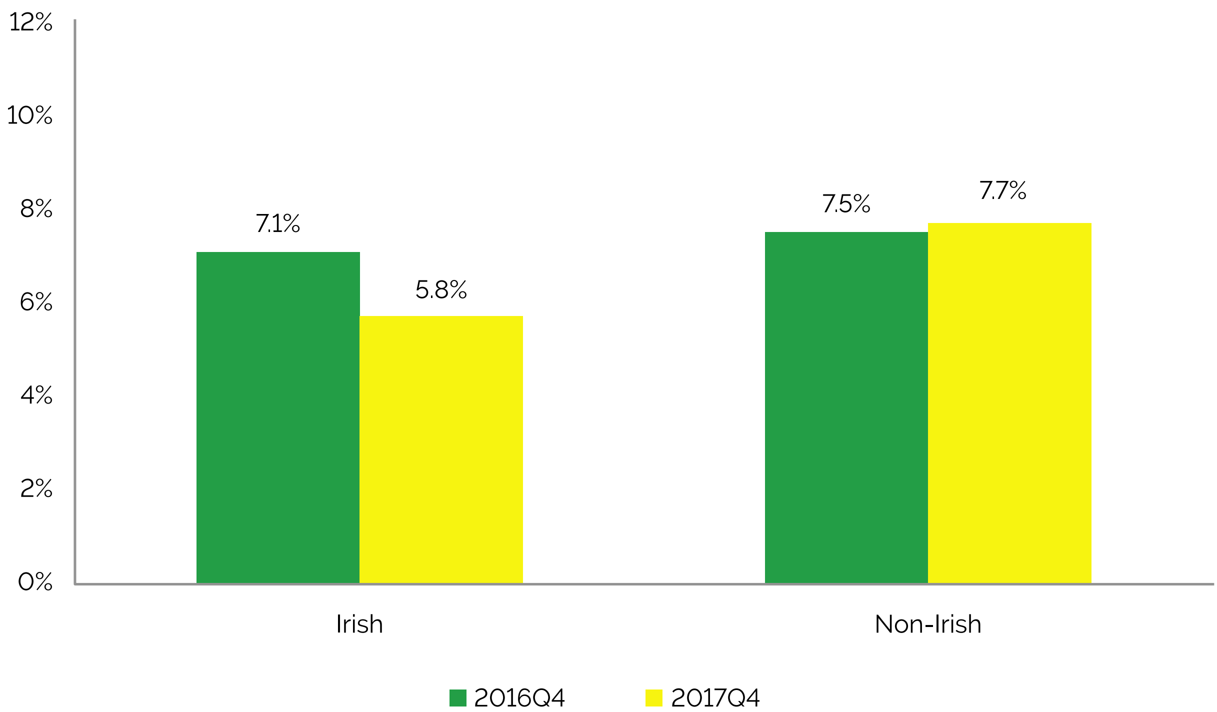
Figure 5.11 Unemployment by Nationality (%), Quarter 4 2017 (000s; %)



Source: SLMRU (SOLAS) analysis of CSO data

Figure 5.12 presents unemployment rates for Irish and non-Irish nationals. In quarter 4 2017, Irish nationals had a lower unemployment rate than non-Irish nationals (5.8% compared to 7.7%). Between quarter 4 2016 and quarter 4 2017, the decrease in the unemployment rate for Irish nationals was 1.3 percentage points with the rate for non-Irish nationals marginally increasing (0.2 percentage points).

Figure 5.12 Unemployment Rate by Nationality, Quarter 4 2016 & Quarter 4 2017



Source: SLMRU (SOLAS) analysis of CSO data

5.7 Unemployment by Sector

The unemployment levels and unemployment rates by sector are presented in Table 5.1. In quarter 4 2017, the largest number of unemployed persons was for those previously employed in wholesale and retail, accommodation & food, construction and industry.

The unemployment rate in quarter 4 2017 was highest for the administration services sector (6.8%) followed by construction (6.7%). Unemployment rates remain low in agriculture, professional services and human health sectors.

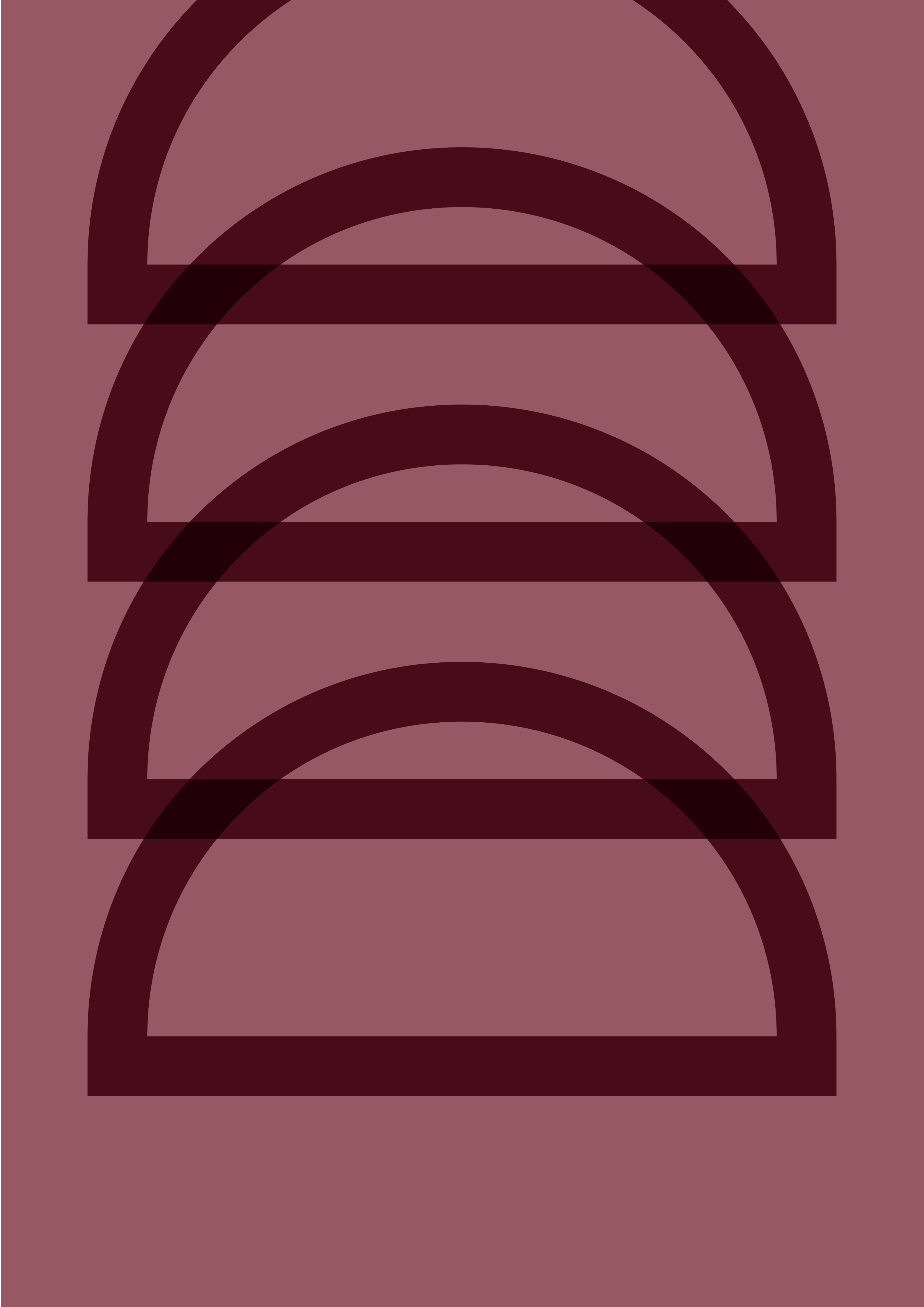
Between quarter 4 2016 and quarter 4 2017, the construction sector experienced the greatest decline in terms of numbers of persons unemployed. For both the wholesale and retail and accommodation and food sectors, unemployment rates increased for this time period.

Table 5.1 Unemployment by Sector, Quarter 4 2017

Sector	Unemployed 000s	Unemployment Rate
Agriculture	*	*
Industry	9.1	3.1%
Construction	9.5	6.7%
Wholesale/retail	18.9	5.8%
Transportation	*	*
Accomm./food	11.7	6.5%
ICT	*	*
Finance	*	*
Prof. services	*	*
Admin. service	[6.8]	[6.8%]
PAD	*	*
Education	*	*
Health	7.0	2.4%
Other	6.3	5.0%
Total	**92.1**	**4.0%**

Source: SLMRU (SOLAS) analysis of CSO data

* numbers too small to report



Section 6
Labour Market Transitions and Recent Job Hires

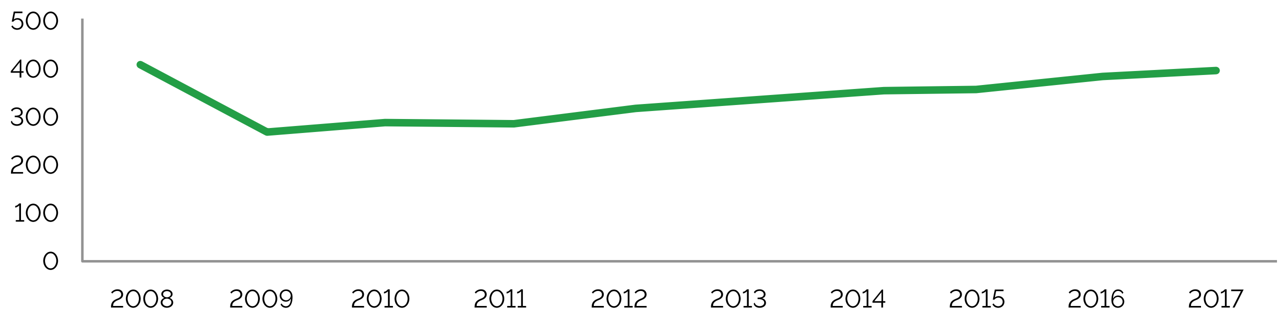
6.1 Transitions

Due to challenges arising from the introduction of the new Labour Force Survey, along with the break in series that occurred at this time (Quarter 3 2017), it has not been possible to provide an analysis of transitions in the labour market for this edition.

6.2 Recent job hires

When recent job hires for the four quarters of 2017 are combined, there were a total of 393,300 occasions of persons starting employment within the previous three months. As Figure 1 below indicates, the number of recent job hires has been increasing steadily in recent years.

Figure 6.1: Recent job hires in Ireland by year (000s)



Source: Eurostat

Key findings: of those recently hired in 2017

- 53% were male
- 65% were hired for full-time positions
- two-thirds were for those aged less than 35 years (Figure 6.2)
- in terms of education level (Figure 6.3):
  - 44% were for those with higher secondary education or less;
  - 42% held a third level qualification
  - 12% held a post-secondary qualification
- the wholesale & retail sector along with the accommodation & food sector accounted for the highest number of recent job hires (Figure 6.4)
- recent job hires were primarily in elementary, professional and sales occupations (Figure 6.5)
- the most frequently mentioned occupations included
  - catering assistants, waiters and bar staff (combined account for 11% of recent job hires)
  - sales assistants (11% of total)
  - other administrative occupations and elementary construction occupations (each accounting for a 3% share).

Figure 6.2: Recent job hires by age, 2017

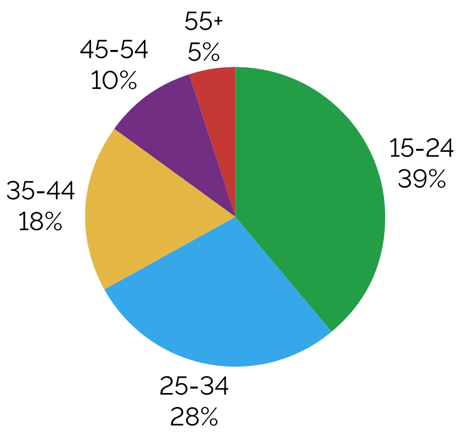
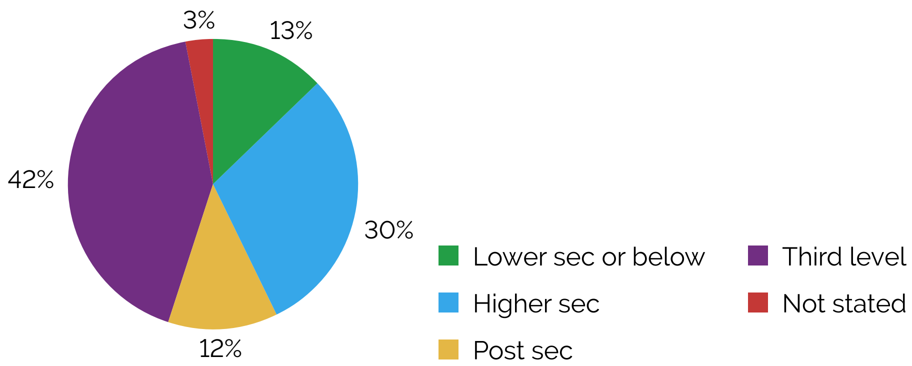
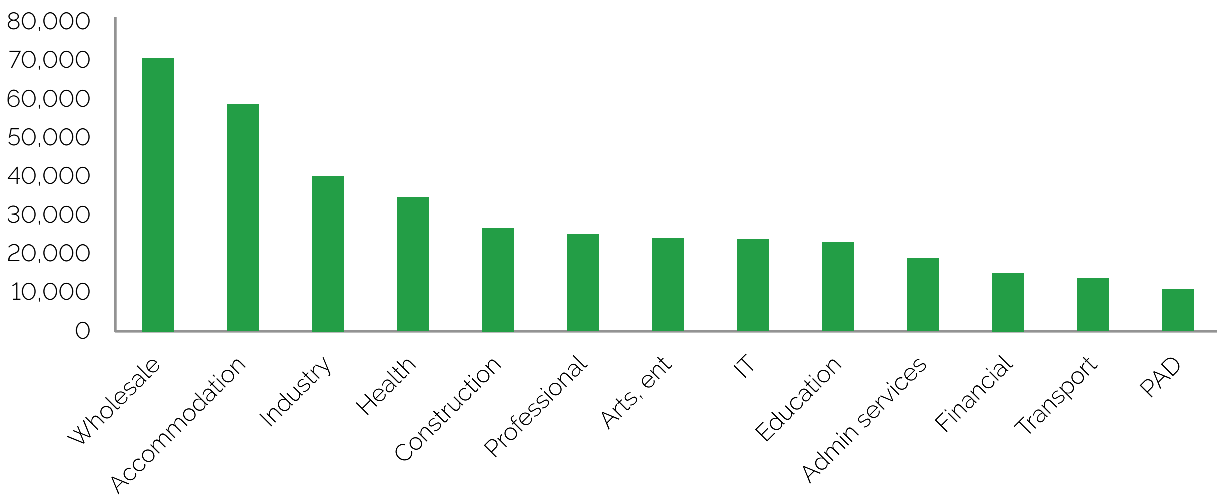


Figure 6.3 Recent job hires by education, 2017



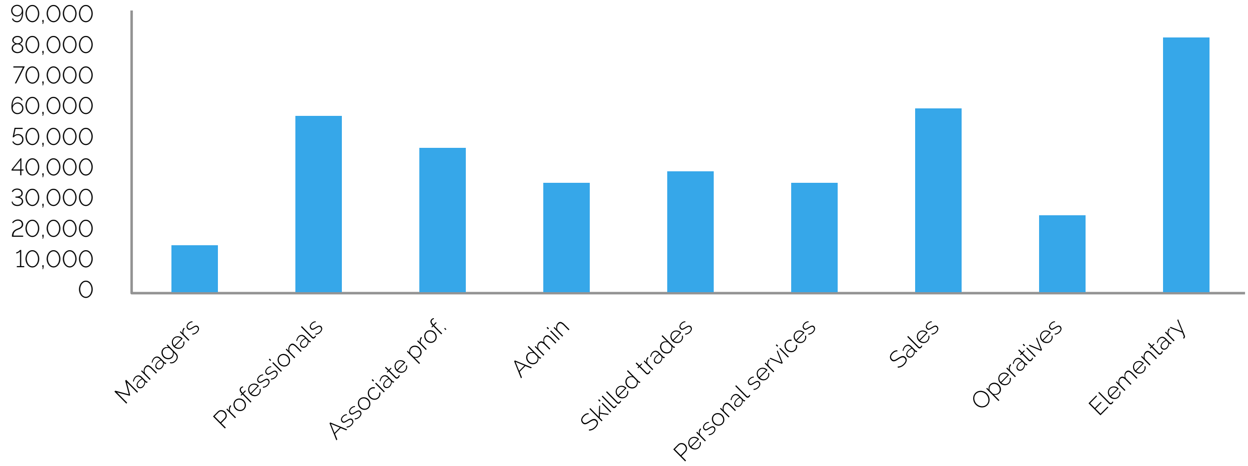
Source: SLMRU analysis of CSO LFS data

Figure 6.4: Recent job hires by sector, 2017



Source: SLMRU analysis of CSO LFS data

Figure 6.5: Recent job hires by occupation, 2017



Source: SLMRU analysis of CSO LFS data

Managers (15,000 recent job hires):

— only a 4% share of total recent hires

— 69% of new hires held a third level qualification

— managers had the oldest age profile with 60% aged 35 years and above

— at 89%, this occupational group had the highest share of new hires that were for full-time roles.

Professionals (56,800 recent job hires):

— professionals accounted for 14% of total recent hires

— almost all new hires (91%) held a third level qualification

— they were represented across all age groups, although the largest share (39%) was for those aged 25-34 years

— 86% of recent hires were for full-time positions, compared to 65% for the overall total

— employment of new hires was concentrated in education, IT, health and professional activities.

Associate professionals (45,600 recent job hires):

— associate professionals accounted for 12% of total recent hires

— two thirds held a third level qualification

— the age profile was similar to that of professionals, with the largest share for those aged 25-34 years

— 78% were for full-time roles.

Administrative (34,800 recent job hires):

— accounted for 9% of total recent hires

— almost a half (48%) held a third level qualification

— recent hires were almost equally represented across all of the age groups

— approximately three quarters of roles were full-time

— in terms of sectors, public administration and defence accounted for the highest share of new hires at 17%, followed by financial services and professional activities, each with a share of 13%.

Skilled trades (38,900 recent job hires):

- accounted for 10% of recent job hires
- 60% of recent job hires held higher secondary education or FET, with a quarter holding a third level qualification
- recent hires were almost equally represented across all of the age groups
- over three quarters (78%) of recent hires were for full-time roles
- the construction sector accounted for the highest share of recent hires at 38%, followed by accommodation and food services (relating to chefs) and industry.

Personal services (33,900 recent job hires):

- accounted for 9% of recent job hires
- 46% had attained a higher secondary/FET education, with a further third who held a third level qualification
- 62% were aged 15-34
- this occupational group had the highest share of hires for part-time positions, at 58%
- the health sector accounted for the highest share of recent hires, at 40%, (primarily care workers), followed by the arts and entertainment sector (relating primarily to hairdressers), at 23%.

Sales and customer services (59,500 recent job hires):

- at 15%, this occupational group had the second highest share of recent hires
- 59% of those hired in these occupations held a higher secondary/FET education, with a further quarter holding a third level qualification
- this group had by far the youngest age profile, with 62% aged 15-24 years
- less than half (44%) of positions were for full-time roles
- the wholesale and retail sector accounted for the majority of recent hires at 77%, with most hires relating to retail sales assistants.

Operatives (24,900 recent job hires):

- this group accounted for 6% of recent job hires
- over half of those recently hired held a higher secondary/FET education qualification
- recent hires were almost equally represented across all of the age groups
- 88% of recent hires were for full-time roles
- those recently hired were primarily employed in industry.

Elementary (81,600 recent job hires):

- at 21%, this occupational group accounted for the highest share of recent hires in 2017
- in terms of education level, 57% held a higher secondary/FET education, 24% had attained lower secondary education or less, with a further 16% having attained a third level qualification
- those employed in these occupations tended to be young, with 60% aged 15-24 years
- 55% of recent hires were for part-time roles
- the accommodation and food services sector accounted for by far the highest share of recent hires, at 53% (e.g. waiters, bar staff, kitchen assistants), with administrative services, construction, industry and wholesale and retail combined accounting for a further third.

Section 7
Employment Permits

7.1 Introduction

Unless they are exempted, a non-EEA national must hold a valid Employment Permit in order to work in Ireland. In this section we provide an overview of the extent to which employers source labour from outside the EU through an analysis of employment permit data, in order to assess where employers are having difficulty in sourcing suitably qualified candidates from the Irish and EU labour market.

An individual must have a valid job offer from a prospective Irish employer to attain an employment permit; the employer must have proved that there were no Irish or EEA nationals available to fill the post. The Employment Permit Act in 2014 introduced nine classes of employment permits as detailed below:

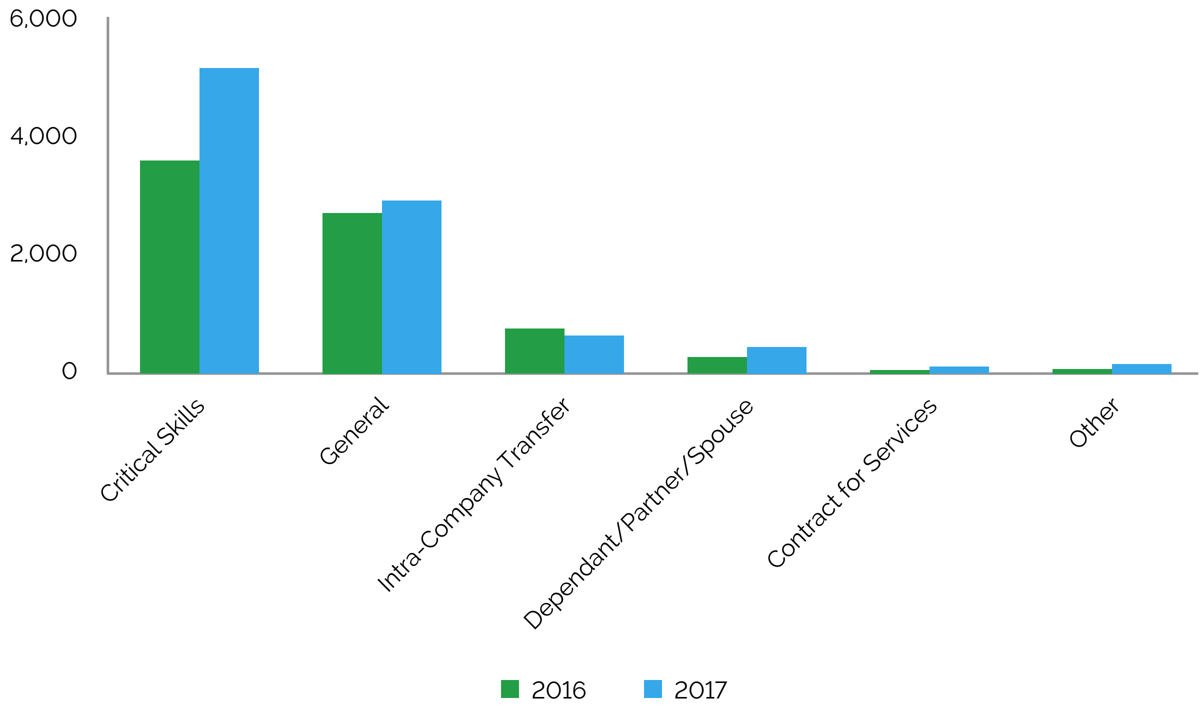
- **Critical skills:** designed to attract highly skilled people into the labour market and take up residence in the State.
- **General:** designed to attract non-EEA nationals for occupations which are experiencing a labour or skills shortage in roles that pay at least €30,000* per year.
- **Intra-company transfer:** designed to facilitate the transfer of key personnel, senior management and trainees who are non-EEA nationals from an overseas branch of a multinational corporation to its Irish branch. The annual salary of the applicant must be at least €40,000 and the person must have been with the parent company for at least 12 months prior to the application.
- **Dependent/partner/spouse:** primarily used to support the attractiveness of Ireland as a location of employment for potential and current critical skills employment permit holders and researchers, it permits the dependents, civil partners, and spouses of certain categories of employment permit holder to live in Ireland and apply for an employment permit to work in the State.
- **Contract for services:** where a foreign undertaking has won a contract to provide services to an Irish entity, this permit is designed to facilitate the transfer of non-EEA employees to work on the contract in Ireland.
- **Reactivation:** this permit is designed to facilitate foreign nationals with a valid Employment Permit to work legally again if they fell out of the system or have been badly treated or exploited in the workplace.
- **Sport and cultural:** designed for the employment of foreign nationals with the relevant qualifications, skills, experience or knowledge for the development, operation and capacity of sporting and cultural activities.
- **Internship:** facilitates the employment of foreign nationals who are full-time students, enrolled in a third level institution outside the State, for the purpose of gaining work experience.
- **Exchange agreement:** facilitates the employment of foreign nationals pursuant to prescribed agreements or other international agreements to which the State is a party.

* *some exceptions apply*

7.2 Overall Trends

The increase in economic activity and labour demand is reflected in the fact that approximately 9,400 new employment permits were issued in 2017 as employers continue to source skills from abroad; this is a 22% increase on the previous year as Ireland is seen as an attractive employment destination. New permits issued for critical skills accounted for over half (54%) of all new permits in 2017, with a further 31% for general permits and 7% for intra-company transfers. Critical skills permits accounted for the largest share of the increase in new permits issued since 2016, with a rise of 42%.

Figure 7.1 New Employment Permits by Type, 2016-2017

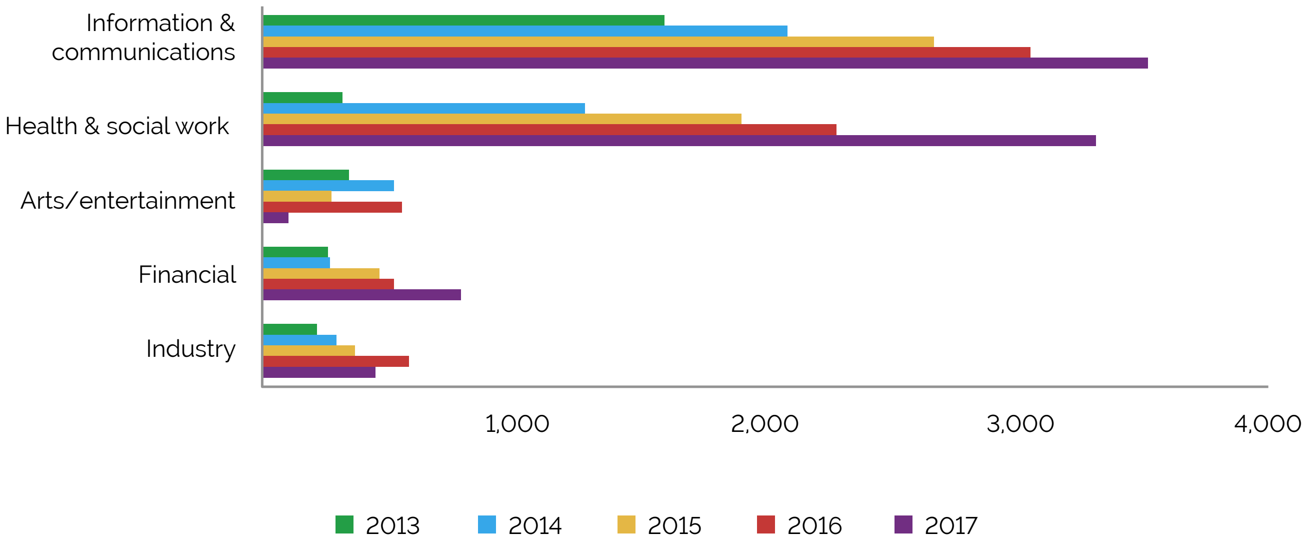


Source: DJEI

7.3 Employment Permits by Sector

Figure 7.2 illustrates a breakdown of new employment permits issued by sector. The number of permits issued has increased for most sectors in recent years, particularly in the health and ICT sectors. In 2017, the ICT sector accounted for 38% of all new permits issued with the health sector accounting for 35%.

Figure 7.2: New Employment Permits for Selected Sectors*, 2013-2017



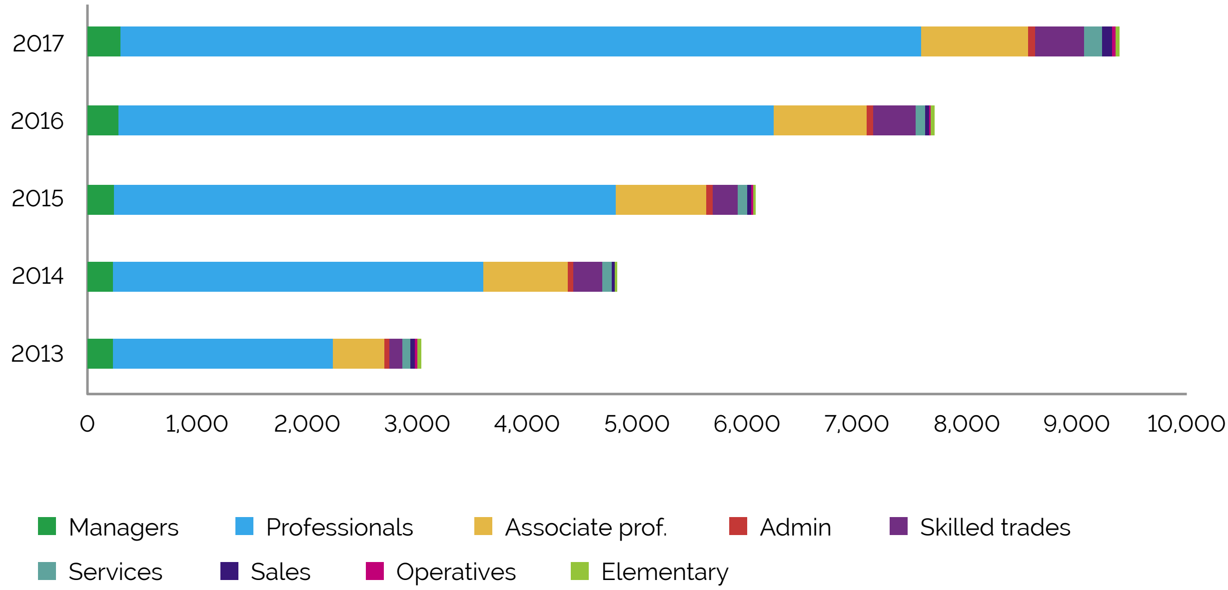
Source: DJEI

*in 2017, these five selected sectors account for 87% of all new permits issued

7.4 Employment Permits by Occupation

Professional occupations account for the majority portion of exponential growth in new permits issued between 2013 and 2017, accounting for 82% of the increase over the period (Figure 7.3).

Figure 7.3 New Employment Permits by Broad Occupation, 2013-2017

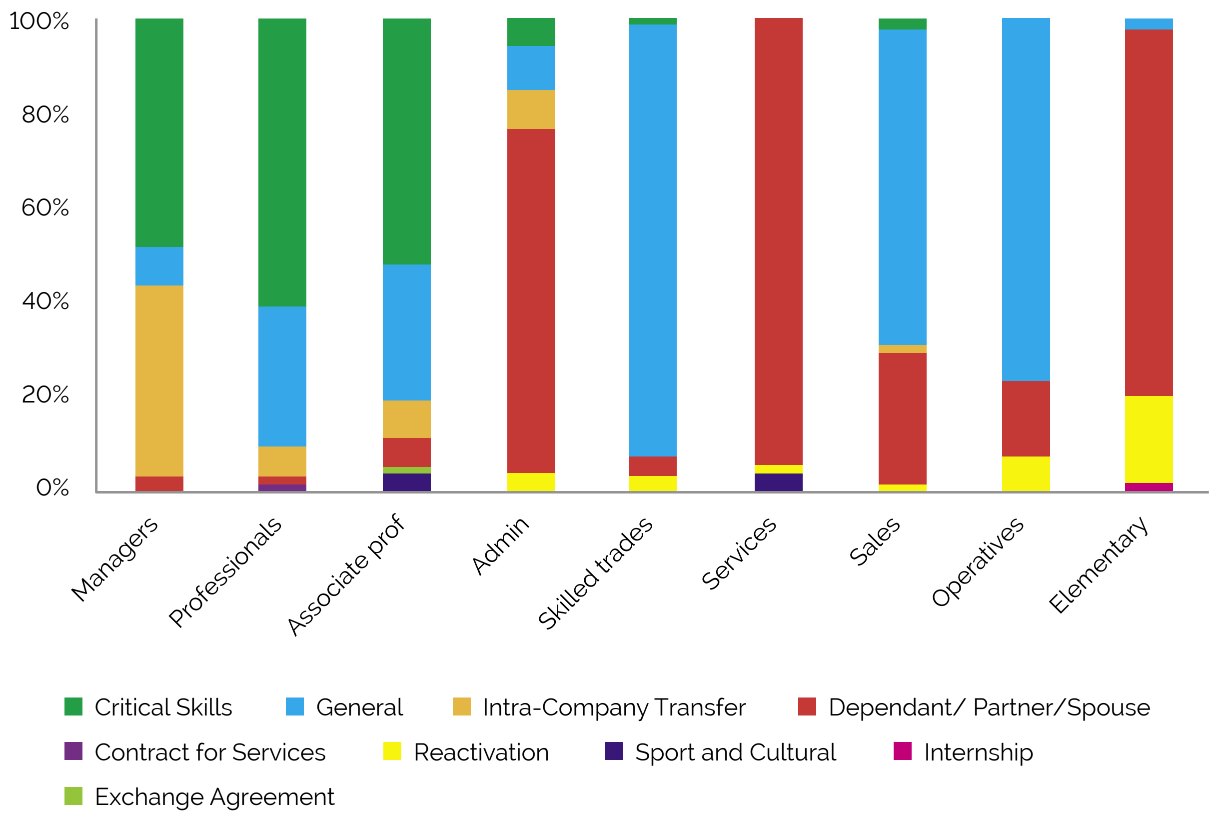


Source: DJEI

The type of permit issued varies across occupational group (Figure 7.4). The overall share of critical skills permits issued increased by 8% in 2017, this increase occurred mostly within the professional occupations.

Over 50% of the new permits issued for managers, professionals and associate professionals were critical skills permits; the majority issued for skilled trades were general permits, while the majority of services permits issued were for dependents/spouse permits.

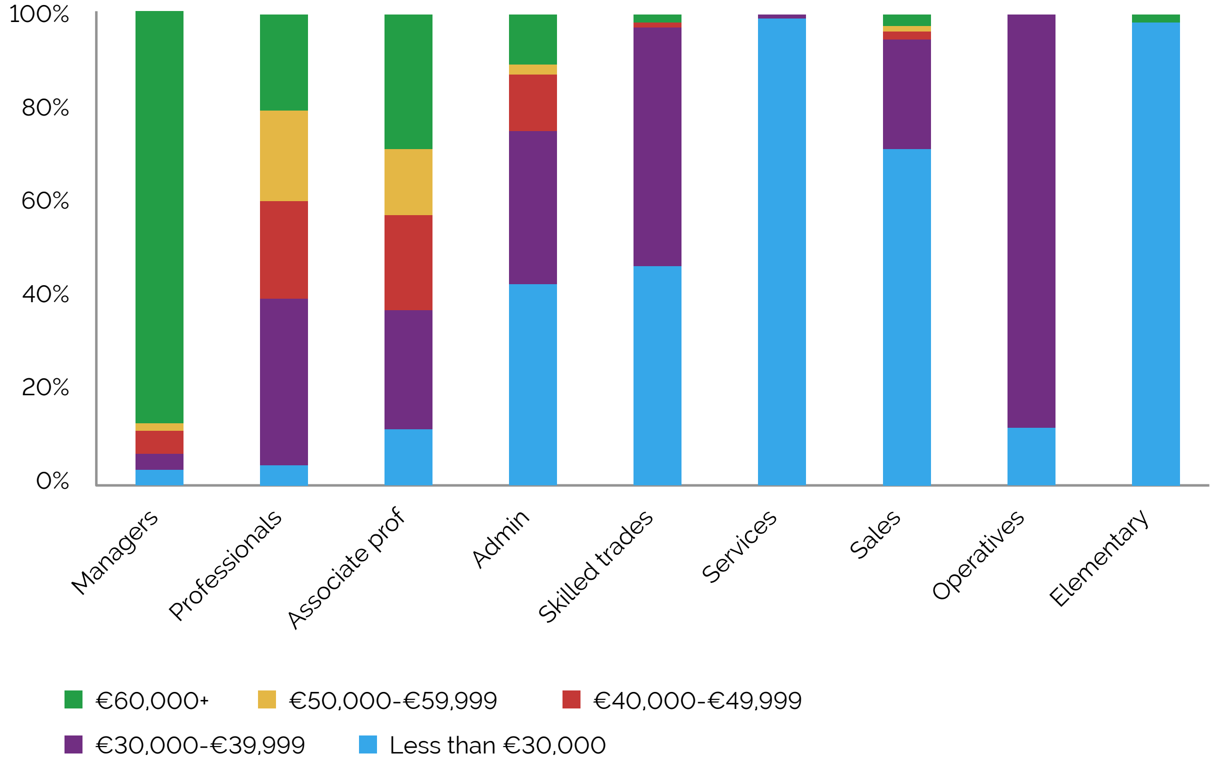
Figure 7.4 New Employment Permits by Permit Type, 2017



Source: DJEI

Most permits issued for managers had a salary of €60,000+; 40% of professionals had a salary of €50,000 +. Almost all in services and elementary had a salary of less than €30,000 but the numbers were small and mostly related to dependants and spouse permits.

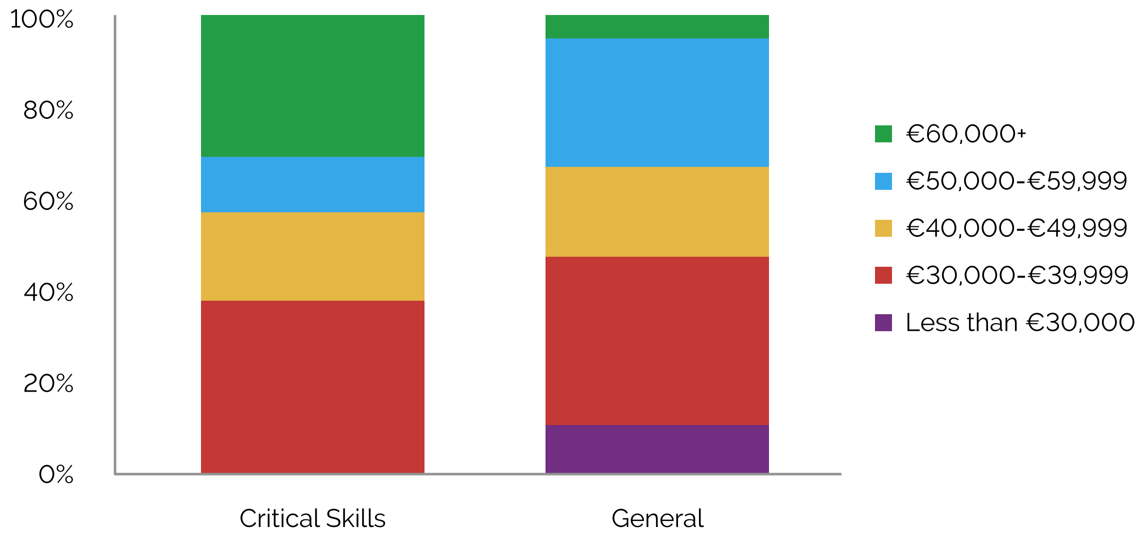
Figure 7.5 New Employment Permits by Salary, 2017



Source: DJEI

Of the critical skills permits salaries, €30,000-€39,999 had the highest share at 37%, €60,000+ had the second highest share at 31%, and a salary of €40,000-€49,999 had a 18% share. Of the general permits those with a salary of €30,000-€39,999 had a share of 37%, the next highest share was 28% for those with a salary of €50,000-€59,999. €40,000-€49,999 had a share of 19% and a salary of less than €30,000 had a share of 10%.

Figure 7.6 New Employment Permits type by Salary, 2017



Source: DJEI

Managers

- **Overall:** new employment permits for managerial positions accounted for 3% of all permits issued in 2017
- **Type:** critical skills accounted for almost a half (49%) of the new permits issued for this occupation with a further 39% for intra-company transfers
- **Salary:** 89% of new permits issued had a salary of €50,000 or more, by far the occupation with the largest share of permits offering salaries at this level
- **Sector:** employment permits were primarily issued for positions in IT (34%), financial services (23%) and industry (16%)
- **Nationality:** almost half (47%) of all permits issued for managers were for those originating from the USA
- **Occupations:** new employment permits were most frequently issued for:
  - vice presidents/CEOs/CFOs and directors in financial and legal services.
  - directors in marketing and business process
  - directors in IT
  - directors and managers in manufacturing
  - HR/operations managers.

Professionals

- **Overall:** new employment permits for professionals accounted for over three quarters (77%) of total permits issued in 2017
- **Type:** permits were primarily related to critical skills (61%) and general permits (29%)
- **Salary:** Over half (56%) of new permits issued were for a salary of between €30,000-49,999 with a further 40% with a salary of €50,000 or more
- **Sector:** permits were mainly issued for positions in IT (43%) and the health sector (39%)
- **Nationality:** a half of all new permits for professionals were issued to persons from India, the Philippines and Pakistan
- **Occupations:** new employment permits were most frequently issued for:
  - IT: software engineers/developers, network engineers, IT business analysts, test (analysts, engineers), architects (software, systems, technical, solutions), UX/UI designers, systems engineers
  - health: medical doctors (senior house officers, registrars (primarily general but also in emergency medicine, orthopaedics and anaesthetics), nurses, radiographers
  - financial: accountants, auditors, financial/risk analysts, business intelligence consultants
  - industry: engineers (e.g. process & equipment, automation, electrical, design, service, quality control), scientists (data, chemists, medical laboratory, physicists).

Associate Professionals & Technical

- **Overall:** new employment permits for associate professionals accounted for 10% of total permits issued in 2017
- **Type:** at 52%, critical skills permits accounted for the highest share of new permits issued followed by general employment permits, at 29%
- **Salary:** 37% of new permits issued had a salary of less than €40,000
- **Sector:** a half of new permits issued were for the IT sector, with a further 8% for arts, entertainment and sport, and 11% in financial services
- **Nationality:** persons from India and the USA accounted for almost a third of all new permits issued for this occupational group
- **Occupations:**
  - sales & marketing: primarily account strategists/managers (with languages) but also market specialists, business development/acquisition and online sales managers, inside sales reps and sales executives with languages
  - financial/risk analysts, auditors, account managers
  - IT: technical support

- graphic designers
- sports professionals.

Administrative and Secretarial

— **Overall:** with 52 permits, administrative positions accounted for less than 1% of total new permits issued in 2017

— **Type:** permits for this occupational group were primarily for dependents/partner/ spouses

— **Salary:** three quarters of new permits issued had a salary of less than €40,000

— **Sector:** new permits were primarily in financial services and IT sectors

— **Occupations:** financial and general administration.

Skilled trades

— **Overall:** new employment permits issued for those in skilled trades accounted for 5% of total permits issued in 2017

— **Type:** most (90%) of new permits issued were general employment permits

— **Salary:** the majority of permits issued were for employment with a salary of less than €40,000

— **Sector:** almost a half (49%) of all new permits issued were for the accommodation and food services sector, with a further 37% in agriculture

— **Occupations:** new permits were most frequently issued for:

- chefs: a half of new permits issued for skilled trades was for chefs, many in ethnic cuisine and also for head chefs
- butchers/boners (with relevant experience considered a requirement rather than a specific educational attainment)
- field service engineers.

Caring, Leisure and Other Services

— **Overall:** new permits issued for those in caring occupations accounted for 2% of total permits in 2017

— **Type:** the majority (94%) of permits issued for this occupational group were issued for dependant/partner/ spouses

— **Salary:** over 98% of new permits issued had a salary of less than €30,000

— **Occupations:** permits were most frequently issued for healthcare assistants.

Sales and Customer Services

— **Overall:** new employment permits issued for those in sales related occupations accounted for 1% of total permits issued in 2017; permits were most frequently issued for customer service occupations within the general employment permits.

Operatives

— **Overall:** at 25 permits issued, new employment permits for operatives accounted for 0.3% of total permits issued in 2017.

Elementary Occupations

— **Overall:** at 38 permits issued, new employment permits for elementary occupations accounted for 0.4% of total permits issued in 2017.

Section 8
Vacancies

A vacancy notification can occur for a number of reasons, whether it is due to a new role created or replacing someone who has left the position. Therefore, the Vacancy Overview 2017 report provides a detailed analysis of the nature of the vacancies occurring before analysing the type of vacancies that are occurring in the Irish labour market. This includes examining employment growth (Sections 3 and 4), transitions and recent job hires (Section 6). This section provides a summary of the main findings from the Vacancy Overview report. The vacancy analysis consists of two sources, namely:

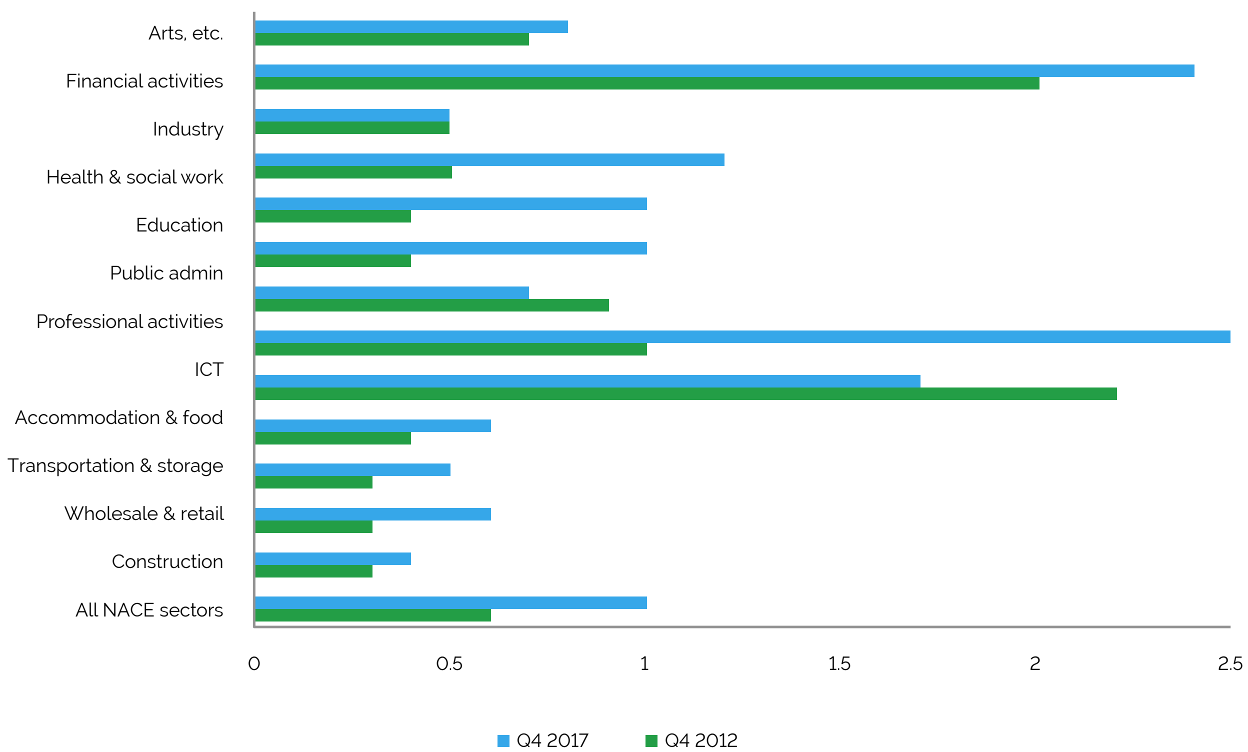
- Public Employment Service (PES) vacancy data (from Department of Employment Affairs and Social Protection's vacancy portal Jobs Ireland)
- Private recruitment agency (IrishJobs.ie).

An analysis of the vacancy rates by sector, as reported on a quarterly basis by the CSO, is also included.

8.1 CSO vacancy rates

The job vacancy rate, as detailed in the CSO Earnings, Hours and Employment Costs Survey (EHECS), measures the proportion of total posts that are vacant as a proportion of total occupied posts combined with job vacancies. In quarter 4 2017, the overall vacancy rate stood at 1%. Figure 8.1 presents the vacancy rates by sector; the highest rate in quarter 4 2017, was recorded for the professional activities sector at 2.5%. This sector also experienced the largest gain since quarter 4 2012. The lowest vacancy rates were recorded for the construction, industry and transportation and storage sectors, at between 0.4% and 0.5% in quarter 4 2017.

Figure 8.1: CSO Vacancy Rate by Sector, Quarter 4 2012 and Quarter 4 2017

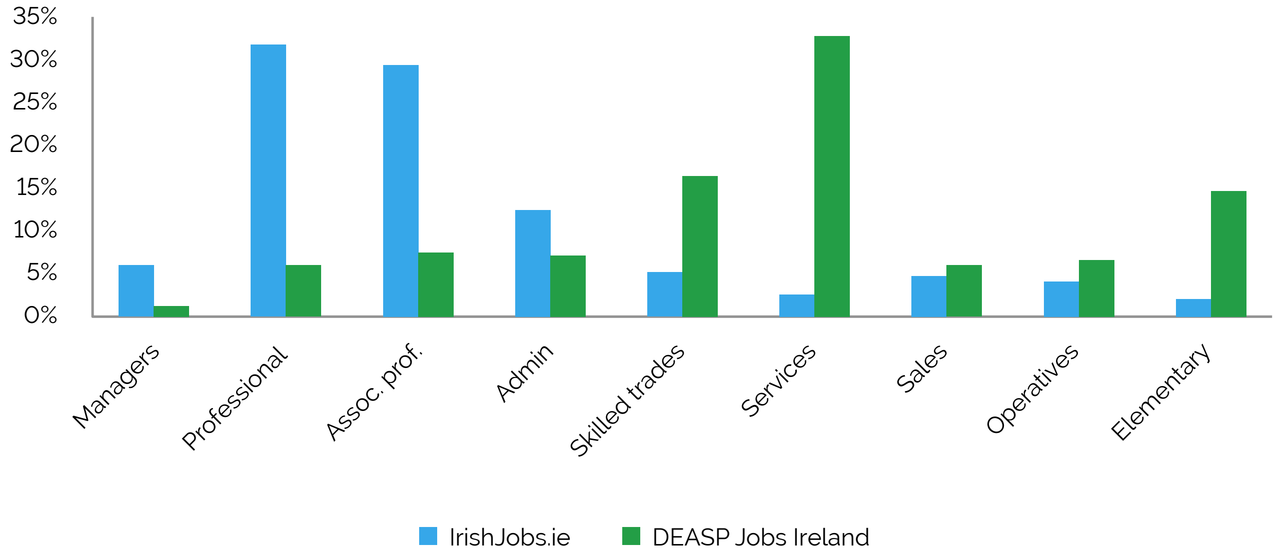


Source: CSO EHECS

8.2 Vacancies by Occupation

In 2017, vacancies advertised through IrishJobs.ie were mostly concentrated in professional and associate professional occupations (Figure 8.2). Newly advertised vacancies through DEASP Jobs Ireland were concentrated in personal services, skilled trades, and elementary occupations.

Figure 8.2 Vacancies by Occupational Group (%), 2017



Source: IrishJobs.ie and DEASP Jobs Ireland

Table 8.1: Summary of main job titles notified through DEASP Jobs Ireland/IrishJobs.ie, 2017

	DEASP Jobs Ireland	IrishJobs.ie
Managers	— Restaurant, retail and hotel managers, construction site managers (overseas)	— Production, operations, technical, financial, HR, and supply chain/logistics
	— Nurses (staff, registered, clinical nurse managers), doctors	— Retail/store, sales and marketing
Professionals	— Higher education lecturers (across all disciplines), English language teachers	— Software engineers/developers (with java, .NET, Oracle/SQL)
	— Software engineers/developers, programmers, web designers	— Other IT (systems analysts/engineers, technical architects, test/network/security engineers, IT project managers)
	— Engineers: including quality, process and design; many vacancies for construction professionals (site/structural/project engineers, quantity surveyors) were for positions overseas	— Engineering: quality, process, project, manufacturing, design, regulatory affairs — Science: microbiologists, QC chemists, scientists (process, analytical, development, medical)
	— Accountants (mainly financial but also management), business analysts	— Construction: quantity surveyors, project managers
		— Business: business/risk analysts, business intelligence, project managers
		— Finance – risk analysts, compliance/regulatory reporting and financial accountants
		— Nurses (staff, clinical nurses, theatre and to a lesser extent, oncology, emergency)
		— Medical practitioners (registrars, SHOs, orthopaedic), radiographers, pharmacists, medical scientists, social workers, physiotherapists, psychologists, dieticians, cardiac physiologists
Associate professionals	— Sales and marketing (inside/field sales executives, business development/ marketing executives, account managers), with languages	— Business/financial: analysts (business, financial, data, compliance, risk), tax managers, audit manager, claims officers (with languages), underwriters, tax advisors/managers, transfer agents
	— IT technical support (with languages)	— Sales and marketing: product/brand management, marketing executive, business development, sales managers, inside sales (with languages), account managers
	— Technicians: electronic/electrical, quality, CAD technicians/kitchen designers	— Buyers, supply chain planners, procurement officers, logistics specialists
	— Recruitment consultants, fundraisers, interpreters, graphic designers, accounting technicians	— HR generalists, advisors, recruitment coordinators, health and safety officers
	— Other: Massage therapists, fitness instructors, health & safety officers	— IT technicians – tech support (with language skills), administrators (systems, database) — Other technicians: laboratory, engineering (process, manufacturing, quality), CAD, field service, pharmacy
Administrative	— Administrators (office, sales/marketing, financial), receptionists (including hotel), personal assistants	— Financial - fund accountants, accounts payable/ receivable, payroll, credit controllers, pensions, claims handlers, banking administrators
	— Accounts assistants/bookkeepers, payroll administrators, credit controllers	— General administrators, receptionists, executive/ personal assistants, document controllers, HR, sales and marketing admin, medical secretaries
	— Stocktakers (mostly part-time)	— Logistics/transport co-ordinators, planners (warehouse/materials), purchasing admin

Skilled trades	— Chefs: head chefs, sous, chef de partie and commis; also ethnic chefs, mainly Indian, Chinese and Thai	— Engineer: validation, C&Q (commissioning & qualification), CSV, IT security, HVAC, mechanical, electrical, EHS
	— Butchers (retail/food processing), boners/ trimmers / slaughtermen	— Maintenance technicians/fitters, toolmakers, calibration technicians, HGV mechanic
	— Electricians: including commercial, industrial and field service technicians,	— Chefs (e.g. head and sous), catering managers
	— Mechanics (car, HGV), panel beaters, spray painters	— Construction site supervisor
	— Carpenters (including shuttering), plumbers, bricklayers, painters/decorators	
	— Welders (MIG/TIG), steel fabricators/ erectors, fitters (mechanical, maintenance), CNC programmers/ operators, cabinet makers, bakers, toolmakers	
Personal services	— Care workers (relates to both those providing care in the home and in nursing homes), healthcare assistants	— Care workers, healthcare assistants
	— Childcare workers	
	— Other personal services: hairdressers/ barbers, beauty therapists, nail technicians, housekeepers	
Sales & customer service	— Sales assistants (retail (e.g. convenience stores, petrol stations, supermarkets), counter, including deli and pharmacy)	— Customer service representatives and collections agents (with languages); call/contact centre agents
	— Telesales, customer services representatives (with languages)	— Retail sales assistants, telesales advisors
	— Merchandisers, mystery shoppers	
Operatives	— Production operatives (including food)	— Manufacturing, process, production, drivers
	— Drivers: artic, HGV, rigid, machine drivers/ operators, forklift	— Drivers
	— Other drivers: delivery, van, bus and coach drivers	
	— Other operatives: scaffolders (both basic and advanced), tyre fitters	
Elementary	— Security guards (door supervisors, event, retail and static security)	— Warehouse operatives, general operatives (maintenance/manufacturing),
	— Cleaners, accommodation assistants	— Kitchen and catering assistants.
	— Catering assistants, kitchen porters, waiting staff, bar persons, baristas	— Security guards, cleaners
	— Warehouse operatives, general operatives, construction labourers, farm labourers, car valetors	

Source: DEASP Jobs Ireland/IrishJobs.ie

8.3 Recruitment Agency Survey (April 2018)

Professional occupations accounted for three quarters of all difficult to fill mentions in April 2018.

Table 8.2: Summary of main job titles identified as difficult to fill, April 2018

Managers	— Purchasing managers - senior buyers
	— Supply chain specialists especially senior planners (supply chain management including demand forecasting) and distribution specialists with technical expertise (biopharma)
	— Project managers/directors in construction with relevant experience and specialist knowledge
	— IT project managers including IT and business processes solutions/change management
	— Production managers - director of quality (MedTech/biopharma)
	— Business processes change managers (IT and business processes)
	— Hotel/accommodation sales managers
	— Restaurant managers
Professionals	— Database architects/engineers (e.g. data centre/data warehouse engineer and integration developers (e.g. ORACLE, SQL MySQL, Infobright, Infini DB, DB & enterprise web development, DB data modeller for fintech)
	— Programmers & software developers (especially UX/UI designers and back-end developers with infrastructure/DB and server expertise)
	— IT system analyst, Internet protocol/networks engineer, cyber security analyst
	— DevOps developers interdependence of software dev. and IT operations for FinTech); Cloud developers/ SaaS developers
	— IT and telecom integration; mobile telephony applications (iOS and androids)
	— IT managers (especially system migration with niche skills (e.g. Waterfall and Agile)
	— IT QA & software testing
	— Engineering - process, project, design (including R&D), quality control/quality assurance (including standards, compliance and regulatory affairs, mostly EHS compliance), automation (including lean processes), validation/computer validation system (CVS), CQE certification; chemical engineers; electrical engineers (safety, tech. specification, mechatronics - development & integration of mechanical, electrical & software systems; power generation & transmission)
	— Data analytics (e.g. DB mining, statistics) and business intelligence analytics (including BI solutions, ETL design, Data as an Enterprise asset/ERP, big data, data visualisation, etc.); data scientists
	— Business & finance – business intelligence and risk analysts, actuaries, financial and management accountants with expertise in solvency, taxation, IFSR relevant skills including regulatory compliance; fund accountants with client relationship management expertise; accountants for roles in industry with ERP System and reporting tools, as well as language skills
	— Quantity surveyors, building services/structural/ site engineers
	— Nurses (ANP in intensive care/theatre, clinical nursing management, RGN, elderly care nursing)
	— Medical practitioners (especially NCHDs/registrars/locums, emergency medicine, psychiatrist, oncology, orthopaedic, CT/MRI radiographers)
	— Scientists - chemists/analytical scientists (esp. product formulation, and analytical development for roles in biopharma); quality control analyst including pharma co-vigilance roles
Associate professionals	— Sales and marketing: product/brand management, technical sales (e.g. software B2B) business development, vendor managers/CRM
	— Supply chain analysts (demand planning & forecasting, ERP)
	— HR recruitment consultants with specialist knowledge
	— IT technicians: tech support (with language skills, especially German, Nordic and French), administrators (database, cloud support), troubleshooting & quality evaluation; validation and C&Q (commissioning & qualification) technicians/engineers
	— Other technicians: quality assurance/control, process (e.g. injection moulding/polymer engineering)
	— Financial – assistant accountant, marketing and sales executives (e.g. FMCG business development)

Administrative	— Admin secretaries, receptionists
	— Business/financial: accounts payable/payroll managers, accounts clerks, credit and collections agent, claims officers (with languages), fund/trustee supervisor
	— Procurement/supply chain/logistics administrative roles (with languages)
Skilled trades	— Welders – TIG, MIG, ARC
	— Construction craft: scaffolders, steel erectors/ fixers, electricians, curtain waller (outer covering of buildings), shift managers/supervisors in construction, carpenters (niche – shuttering)
	— Chefs
	— Butcher/deboner
	— Toolmakers (CNC programming, solidworks & CAD/CAM)
	— HVAC engineer
	— Electricians
Personal services	— Carers - homecare roles/nursing home care roles
Sales & customer service	— Telesales/telemarketing (multilingual, especially German, Nordic, Dutch)
	— Junior Lead Generation roles (including outgoing cold calling and DB updates)
	— Customer service/care/representative and collections specialists (with languages)
Operatives	— Drivers: artic, HGV (E+,CI licence), forklift drivers (e.g. with VNA and/or turret license, Reach Truck)
	— Manufacturing, process, production (in high tech manufacturing/Medtech)

Source: Recruitment Agency Survey, April 2018

Section 9
Occupational Employment Profiles

This section provides a statistical analysis of employment at occupational level. Employment profiles are provided for over 95 occupations[26]. The occupations were based on the Standard Occupational Classification (SOC) 2010; in cases where estimated employment was too small to report for statistical reasons, two or more occupations were merged. All of the occupations were then grouped into 16 occupational groups. In general, occupations that are associated with the same sector of employment or occupations with similar duties were grouped together. The occupational groups are as follows:

- science and engineering occupations
- ICT occupations
- business and financial occupations
- healthcare occupations
- education occupations
- social and care occupations
- legal and security occupations
- construction occupations
- other craft occupations
- agriculture and animal care occupations
- hospitality occupations
- arts, sports and tourism occupations
- transport and logistics occupations
- administrative and secretarial occupations
- sales, marketing and customer service occupations
- operative and elementary occupations (labourers).

For each of the occupations, an analysis was conducted using the following indicators:

- **Employment:** An annual average of employment figures over the four quarters in 2017.
- **Females:** The percentage of females employed in an occupation (based on quarter 4 2017 data from the LFS).
- **Full-time:** The percentage of persons who work full-time in an occupation (based on quarter 4 2017 data from the LFS).
- **Unemployment rate:** The unemployment rate is calculated by dividing the number of unemployed persons aged 15 to 74 in the occupation by the sum of the number of employed and unemployed persons aged 15 to 74 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. This indicator was only reported in a small number of occupations as the data was too small to report in most instances. (Based on quarter 4 2017 data from the LFS).
- **Aged 55 years and over:** A higher than average share of persons aged 55 years and over indicates a higher expected retirement rate in the short to medium-term (based on quarter 4 2017 data from the LFS).
- **Non-Irish nationals:** A higher than average proportion of non-Irish nationals in an occupation indicates employers' reliance on sourcing skills/labour from abroad to fill vacancies (based on quarter 4 2017 data from the LFS).
- **Third level qualifications:** The percentage of persons who have attained a third level qualification (based on quarter 4 2017 data from the LFS).

26 The number of occupations analysed has been reduced from over 130 in previous editions of the Bulletin due to stricter reporting restrictions introduced in the Labour Force Survey. Appendix B details the new categorisation of occupations.

- **Employment growth:** The annualised rate of employment growth for the period 2012-2017.
- **Employment permits:** issued to non-EEA nationals in 2017. This is an indicator of the demand for skills that could not be met from domestic or EEA sources. (based on 2017 data from the Department of Business, Enterprise and Innovation).
- **Recruitment Agency Survey:** presents the results of the SLMRU (SOLAS) Recruitment Agency Survey conducted in April 2018. The occupations with mentions of difficult-to-fill vacancies reported by recruitment agencies are indicated by an 'X'.

In addition to these demand indicators, the supply of skills was approximated using the expected output from the formal education and training system. 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). Also, 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. It should be noted that it is possible that individuals do not work in the occupations for which they are educated/trained. In addition, estimates of supply also included job ready job seekers.

By comparing estimates of demand and supply, an indication of potential shortage was derived.

Shortages were defined using the following categories:

● – for occupations for which there are no shortages

● – where there is 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 and/or where there is an insufficient number of individuals available to take up employment opportunities in a particular occupation

● – indicates that there is no overall current shortage, but some issues (e.g. geographical mobility, high turnover), or potential future shortages, have been identified.

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.

Where possible, a distinction is made between 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 skill, 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 results also indicate the specific job titles within the occupation that are experiencing shortages because the shortages, in most cases, do not relate to all of the job titles linked to an occupation. For example, shortages for business sales executives relate to those employed as account strategists and inside sales representatives and are primarily for job roles in the IT sector.

The purpose of this bulletin is solely to identify occupations for which shortages exist, without quantifying them. The identification of the cause and magnitude of these shortages and the appropriate (if any) policy response requires further research. The EGFSN's research programme includes a number of such studies.

9.1 Science & Engineering Occupations

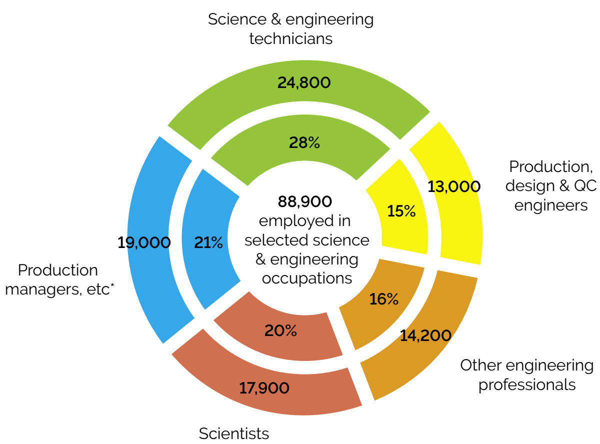
Overall employment: Approximately 88,900 persons (67% male) were employed in the selected science & engineering occupations, representing 4.1% of the national workforce

- **Sector:** 51% of overall employment was concentrated in industry, followed by 15% in professional service activities
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 22,500 (6.0%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for production managers in manufacturing (9.5%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 83%. The share of employees aged 55 and over was 12%, below the national average of 17%
- **Education:** The share of persons employed in the selected science & engineering occupations who had attained higher secondary/FET qualifications was 15%, well below the national average share of 36%. Those who had attained third level qualifications (80%) was significantly above the national average share (48%)
- **Full-time/part-time:** Over 95% of science & engineering workers were in full-time employment
- **Nationality:** The share of non-Irish workers was slightly below the national average of 15%, while 86% of workers were Irish nationals

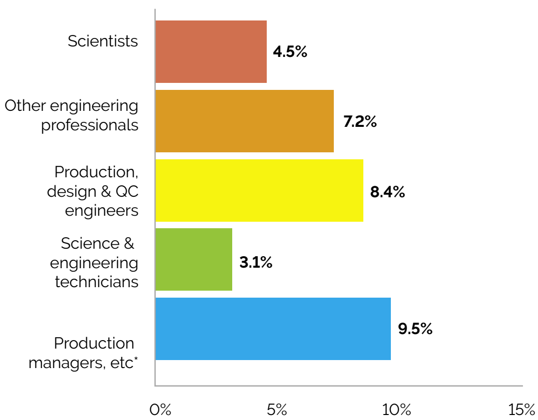
Overall outlook for these occupations:

The demand for those with science and engineering skills is not confined to these occupations. While output from science and engineering disciplines in the education system has been growing, in the main, in recent years, these graduates are in strong demand across a variety of occupations (e.g. education, finance, public administration etc.). Specialist skills for certain science and engineering roles require extensive experience and although small in number are required nationwide. Demand for those working in science and engineering occupations is driven chiefly by high-tech and related industries.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 22,500 (6%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation shortage details
Scientists	While the supply of graduates appears to be sufficient to meet the annual recruitment requirement (5,500 graduates in 2017), the demand is arising for roles for those with a high level of experience and/or in niche areas. The demand is for a small number of people given the relatively small size of this occupation (approx. 1% of total employment) and in the areas associated with pharmaceuticals, biopharma and food development.	● Niche	— Chemists — Biochemists
Other engineering professionals	Employment growth in this occupational group, which includes mechanical, electrical and electronic engineers, was above average. Employers are frequently citing these occupations as difficult to fill although the demand is likely to be small in number given the size of the employment stock. While the supply from the education system appears to be growing, demand is mostly for roles requiring sector-specific experience (e.g. medium-high, high-tech and food/beverage manufacturing).	● Niche Experience	— Electrical — Chemical — Automation — Validation — Mechanical
Production, design & QC engineers	Employers are frequently citing these occupations as difficult to fill although the demand is likely to be small in number given the size of the employment stock. Demand is mostly for roles requiring sector-specific experience (e.g. medium-high, high-tech and food/beverage manufacturing).	● Experience	— Process — Quality control — Design
Science & engineering technicians	Employment growth was at the national average; opportunities for technicians are likely to be due to replacement requirements rather than growth. The demand is largely for roles in high tech manufacturing especially for those with experience. Three new apprenticeships in this area will help to address identified skills shortages.	●	— Quality control — Process (injection moulding/polymer) — Maintenance — Extrusion
Production managers in manufacturing	While no shortages have been identified in this area, strong employment growth would indicate job opportunities exist for experienced personnel.	●	

*For detailed table see Appendix A

9.2 ICT Occupations

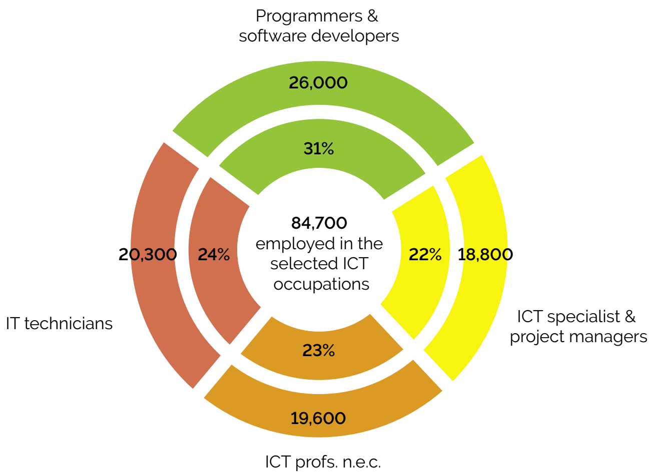
Overall employment: Approximately 84,700 persons (77% male) were employed in the selected ICT occupations, representing 3.9% of the national workforce

- **Sector:** 60% of overall employment was concentrated in the IT sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 20,000 (5.5%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for IT technicians (8.8%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 88%. The share of employees aged 55 and over was 5%, well below the national average of 17%
- **Education:** The share of persons employed in the selected ICT occupations who had attained higher secondary/FET qualifications was 11%, significantly below the national average share of 36%. Those who had attained third level qualifications (86%) was significantly above the national average share (48%)
- **Full-time/part-time:** Over 95% of ICT workers were in full-time employment
- **Nationality:** The share of non-Irish workers was well above the national average of 15%, while 72% of workers were Irish nationals

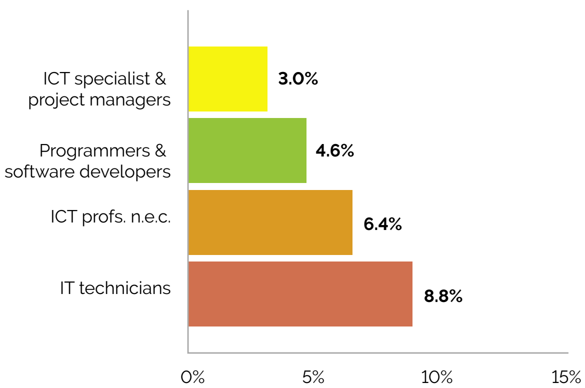
Overall outlook for this occupational group:

The demand for ICT skills is a global phenomenon with skills required across an increasing number of sectors. Although the Irish education and training system appears to be producing a sufficient supply of IT graduates to meet replacement and expansion demand, the evolving nature of the skillsets and the international competition for these skills is resulting in shortages. A high level of experience is also a significant feature in the demand for skills.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 20,000 (5.5%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Occupation	Economic summary	Shortage	Occupation shortage details
ICT specialist & project managers	Employment growth in this occupation is in line with the national average. Demand relates primarily to those with a third level qualification, with experience a key contributory factor in emerging shortages.	●	— IT project managers
Programmers & software developers	The labour market indicators examined point to an occupation in high demand with strong employment growth and evidence that employers are having difficulties filling vacancies. However, there were over 5,000 recent hires recorded in 2017, indicating that turnover is a significant factor for this occupation. The type of specific areas in demand is detailed in the Recruitment Agency Survey analysis on Page 62.	●	— Software developers/ engineers
ICT profs. n.e.c.	As for programmers, the labour market indicators examined point to an occupation in high demand with strong employment growth and evidence that employers are having difficulties filling vacancies.	●	— Web developers — IT architects (systems, solutions, technical) — Test/ systems/ network/ security engineers
IT technicians	This occupation had the highest rate of employment growth amongst the IT occupations. Only two-thirds of those employed were Irish, most likely related to the language requirements for a large number of these roles.	● Language skills	— Technical support — Systems/database administrators

**For detailed table see Appendix A*

9.3 Business & Financial Occupations

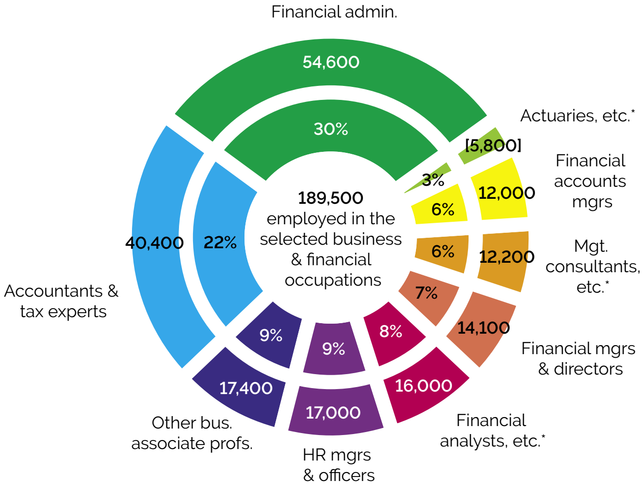
Overall employment: Approximately 189,500 persons (57% female) were employed in the selected business & financial occupations, representing 8.6% of the national workforce

- **Sector:** 35% of overall employment was concentrated in the financial sector, with a further fifth in the professional services sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 27,800 (3.2%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for other business associate professionals (10.1%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 81%. The share of employees aged 55 and over was 13%, below the national average of 17%
- **Education:** The share of persons employed in the selected business & financial occupations who had attained higher secondary/FET qualifications was 18%, well below the national average share of 36%. Those who had attained third level qualifications (78%) was significantly above the national average share (48%)
- **Full-time/part-time:** Over 86% of business & financial workers were in full-time employment
- **Nationality:** The share of non-Irish workers was below the national average of 15%, while 88% of workers were Irish nationals

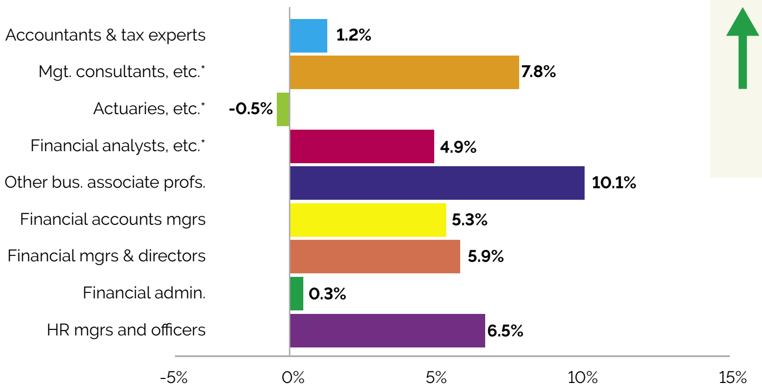
Overall outlook for these occupations:

The future demand for business and financial skills is likely to be affected by the impact of Brexit. Numerous financial services firms have applied for authorisations to operate in Ireland; should these companies relocate from the UK to Ireland, demand will increase for medium and high skilled persons to work in the financial sector. On the other hand, the demand for business skills may be negatively affected by exposure to a decrease in demand for exports of goods and services to the UK.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 27,800 (3.2%) on average annually (compared to 3.1% nationally)

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below
Numbers in square brackets are small and should be treated with caution

Occupation	Economic summary	Shortage	Occupation shortage details
Accountants & tax experts	Employment growth was low for this occupation, and, indeed, declined in the most recent year[27]. Although they feature in the vacancy data, the recent job hires analysis indicates that churn is a significant factor in these openings. Declines in employment levels are expected to continue as some tasks become automated, although replacement demand for such a large occupation will continue to translate into job opportunities.	Niche Industry specific experience	— Accountants with experience in legislation, regulation and compliance
Mgt. consultants, bus. analysts & project managers	Employment growth was strong for this occupation and there is evidence that employers are finding it difficult to find suitable candidates in the available labour market. Demand appears to relate primarily to the IT and financial sectors.		— Business intelligence — Business analysts
Actuaries, economists & statisticians; other business profs.	There is a strong indication that demand exists for this occupation across several sectors (both public and private), although the number employed is too small to allow reliable analysis. As such, any shortages are likely to be small in number.		— Economists — Data scientists
Financial analysts and insurance underwriters	Employment growth was above the national average for this occupation and there are indications of some difficulties in sourcing candidates in the labour market.		— Financial analysts
Financial accounts managers	While this occupation features in the vacancy analysis, no indications of shortages have been identified.		
Other bus. associate profs.	This group includes financial and accounting technicians along with estimators and valuers. Employment growth was strong. Demand appears to relate primarily to the IT and financial sectors.		— Data analysts
Financial managers & directors	Employment growth was strong for this sector. While no evidence of shortages exists at present, the impact of Brexit is unclear.		
Financial admin.	With over 50,000 persons employed, job opportunities are likely to continue in this occupation in areas such as fund accountants, accounts payable/receivable and payroll. This occupation had over 8,700 recent job hires in 2017 indicating a high level of churn is occurring. Employment totals are expected to fall in the coming years due to the impact of outsourcing and automation in these roles.		
HR managers and officers	The recovery in the economy has resulted in a stronger demand for HR managers and officers. Although shortages are not expected in the short term, there are signs of increased employment and growing demand for those with sector specific knowledge (e.g. finance).		

***For detailed table see Appendix A*

27 Any annual change may relate to the break in series in the LFS data that occurred in quarter 3, 2017, and should therefore be treated with caution.

9.4 Healthcare* Occupations

Overall employment: Approximately 123,500 persons (78% female) were employed in the selected healthcare occupations, representing 5.6% of the national workforce

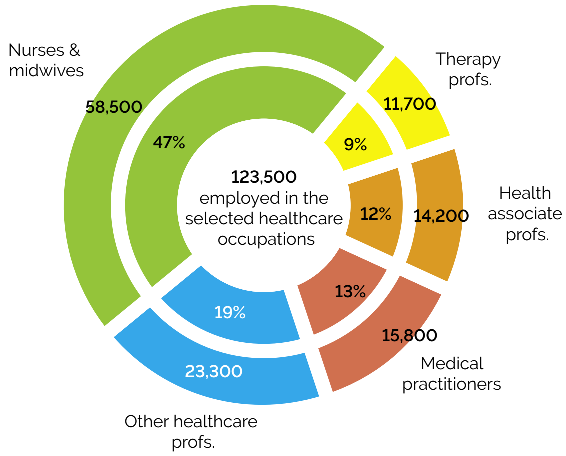
- **Sector:** 87% of overall employment was concentrated in the health sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 5,100 (0.9%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for other healthcare professionals (6.1%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 78%. The share of employees aged 55 and over was in line with the national average of 17%
- **Education:** The share of persons employed in the selected healthcare occupations who had attained higher secondary/FET qualifications was 6%, significantly below the national average share of 36%. Those who had attained third level qualifications (92%) was significantly above the national average share (48%)
- **Full-time/part-time:** Over 80% of healthcare workers were in full-time employment
- **Nationality:** The share of non-Irish workers was slightly below the national average of 15%, while 86% of workers were Irish nationals

Overall outlook for these occupations:

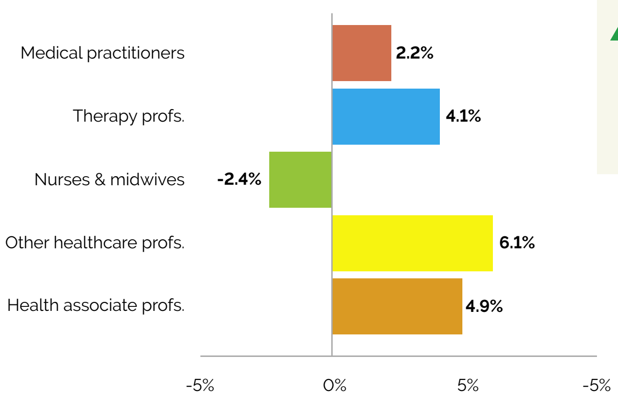
While demand for health services continues to grow in Ireland, recruitment in these occupations is dependent on government funding. As such, there are many occupations where shortages do not exist despite significant demand for services. Pay and conditions of employment remain an issue.

* Carers are examined in Chapter 9.6 (Social & Care Occupations)

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 5,100 (0.9%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Occupation	Economic summary	Shortage	Occupation shortage details
Medical practitioners	Due to international demand for these skills, job opportunities will continue to arise.	●	— Emergency medicine — Anaesthetics — Paediatric — Orthopaedic — General practitioners
Therapy profs.	While demand has remained strong, there is no evidence of a shortage of therapists (including physiotherapists, occupational, speech and language).	●	
Nurses & midwives	Despite a decline in employment, the demand for certain types of nursing skills has remained strong and has resulted in shortages. Work patterns and certain geographical locations are also impacting on recruitment and retention of nurses.	●	— Staff — Registered — Clinical nurse managers — Advanced nurse practitioners
Other healthcare profs.	This group includes pharmacists, psychologists, dentists, radiographers, vets, and health services managers. While demand is strong for many healthcare professionals, shortages have only been identified for radiographers.	●	— Radiographers
Health associate profs.	While no shortages exist, demand is evident for dieticians, cardiac technicians and audiologists.	●	

**For detailed table see Appendix A*

9.5 Education Occupations

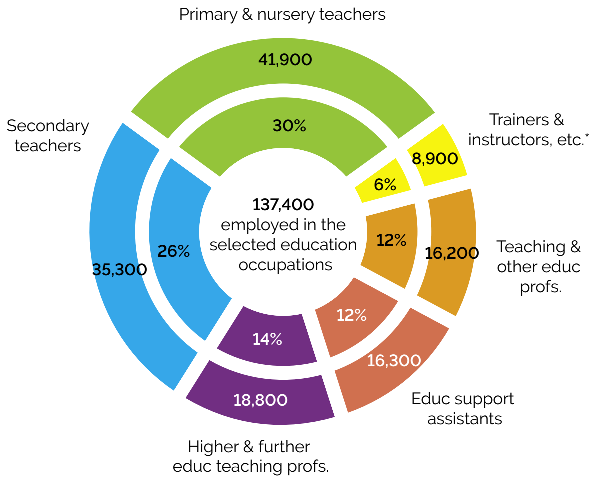
Overall employment: Approximately 137,400 persons (74% female) were employed in the selected education occupations, representing 6.3% of the national workforce

- **Sector:** 91% of overall employment was concentrated in the education sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 18,400 (2.9%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for higher and further education teaching professionals (8.3%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 78%. The share of employees aged 55 and over was in line with the national average of 17%
- **Education:** The share of persons employed in the selected education occupations who had attained higher secondary/FET qualifications was 10%, significantly below the national average share of 36%. Those who had attained third level qualifications (88%) was significantly above the national average share (48%)
- **Full-time/part-time:** Over 83% of education workers were in full-time employment
- **Nationality:** The share of non-Irish workers was well below the national average of 15%, while 92% of workers were Irish nationals

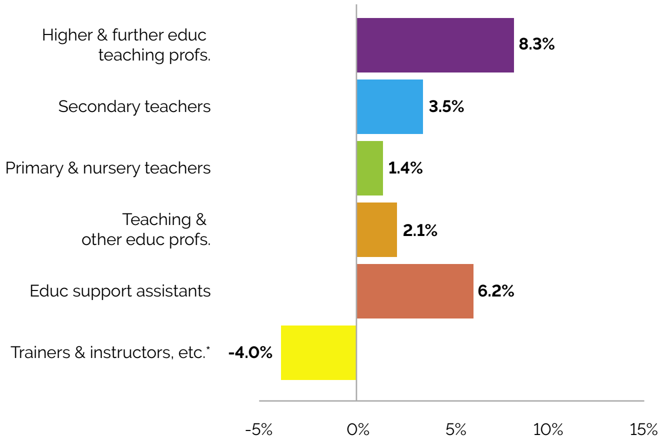
Overall outlook for these occupations:

Employment for these occupations is driven both by government funding and the demographic profile of the population. The fall in the number of children born in recent years will mean a lower demand for primary school/nursery teachers. On the other hand, the second level school population is expected to peak in 2024-2025; this will result in increased demand at second level over the next ten years, and later at third level as this cohort moves up through the education system. In addition, government policy for lifelong learning will impact on demand for workplace and adult learning.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 18,400 (2.9%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation shortage details
Higher & further education teaching profs.	There is no shortage of higher and further education teaching professionals. However, some employers have experienced difficulties in recruiting staff with sufficient expertise in specialised areas.		
Secondary teachers	It is proving difficult to source qualified teachers for certain key subjects (e.g. foreign languages, science). Changes in government policy in relation to the introduction of other subjects (such as career guidance) will require the sourcing of teachers with the required specific skills. Demand for secondary teachers is expected to continue in the medium term due to demographic factors.		– Secondary teachers
Primary & nursery teachers	Demand for primary and nursery teachers is expected to decline in line with the decrease in the relevant age cohort.		
Teaching & other educational profs.	No shortages have been identified for this occupation.		
Educational support assistants	Employment has increased in this occupation, and is expected to grow in the coming years primarily due to the creation of additional special needs assistant (SNA) posts announced in the most recent budget.		
Trainers & instructors, career guidance	No shortages have been identified for this occupation.		

**For detailed table see Appendix A*

9.6 Social & Care Occupations

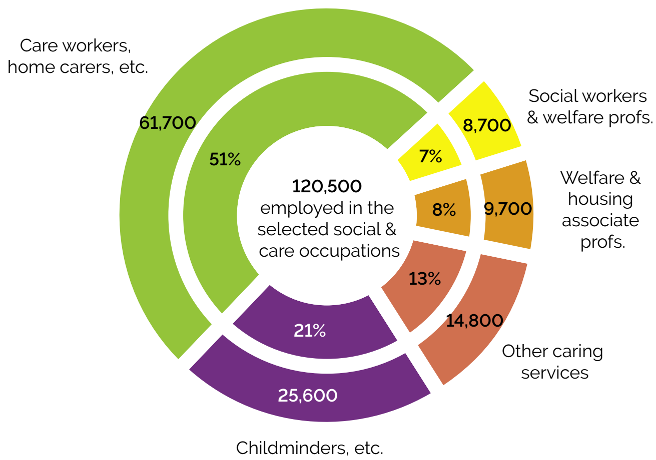
Overall employment: Approximately 120,500 persons (82% female) were employed in the selected social & care occupations, representing 5.5% of the national workforce

- **Sector:** 76% of overall employment was concentrated in the health sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 21,800 (4.1%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for other caring services (9.2%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 71%. The share of employees aged 55 and over was slightly above the national average of 17%
- **Education:** The share of persons employed in the selected social & care occupations who had attained higher secondary/FET qualifications was 48%, above the national average share of 36%. Those who had attained third level qualifications (40%) was slightly below the national average share (48%)
- **Full-time/part-time:** Over 64% of social & care workers were in full-time employment
- **Nationality:** The share of non-Irish workers was below the national average of 15%, while 87% of workers were Irish nationals

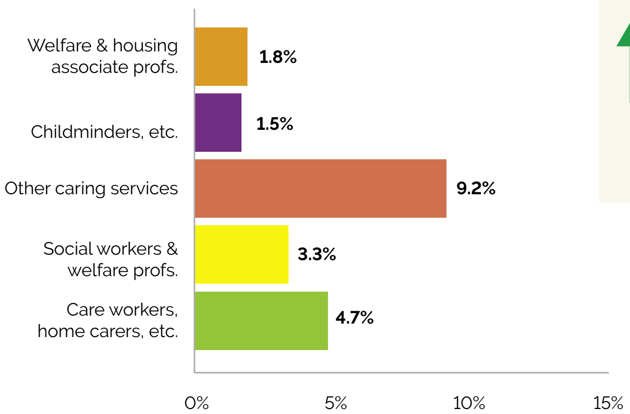
Overall outlook for these occupations:

Changing demographics is the primary driver of employment for these occupations; the demand for childcare workers will decline with the fall in the number of births and, conversely, the demand for care workers will increase due to the aging population.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 21,800 (4.1%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Occupation	Economic summary	Shortage	Occupation Shortage details
Welfare & housing associate profs.	No shortages have been identified for this occupation.	●	
Childminders, etc.	Employment growth was below average for this occupation and it featured strongly in the recent job hires analysis indicating that churn is an issue. Little growth is expected due to declining demographics.	●	
Other caring services	Demand in this occupation relates to healthcare assistants, primarily employed in healthcare settings e.g. hospitals and nursing homes. However, no shortages have been identified.	●	
Social workers & welfare profs.	While no shortages were identified, demand is evident for social work services in Ireland.	●	
Care workers, home carers, etc.	Employment is growing in this occupation as a result of the aging population in Ireland. Many are employed in part-time roles; the recent job hire analysis and the high number of job ready jobseekers previously employed in this occupation indicate that churn is a significant factor in this occupation.	●	— Care workers

**For detailed table see Appendix A*

9.7 Legal & Security Occupations

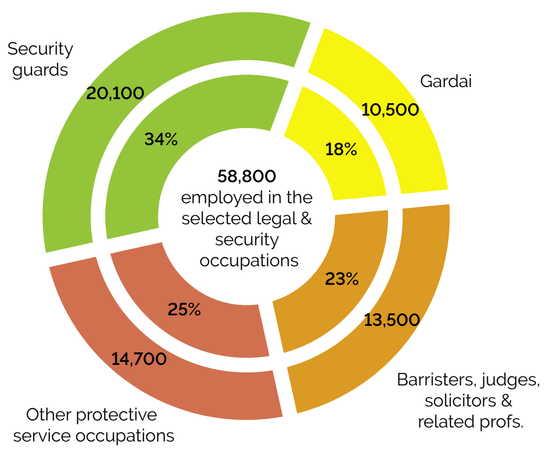
Overall employment: Approximately 58,800 persons (75% male) were employed in the selected legal & security occupations, representing 2.7% of the national workforce

- **Sector:** 41% of overall employment was concentrated in the public administration and defence (PAD) sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 2,700 (1.0%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for security guards (4.5%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 78%. The share of employees aged 55 and over was 15%, below the national average of 17%
- **Education:** The share of persons employed in the selected legal & security occupations who had attained higher secondary/FET qualifications was 29%, below the national average share of 36%. Those who had attained third level qualifications (55%) was above the national average share (48%)
- **Full-time/part-time:** Over 89% of legal & security workers were in full-time employment
- **Nationality:** The share of non-Irish workers was below the national average of 15%, while 89% of workers were Irish nationals

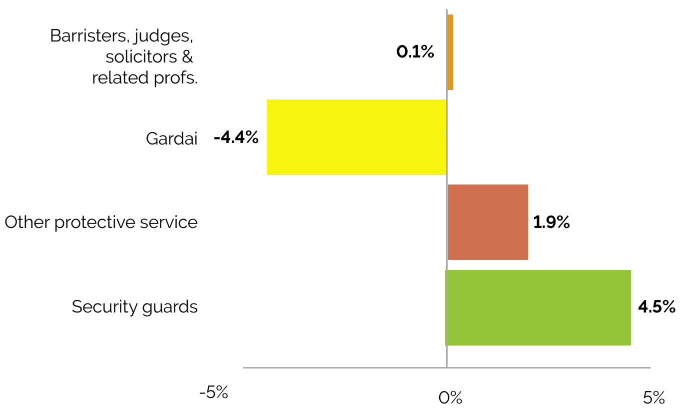
Overall outlook for these occupations:

Excluding security guards, there was very little employment growth in these occupations over the five years examined and there was no evidence in the analysis of difficulties sourcing candidates.

Numbers employed, 2017



Average growth rate (%) 2012-2017



Between 2012 and 2017, overall employment increased by 2,700 (1.0%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Occupation	Economic summary	Shortage	Occupation shortage details
Barristers, judges, solicitors & related profs.	No shortages have been identified for this occupation.	●	
Gardaí	No shortages have been identified for this occupation.	●	
Other protective service occupations	This occupational group includes army personnel, fire and prison service officers. No shortages have been identified for this occupation.	●	
Security guards	While this occupation experienced employment growth, churn is a key contributor to a high number of vacancies. There were also over 1,000 job seekers previously employed as security guards.	●	

**For detailed table see Appendix A*

9.8 Construction Occupations

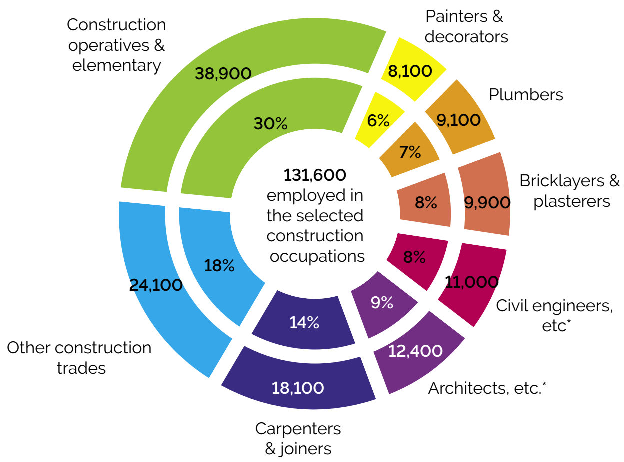
Overall employment: Approximately 131,600 persons (94% male) were employed in the selected construction occupations, representing 6.2% of the national workforce

- **Sector:** 60% of overall employment was concentrated in the construction sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 28,900 (5.1%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for painters & decorators (16.2%) during the period, albeit from a small base
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 76%. The share of employees aged 55 and over was in line with the national average of 17%
- **Education:** The share of persons employed in the selected construction occupations who had attained higher secondary/FET qualifications was 46%, above the national average share of 36%. Those who had attained third level qualifications (26%) was well below the national average share (48%)
- **Full-time/part-time:** Over 88% of construction workers were in full-time employment
- **Nationality:** The share of non-Irish workers was in line with the national average of 15%, while 85% of workers were Irish nationals
- **Unemployment:** In quarter 4 2017, the unemployment rate for construction workers (aged 15-74) was 7.0% (compared to the national rate of 6.1%).

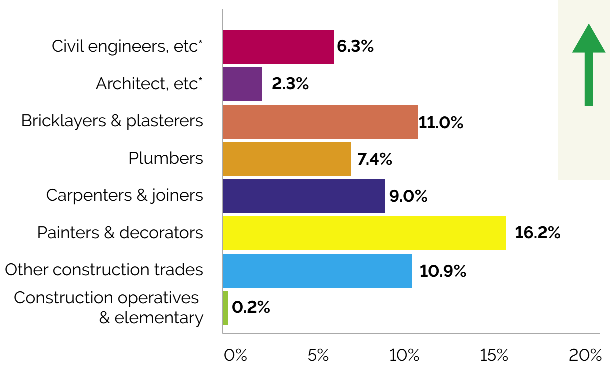
Overall outlook for these occupations:

In terms of employment growth for these occupations, most relates to skilled trades and operative/elementary occupations. Growth for professional roles has been smaller. Despite this employment growth, however, there remain over 11,000 job ready job seekers who had previously worked in the construction sector, although most of these are in the lower skilled occupations.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 28,900 (5.1%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation shortage details
Civil engineers & construction project managers	Output from the education and training system is not expected to be enough to meet growing demand. Shortages are only beginning to emerge and are small in numbers, although the reduced supply indicates that these shortages could be exacerbated in future years.	●	— Civil engineers — Construction project managers
Architects & town planners, architectural technologists, & surveyors	Although the number of quantity surveyors is too small to report, employers have indicated that they are experiencing difficulty in sourcing these skills. Demand is likely to be limited in volume due to the small size of this occupation.	●	— Quantity surveyors
Bricklayers & plasterers	With almost 2,000 job ready job seekers there remains an overhang of supply from the recession for this occupation. However, as apprenticeship registrations in this area remain low, shortages could emerge if an increase in residential activity occurs. The high employment growth rate should be treated with caution[28]	●	
Plumbers	The growth observed in employment in this occupation has been driven by commercial sector activity. Apprenticeship registrations are growing steadily, although shortages could emerge if an increase in residential activity occurs.	●	
Carpenters & joiners	Employment growth has been strong since 2013. While growth in apprenticeship registration is occurring, it is far below the pre-recession figures. Growth is expected to continue.	●	— Shuttering carpenters
Painters & decorators	While this occupation has experienced employment growth, there is no evidence of shortages, with a large number of job ready jobseekers who were previously employed as painters.	●	
Other construction trades	Growth in employment (+11%) has been driven by commercial sector activity with employment growing strongly since 2014.	●	— Shift managers — Glaziers — Steel erectors — Curtain wallers
Construction operatives & elementary	Most employment for these roles relates to labourers. There were over 4,000 job ready job seekers for this occupation. The low employment growth recorded relates to a fall in the most recent time period (2016-2017) and as such should be treated with caution. Demand for scaffolders and pipe layers are evident although numbers employed are too small to report.	●	— Scaffolders — Pipe layers

***For detailed table see Appendix A**

28 Any annual change may relate to the break in series in the LFS data that occurred in quarter 3, 2017, and should therefore be treated with caution.

9.9 Other Craft Occupations n.e.c.

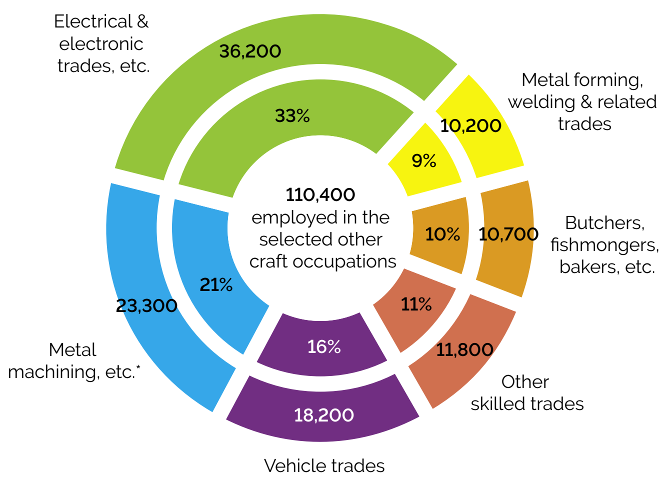
Overall employment: Approximately 110,400 persons (92% male) were employed in the selected other craft occupations n.e.c., representing 5.0% of the national workforce

- **Sector:** 41% of overall employment was concentrated in the industry sector, followed by the wholesale/retail and construction sectors
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 13,000 (2.5%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for metal forming, welding & related trades (8.0%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 72%. The share of employees aged 55 and over was in line with the national average of 17%
- **Education:** The share of persons employed in the selected other craft occupations n.e.c. who had attained higher secondary/FET qualifications was 56%, well above the national average share of 36%. Those who had attained third level qualifications (27%) was well below the national average share (48%)
- **Full-time/part-time:** Over 92% of other craft workers were in full-time employment
- **Nationality:** The share of non-Irish workers was in line with the national average of 15%

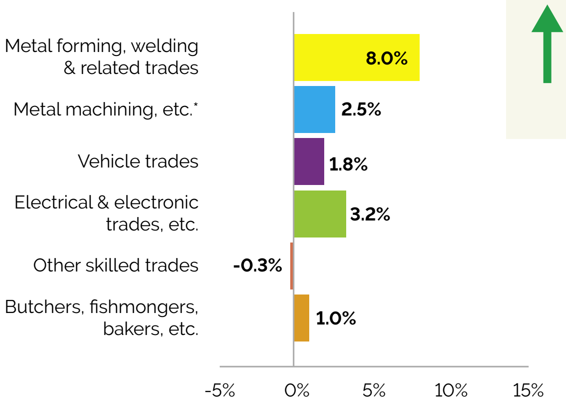
Overall outlook for these occupations:

Further growth in these occupations is likely to be driven by activity in the medium-high and high tech manufacturing sectors, and to a lesser extent, by the construction (e.g. electricians) and wholesale/retail (e.g. mechanics) sectors.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 13,000 (2.5%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation hortage details
Metal forming, welding & related trades	This occupation has experienced strong employment growth in recent years. Employers have indicated a significant difficulty in sourcing suitably qualified welders. The difficult to fill relates to companies that are supplying products for the high tech manufacturing sector.	●	— Welders (e.g. TIG/MIG)
Metal machining, fitting & instrument making trades	Employers have indicated a difficulty in sourcing skills in this area across numerous manufacturing sub-sectors. Despite increased supply, demand continues in niche areas e.g. high tech manufacturing.	● Niche	— Toolmakers — CNC Programmers — Fitters (e.g. mechanical/ maintenance)
Vehicle trades	There is evidence of increased demand for heavy vehicle mechanics. Intake on the apprenticeship programme has increased in recent years with an average of 145 registrations, annually, since 2014, more than double the level during the recession.	●	
Electrical & electronic trades, etc.	Electricians are in demand in both construction and industry. Employment has been increasing in recent years, although there is evidence of churn through the recent job hires analysis; there were also over 1,000 jobseekers who were previously employed in electrical trades. The number of registrations for apprenticeships has been increasing steadily in recent years, although it remains far below the pre-recession level. Short-term issues in sourcing electricians may emerge in this occupation until the output from apprenticeship recovers.	●	— Electricians
Other skilled trades	Occupations in this group include printers, furniture makers, and textile trades. Employment has remained relatively unchanged in recent years with no indication of shortages identified.	●	
Butchers, fishmongers, bakers etc.	Employment growth has been below the national average in this occupation. Attracting and retaining deboners for the meat processing sector continues to be an issue for employers.	● Labour Shortage	— Deboners

***For detailed table see Appendix A**

9.10 Agriculture & Animal Care Occupations

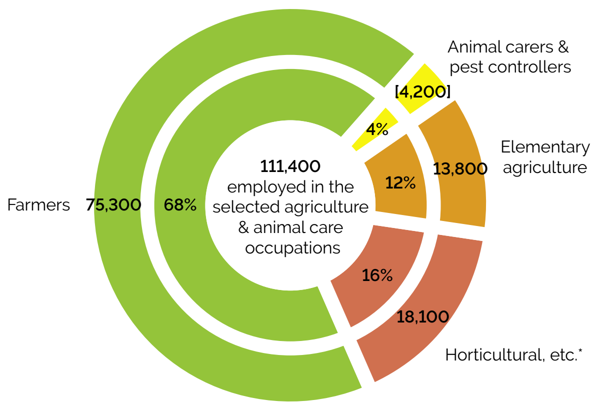
Overall employment: Approximately 111,400 persons (88% male) were employed in the selected agriculture & animal care occupations, representing 5.2% of the national workforce

- **Sector:** 85% of overall employment was concentrated in the agriculture sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 4,500 (0.8%) on average annually (compared to 3.1% nationally). At 5.6%, the strongest rate of employment growth was observed for horticultural, agricultural & fishing trades n.e.c. (e.g. gardeners) during the period
- **Age:** The 25-54 age group accounted for 49% of persons employed. 43% of those employed were aged 55 and above, more than twice the national average of 17%
- **Education:** The share of persons employed in the selected agriculture & animal care occupations who had attained higher secondary/FET qualifications was 40%, slightly above the national average share of 36%. Those who had attained third level qualifications (16%) was significantly below the national average share (48%)
- **Full-time/part-time:** Over 82% of agriculture & animal care workers were in full-time employment
- **Nationality:** The share of non-Irish workers was well below the national average of 15%, while 94% of workers were Irish nationals

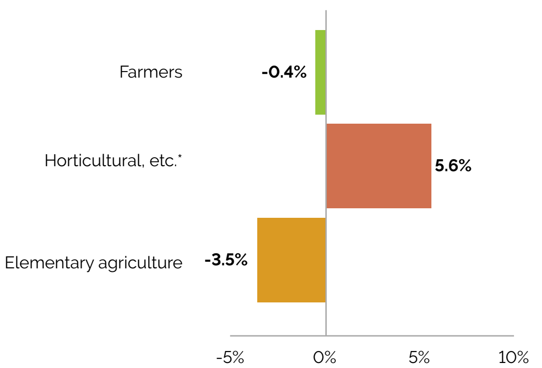
Overall outlook for these occupations:

There was very little employment growth in these occupations over the five-year period examined and there was no evidence in the analysis of difficulties sourcing candidates. However, issues have been identified by employers through the Department of Agriculture, Food and the Marine in attracting and retaining persons in the areas of horticulture (e.g. fruit and mushroom pickers) and dairy farming. As such, a quota of employment permits has been issued for this sector in order to address the labour shortages that are occurring.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 4,500 (0.8%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Numbers in square brackets are small and should be treated with caution

Occupation	Economic summary	Shortage	Occupation shortage details
Managers in horticulture, agriculture and fishing	Employment figures for this occupation are too small to report and derive any analysis.	●	
Farmers	No skills issues have emerged in relation to farmers.	●	
Horticultural, agricultural & fishing trades n.e.c.	Gardeners account for the largest share of employment in this occupational group. While the data does not point to any shortages, employers are indicating significant issues with sourcing staff; as such, employment permits are being issued, albeit for a restricted number.	● Labour	— Mushroom pickers — Fruit pickers
Elementary agriculture.	While the data does not point to any shortages in this area, employers are indicating significant issues with sourcing staff; as such, employment permits are being issued, albeit for a restricted number.	● Labour	— Dairy farming
Animal carers & pest controllers.	Employment figures for this occupation are too small to report and derive any analysis.	●	

**For detailed table see Appendix A*

9.11 Hospitality Occupations

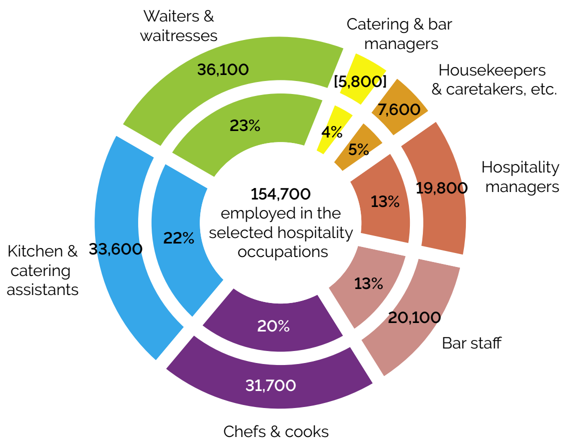
Overall employment: Approximately 154,700 persons (56% female) were employed in the selected hospitality occupations, representing 7.0% of the national workforce

- **Sector:** 85% of overall employment was concentrated in the accommodation sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 40,600 (6.3%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for waiters & waitresses (9.2%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 61%. The share of workers aged 55 and over was 11%, below the national average of 17%
- **Education:** The share of persons employed in the selected hospitality occupations who had attained higher secondary/FET qualifications was 52%, well above the national average share of 36%. Those who had attained third level qualifications (26%) was well below the national average share (48%)
- **Full-time/part-time:** Over 58% of hospitality workers were in full-time employment
- **Nationality:** The share of non-Irish workers was significantly above the national average of 15%, while 70% of workers were Irish nationals
- **Unemployment:** In quarter 4 2017, the unemployment rate for hospitality workers (aged 15-74) was 5.8% (compared to the national rate of 6.1%).

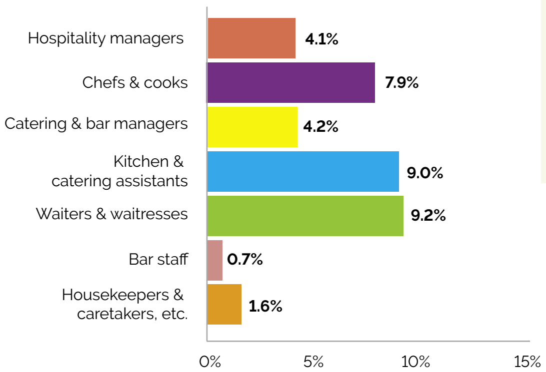
Overall outlook for these occupations:

The accommodation and food services sector, for which the majority of employment in these occupations occurs, has experienced significant growth in recent years. However, job churn is also a significant factor for these occupations, with over 50,000 recent job hires occurring in 2017 for these occupations; job churn was also highlighted as an issue in a recent report by the Hospitality Skills Oversight Group[29].

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 40,600 (6.3%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Numbers in square brackets are small and should be treated with caution

29 *Ireland's €5 Billion Hospitality Industry: Skills, Careers, Growth*, Hospitality Skills Oversight Group Report, 2018

<table>
<thead>
<tr><th>Occupation</th><th>Economic summary</th><th>Shortage</th><th>Occupation shortage details</th></tr>
</thead>
<tbody>
<tr><td>Hospitality managers</td><td>While this occupation features regularly in the vacancy data, no evidence of shortages has been identified.</td><td></td><td></td></tr>
<tr><td>Chefs & cooks</td><td>Employment growth was high for this occupation; while chefs are employed across a variety of sectors, issues in attracting chefs relate to the hospitality sector. Employment permits have been expanded to allow for certain chef occupations. There is also evidence of issues with retention for entry level chefs. There has been a substantial increase in supply in recent years (+80% compared to 2012) but this has not been sufficient to offset demand.</td><td></td><td>— Executive chefs
— Head chefs
— Sous chefs
— Chef de partie</td></tr>
<tr><td>Catering & bar managers</td><td>While this occupation features regularly in the vacancy data, no evidence of shortages has been identified.</td><td></td><td></td></tr>
<tr><td>Kitchen & catering assistants</td><td rowspan="3">Employment growth has been strong for these occupations; however, churn is also a significant factor resulting in an over-representation in the vacancy data. While demand has grown, no specific qualification is required for the majority of these roles and, therefore, supply can be drawn from the total labour market. Indeed, there were over 3,000 job ready job seekers in August 2018, who had previously been employed in these occupations.</td><td></td><td></td></tr>
<tr><td>Waiters & waitresses</td><td></td><td></td></tr>
<tr><td>Bar staff</td><td></td><td></td></tr>
<tr><td>Housekeepers & caretakers, etc.</td><td>Employment growth in this occupation was below the national average. No shortages have been identified.</td><td></td><td></td></tr>
</tbody>
</table>

**For detailed table see Appendix A*

9.12 Arts, Sports & Tourism Occupations

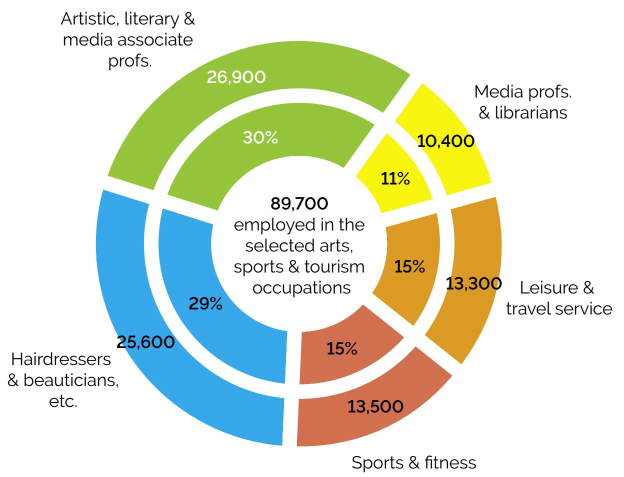
Overall employment: Approximately 89,700 persons (60% female) were employed in the selected arts, sports & tourism occupations, representing 4.1% of the national workforce

- **Sector:** 56% of overall employment was concentrated in the arts & entertainment sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 17,300 (4.4%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for leisure & travel service occupations (6.5%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 72%. The share of employees aged 55 and over was 12%, below the national average of 17%
- **Education:** The share of persons employed in the selected arts, sports & tourism occupations who had attained higher secondary/FET qualifications was 37%, just above the national average share of 36%. Those who had attained third level qualifications (53%) was above the national average share (48%)
- **Full-time/part-time:** Over 68% of arts, sports & tourism workers were in full-time employment
- **Nationality:** The share of non-Irish workers was in line with the national average of 15%, while 85% of workers were Irish nationals

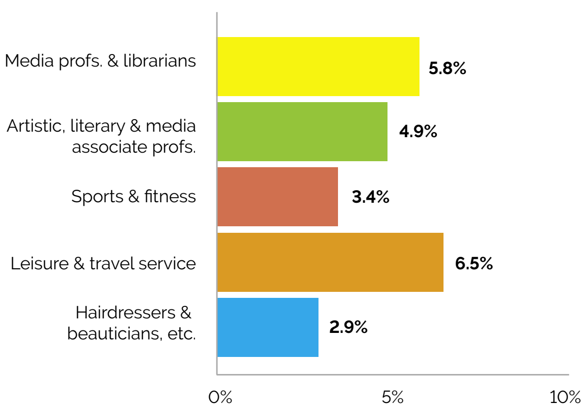
Overall outlook for these occupations:

Employment growth in these occupations is likely to be linked to Ireland's strong economic performance in recent years; increases in disposable incomes may be expected to drive the growth in many of these occupations (e.g. fitness instructors, beauty therapists)

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 17,300 (4.4%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Occupation	Economic summary	Shortage	Occupation shortage details
Media profs. & librarians	No shortages have been identified for this occupation.	●	
Artistic, literary & media associate profs.	Although the data does not highlight any issues in this occupation, there have been indications from Enterprise Ireland that client-companies are finding it difficult to source suitably qualified staff to work in animation. As a result an apprenticeship for a CGI Technical Artist has been proposed.	●	— Animators
Sports & fitness occupations	The vacancy data indicates that job opportunities exist for fitness instructors, although no shortages have been identified in this area.	●	
Leisure & travel service occupations	No shortages have been identified for this occupation.	●	
Hairdressers & beauticians, etc.	There is evidence of churn for this occupation from the recent job hires analysis. At present, there is a significant quantity of state-funded and private education and training in this area.	●	

**For detailed table see Appendix A*

9.13 Transport & Logistics Occupations

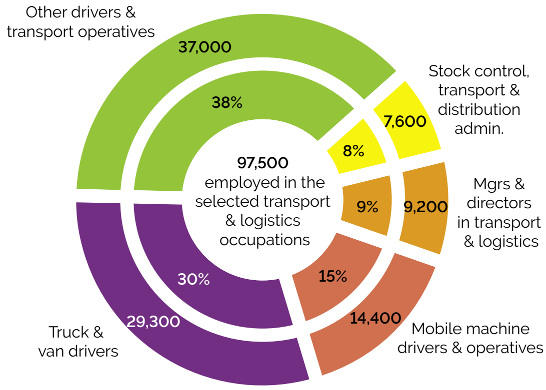
Overall employment: Approximately 97,500 persons (94% male) were employed in the selected transport & logistics occupations, representing 4.5% of the national workforce

- **Sector:** 52% of overall employment was concentrated in the transport sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 15,700 (3.6%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for stock control, transport & distribution admin. occupations (5.8%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 71%. The share of employees aged 55 and over was 25%, well above the national average of 17%
- **Education:** The share of persons employed in the selected transport & logistics occupations who had attained higher secondary/FET qualifications was 46%, above the national average share of 36%. Those who had attained third level qualifications (16%) was significantly below the national average share (48%)
- **Full-time/part-time:** Over 87% of transport & logistics workers were in full-time employment
- **Nationality:** The share of non-Irish workers was just below the national average of 15%, while 84% of workers were Irish nationals

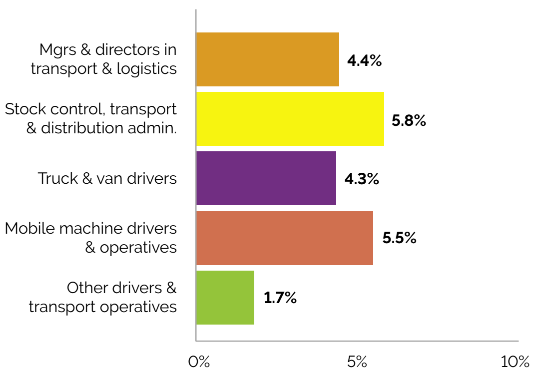
Overall outlook for these occupations:

Employment for people working in these occupations is primarily in the transport sector, but is also spread across a number of other sectors including industry, wholesale/retail and construction. Four fifths of employment relates to drivers (e.g. truck, taxi, bus, mobile machine). Those working in the transport sector are likely to be affected by the impact of Brexit in terms of the import and export of goods. In the event of a hard Brexit, additional skills will be required in the areas of customs clearance and documentation[30]. Regardless of Brexit, technological changes and automation of processes will result in a need for enhanced digital skills across all occupations in this field.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 15,700 (3.6%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Occupation	Economic summary	Shortage	Occupation shortage details
Managers & directors in transport & logistics	While no shortage has been identified, demand is arising in niche areas; as the logistics process becomes more automated, the skillsets required are changing, demanding more digital and analytical skills.	●	— Supply chain managers — Demand planning and forecasting analysts — Senior planners
Stock control, transport & distribution admin. occupations	While no shortage has been identified, in the event of Brexit, there will be an increased demand for those with the skills to ensure compliance in the areas of customs duties, controls, and tariffs (which the new Logistics Associate apprenticeship is designed to address).	●	— Logistics/supply chain operators & administrators
Truck & van drivers	Employers have identified difficulty in sourcing and retaining qualified HGV drivers, despite over 2,500 job ready job seekers previously employed in this occupation. Regional issues may also be a factor.	● Labour shortage	— HGV drivers
Mobile machine drivers & operatives	Employment growth for this occupation is driven by the construction sector. Although there were 1,600 job ready job seekers previously employed in this occupation, shortages are occurring in a small number of areas.	●	— Crane drivers — 360°/ Reach truck drivers — Forklift (VNA) drivers
Other drivers & transport operatives	This group consists primarily of taxi drivers. No shortages have been identified in this occupation.	●	

**For detailed table see Appendix A*

9.14 Administrative & Secretarial Occupations

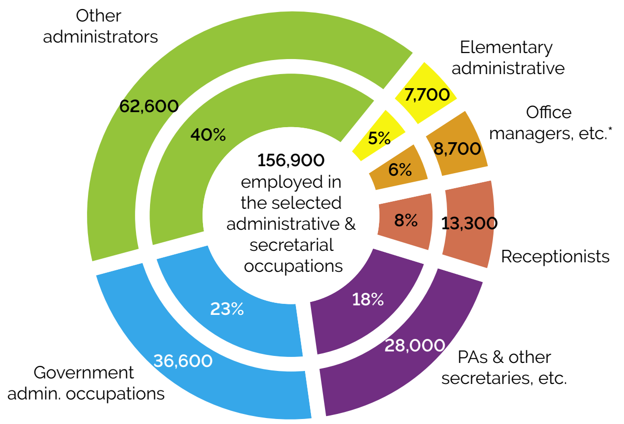
Overall employment: Approximately 156,900 persons (77% female) were employed in the selected administrative & secretarial occupations, representing 7.2% of the national workforce

- **Sector:** 24% of overall employment was concentrated in the public administration and defence (PAD) sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 12,800 (1.7%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for office managers & supervisors administrative occupations (6.9%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 72%. The share of employees aged 55 and over was 21%, above the national average of 17%
- **Education:** The share of persons employed in the selected administrative & secretarial occupations who had attained higher secondary/FET qualifications was 49%, well above the national average share of 36%. Those who had attained third level qualifications (41%) was below the national average share (48%)
- **Full-time/part-time:** Over 72% of administrative & secretarial workers were in full-time employment
- **Nationality:** The share of non-Irish workers was below the national average of 15%, while 90% of workers were Irish nationals

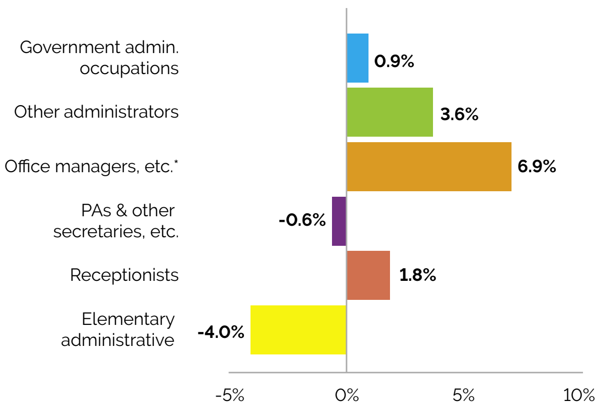
Overall outlook for these occupations:

Automation is likely to continue to impact the number of people required for these occupations. Outsourcing of certain tasks is also directly impacting this group. Job churn is also a factor.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 12,800 (1.7%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation Shortage details
Government admin. occupations	No shortages have been identified for this occupation.	●	
Other administrators	Although large numbers are employed in this occupation, growth is on a par with the national average. There are over 7,000 job ready job seekers previously employed in this occupation and it also features strongly in the recent job hires analysis indicating issues with job churn.	●	
Office managers & supervisors administrative occupations	No shortages have been identified for this occupation.	●	
PAs & other secretaries, etc.	No shortages have been identified for this occupation.	●	

**For detailed table see Appendix A*

9.15 Sales, Marketing & Customer Service Occupations

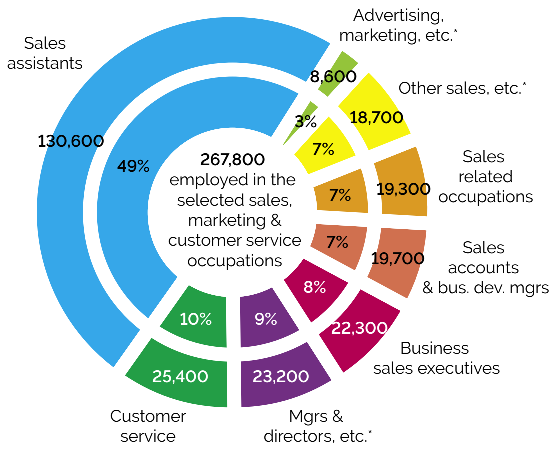
Overall employment: Approximately 267,800 persons (56% female) were employed in the selected sales, marketing & customer service occupations, representing 12.2% of the national workforce

- **Sector:** 66% of overall employment was concentrated in the wholesale/retail sector, followed by industry and the ICT and financial sectors
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 32,500 (2.6%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for sales related occupations (9.4%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 68%. The share of employees aged 55 and over was 10%, below the national average of 17%
- **Education:** The share of persons employed in the selected sales, marketing & customer service occupations who had attained higher secondary/FET qualifications was 47%, above the national average share of 36%. Those who had attained third level qualifications (39%) was below the national average share (48%)
- **Full-time/part-time:** Over 69% of sales, marketing & customer service workers in were in full-time employment
- **Nationality:** The share of non-Irish workers was slightly above the national average of 15%, while 83% of workers were Irish nationals
- **Unemployment:** In quarter 4 2017, the unemployment rate for sales, marketing and customer service workers (aged 15-74) was 6.0% (compared to the national rate of 6.1%).

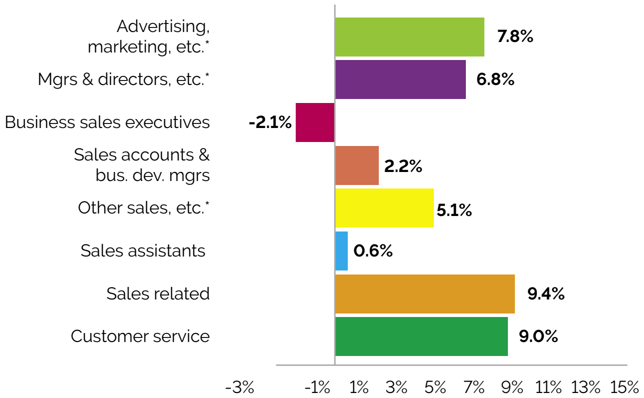
Overall outlook for these occupations:

These occupations span a range of skills levels, from sales assistants to marketing executives. As such, the outlook varies significantly.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 32,500 (2.6%) on average annually (compared to 3.1% nationally)

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation shortage details
Advertising, marketing & sales directors	Employment growth for this occupation relates primarily to growth since 2016 and as such should be treated with caution. No shortages were identified in this area; of those issued with employment permits almost all were for salaries above €70,000 and half were in the IT sector.	●	
Managers & directors in retail & wholesale	Employment in this occupation has risen in line with the overall recovery of the wholesale/retail sector; those employed are equally likely to have a third level qualification as a higher secondary/FET education with a wide variety of entry routes.	●	
Business sales executives	While the majority of those employed in this occupation are employed in the wholesale and retail sector, demand, and indeed shortages, primarily relates to those employed in the IT sector, with language skills a key factor.	● Languages	— Account strategists — Inside sales representatives
Sales accounts & bus. dev. Managers	Any shortages for this occupation refer to the IT sector and, therefore, only relate to a subsection of employment.	●	— Product/account managers
Other sales & marketing assoc. prof.	While the majority of those employed in this occupation are employed in the wholesale and retail sector, demand, and indeed shortages, primarily relates to those employed in the IT sector, with language skills a key factor.	● Languages	— Marketing specialists (including digital)
Sales assistants	With 130,000 persons employed, this occupation will continue to offer job opportunities due to replacement demand alone. Half of those working are in part-time roles and job churn is a significant factor. Approx. 6,000 job ready job seekers previously worked in this occupation.	●	
Customer service occupations	Shortages in this occupation relate to those employed in call centres and are specific to those with language skills. There is evidence of churn in this occupation, with over 8,000 recent job hires in 2017.	● Languages	— Contact centre agents — Customer service representatives
Sales related occupations n.e.c.	This occupation relates to those primarily employed in the wholesale/retail sector, with no indication of shortages.	●	

**For detailed table see Appendix A*

9.16 Operatives & Elementary Occupations n.e.c.

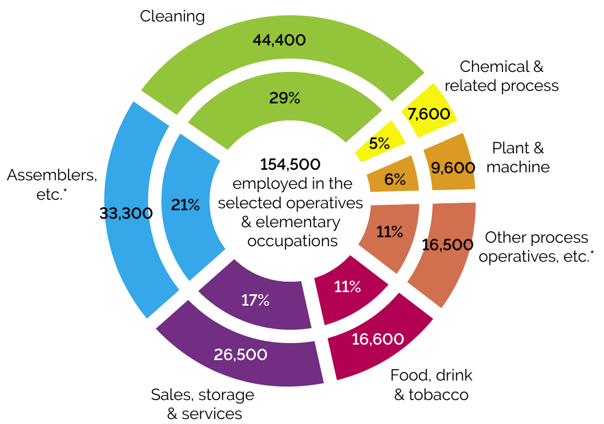
Overall employment: Approximately 154,500 persons (62% male) were employed in the selected operatives & elementary occupations n.e.c., representing 7.0% of the national workforce

- **Sector:** 49% of overall employment was concentrated in the industry sector
- **Employment growth (5-year):** Between 2012 and 2017, overall employment increased by 14,100 (1.9%) on average annually (compared to 3.1% nationally). The strongest rate of employment growth was observed for chemical & related process occupations (11.6%) during the period
- **Age:** The 25-54 age group accounted for the majority of persons employed, at 73%. The share of employees aged 55 and over was 14%, below the national average of 17%
- **Education:** The share of persons employed in the selected operatives & elementary occupations n.e.c. who had attained higher secondary/FET qualifications was 51%, well above the national average share of 36%. Those who had attained third level qualifications (21%) was well below the national average share (48%)
- **Full-time/part-time:** Over 75% of operatives & elementary occupations n.e.c. workers were in full-time employment
- **Nationality:** The share of non-Irish workers was well above the national average of 15%, while 68% of workers were Irish nationals
- **Unemployment:** In quarter 4 2017, the unemployment rate for operatives & elementary occupations n.e.c. (aged 15-74) was 6.2% (compared to the national rate of 6.1%).

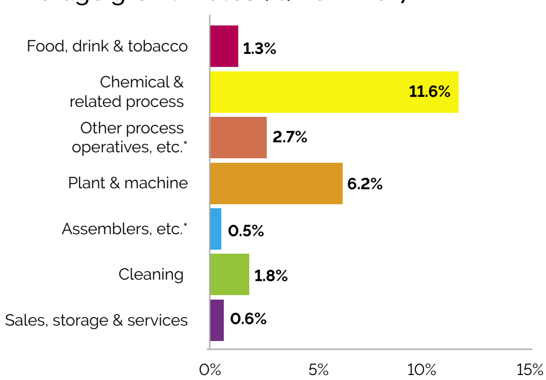
Overall outlook for these occupations:

Industry accounts for over half of the employment in these occupations (e.g. manufacturing of food products and pharmaceutical products), with employment also in the wholesale/retail and accommodation and food services sectors (e.g. cleaners). These occupations are likely to be impacted by the automation of manufacturing processes, which will lead to a demand for upskilling of the existing workforce to evolve with new digitalisation and automation requirements. Job churn is a significant factor for these occupations as evidenced by the number of job ready job seekers previously employed in these occupations and the high number of recent job hires.

Numbers employed, 2017



Average growth rates (%) 2012-2017



Between 2012 and 2017, overall employment increased by 14,100 (1.9%) on average annually (compared to 3.1% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Occupation	Economic summary	Shortage	Occupation shortage details
Food, drink & tobacco	There is demand for operatives in the food processing sector, although at present, no indication of shortages exists. This occupation has one of the lowest shares of Irish nationals employed, at 57%.		
Chemical & related process	Employment opportunities in this occupation are driven by both high tech manufacturing and the food industry. Although the employment growth rate is strong, automation may have an impact on this occupation in the medium term.		
Other process operatives & process plant occupations	There were over 9,000 job ready job seekers who had previously been employed in this occupation. Employment relates primarily to packers, bottlers and elementary process plant occupations.		
Plant & machine operatives	Employment in this occupation includes quarry workers, energy and sewerage plant operatives. No indication of shortages was evident.		
Assemblers & routine operatives	Employment has remained level, with no evidence of shortages emerging.		
Cleaners	The majority of those employed in this occupation were female and in part-time roles; over a quarter were aged 55 years or older, and almost a half were non-Irish. Recent job hires analysis shows that job churn is a feature for this occupation.		
Sales, storage & services	Employment in this group refers primarily to those in elementary storage roles; no difficulty in sourcing personnel has been observed.		

**For detailed table see Appendix A*

Section 10
In Focus: Potential Additional Labour Force

10.1 Background

Population by labour market status

In terms of economic status, the adult population (aged 15+) in Ireland can be categorised into one of three broad categories: employed, unemployed and economically inactive. Employed and unemployed persons are considered to be part of the labour force, either working or looking for work. Persons in the third category, the economically inactive, are not considered to be part of the labour force (Figure 10.1).

Figure 10.1 Population aged 15+ by economic status (000s), quarter 4 2017

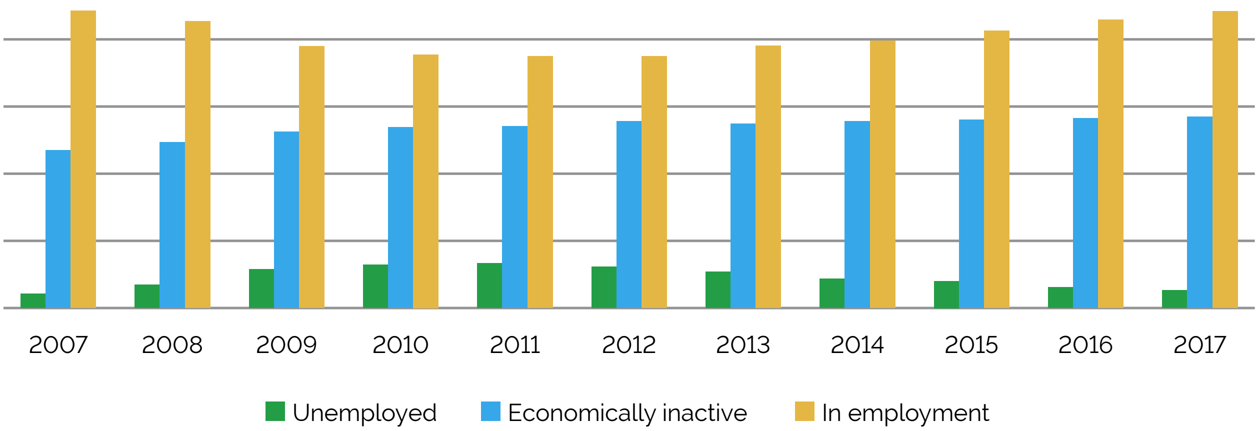
Source: SLMRU Analysis of CSO LFS data

Overview of the economically inactive category

While the number of people in employment in quarter 4 2017 almost reached the quarter 4 2007 level and the number of people unemployed had been decreasing since 2012, there was a steady growth of the group consisting of those that were economically inactive (i.e. not the in labour force). Between quarter 4 2007 and quarter 4 2017, the number of people classified as economically inactive grew by 247,000, or 21%, over the ten-year period (Figure 10.2).

This growth was primarily driven by increases in the number of persons aged 65 years and over; of the additional 247,000 economically inactive persons, 152,000 were 65+ years. While the number of those aged 65 years and older has risen steadily over this period, any increase in the number of persons aged under 65 years related to the start of the economic downturn (from quarter 4 2008 to quarter 4 2010). Despite improvements in the labour market, the number of those inactive under the age of 65 in quarter 4 2017 had not declined by much compared with quarter 4 2010.

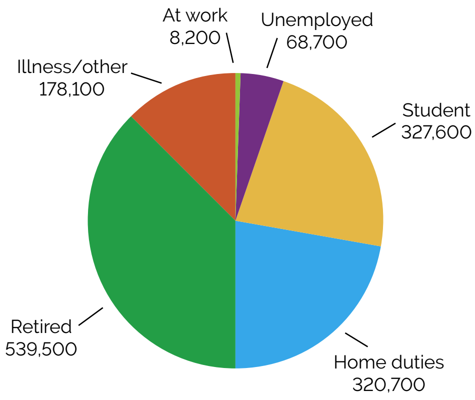
Figure 10.2 Population aged 15+ by economic status (000s), quarter 4 2007- quarter 4 2017



Source: SLMRU Analysis of CSO LFS data

Persons in the economically inactive category form a diverse group, made up of those who are retired, engaged in home duties, among other groups. Figure 10.3 shows the distribution of economically inactive persons by their self-declared labour status[31] in quarter 4 2017. Retired persons make up the largest group, followed by students and those engaged on home duties.

Figure 10.3 Inactive Population by CSO Main Labour Status (quarter 4 2017)



Source: SLMRU Analysis of CSO LFS data

10.2 Potential Additional Labour Force

The concept of potentially active persons is a newly developed sub-classification of the economically inactive population. It has been discussed by both the ILO[32] and Eurostat[33] and is based on the notion that some of the people outside the standard labour force have a stronger attachment to the labour market than others.

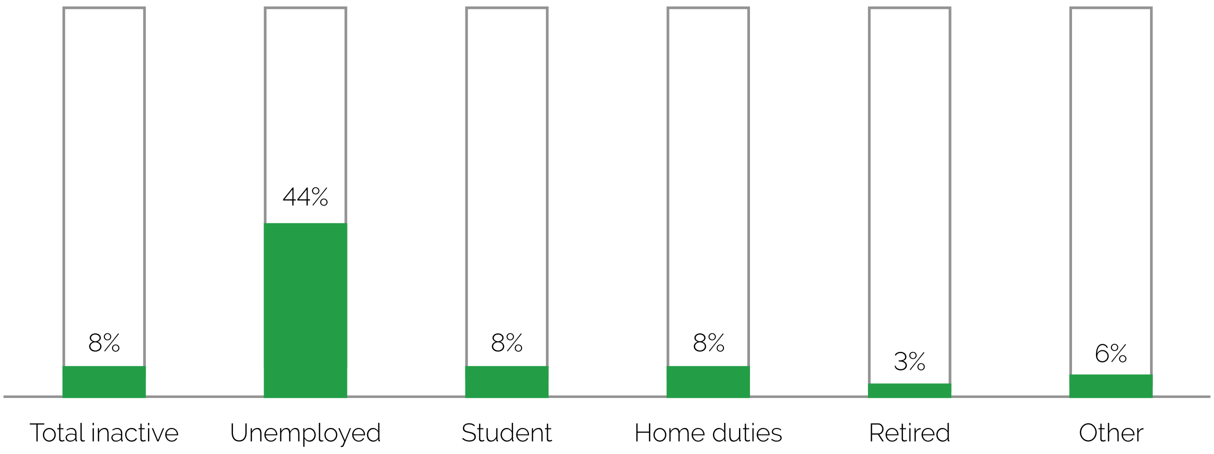
> *Although neither employed nor unemployed, the sum of persons aged 15 years or older who are available for work but not seeking[34] and persons seeking work but not immediately available[35] constitutes the **Potential Additional Labour Force (PALF)**. These persons may be drawn from any of the six categories outlined in Figure 10.3 on the preceding page, including the retired and those engaged on home duties.*

This measure has been adopted by the CSO and other statistical agencies across Europe. It has been used, in addition to the standard unemployment rate, as a supplementary indicator for monitoring labour underutilisation.

In quarter 4 2017, the potential additional labour force (PALF) in Ireland accounted for about 111,200 persons or 8% of the 1,443,400 inactive cohort. However, their self-declared main labour status varied significantly (Figure 10.4). For example, 44% of inactive persons who self-declared as unemployed were considered to be part of PALF. In contrast, only 8% of those classified as being on home duties or students, were in the PALF category.

31 Based on the ILO definition of those outside the labour force (inactive population) and the CSO Main Labour Status response categories.
32 http://www.ilo.org/global/statistics-and-databases/statistics-overview-and-topics/WCMS_470306/lang--en/index.htm
33 http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Potentially_active
34 Persons available for work but not seeking are jobless people who do not qualify as unemployed because they are not actively looking for a job. This group includes, among others, discouraged jobseekers and those restrained by personal circumstances i.e. care duties.
35 Persons seeking work but not immediately available are jobless people actively or passively seeking work. This group includes those awaiting the results of a job interview or waiting to start a job they found.

Figure 10.4 PALF share of total inactive population with respect to CSO main labour status categories, quarter 4 2017

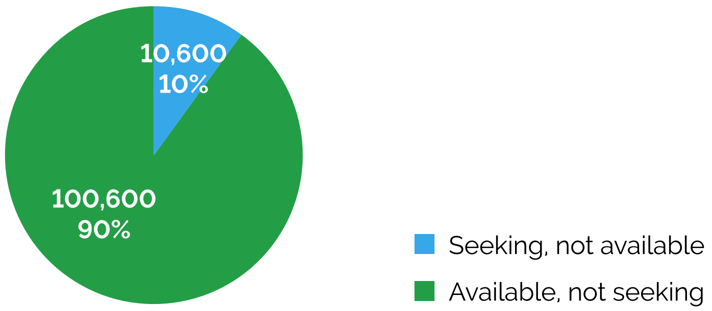


Source: SLMRU Analysis of CSO LFS data

PALF by subgroup

Of the 111,200 persons identified as forming the PALF in Ireland in quarter 4 2017, persons available but not seeking work significantly outnumbered those seeking but not immediately available for work (Figure 10.5). This was in line with the main pattern identified in other EU countries[36].

Figure 10.5 PALF by subgroup, quarter 4 2017

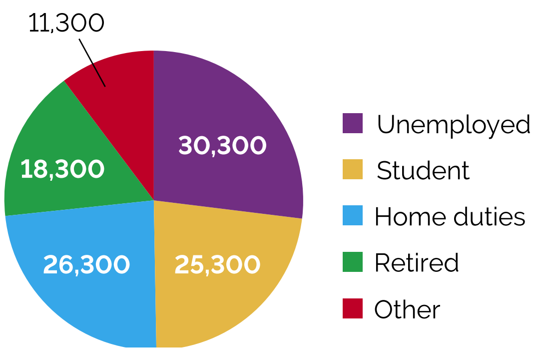


Source: SLMRU Analysis of CSO LFS data

PALF by main labour status

Half of the 111,200 persons in the PALF were those who declared themselves as unemployed or on home duties, while the other half was comprised of students, retirees, and persons inactive for other reasons[37] (Figure 10.6).

Figure 10.6 PALF by CSO main labour status, quarter 4 2017



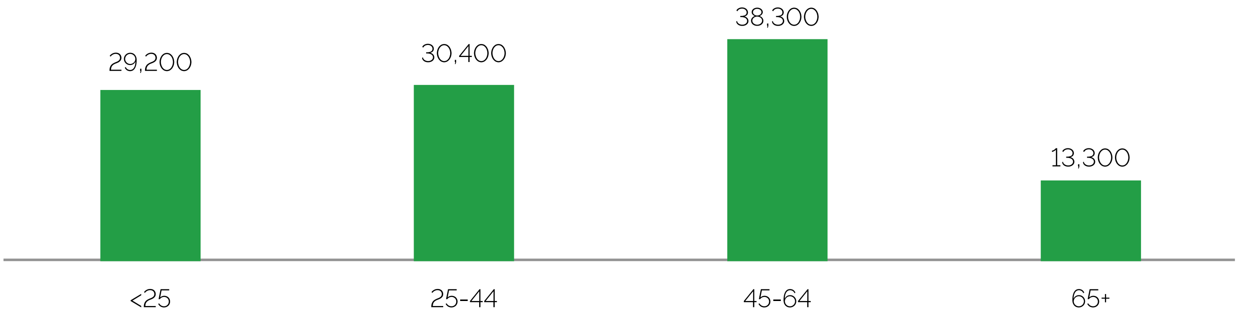
Source: SLMRU Analysis of CSO LFS data

36 http://ec.europa.eu/eurostat/statistics-explained/index.php/Underemployment_and_potential_additional_labour_force_statistics
37 Other include people identifying themselves as having illness, having disability, working (i.e. unpaid work), or inactive for further reasons.

PALF by age group

- Among the PALF, 62% were between the ages of 25 and 64 years (Figure 10.7)
- Among the 25-44 year olds, the majority were either unemployed or on home duties (81%); the same was true for the 45-64 years olds (65%).
- The under 25s were mostly students at 74%
- Of those aged 65 years and older, 85% were classified as retired.

Figure 10.7 PALF by age group, quarter 4 2017

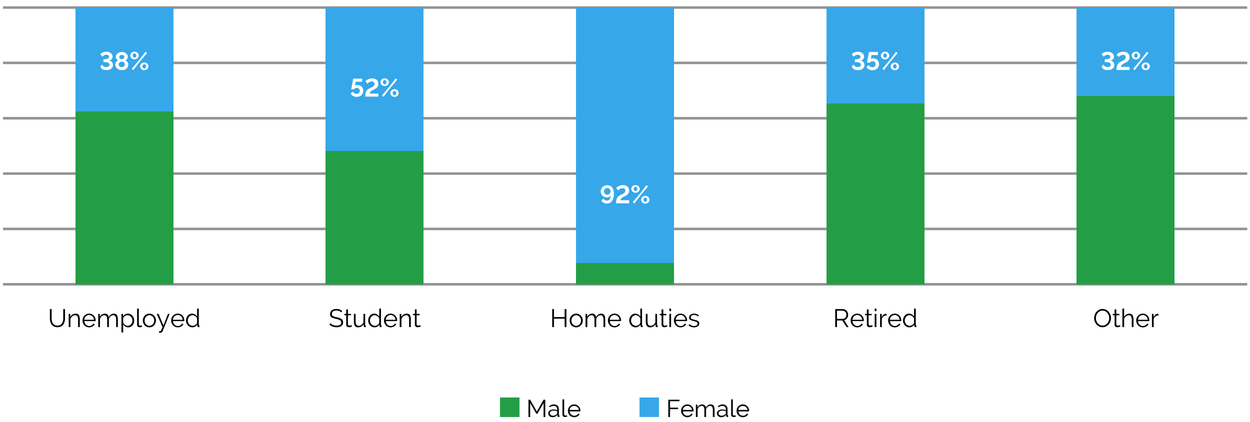


Source: SLMRU Analysis of CSO LFS data

PALF by gender

In general, the PALF was gender balanced with 53% females and 47% males. This, however, resulted from the fact that those on home duties were almost entirely female (92% or 24,100 persons in quarter 4 2017), while males accounted for higher shares of those unemployed, retired, and inactive for other reasons (Figure 10.8).

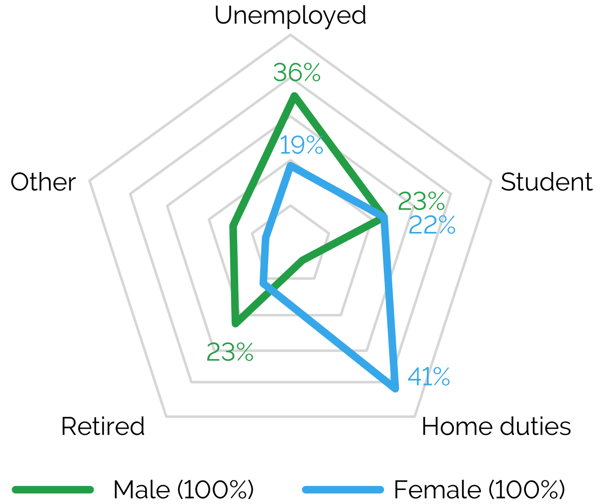
Figure 10.8 PALF by gender, quarter 4 2017



Source: SLMRU Analysis of CSO LFS data

Of all the female PALF, 41% were on home duties (Figure 10.9). Of the total PALF who were male, the largest share (36%) in quarter 4 2017 were unemployed; this compares with 19% unemployed for the female PALF. The number of retired males who were classified as PALF were double that of retired females, 12,000 persons and 6,300 persons respectively.

Figure 10.9 PALF by gender and CSO main labour status, quarter 4 2017

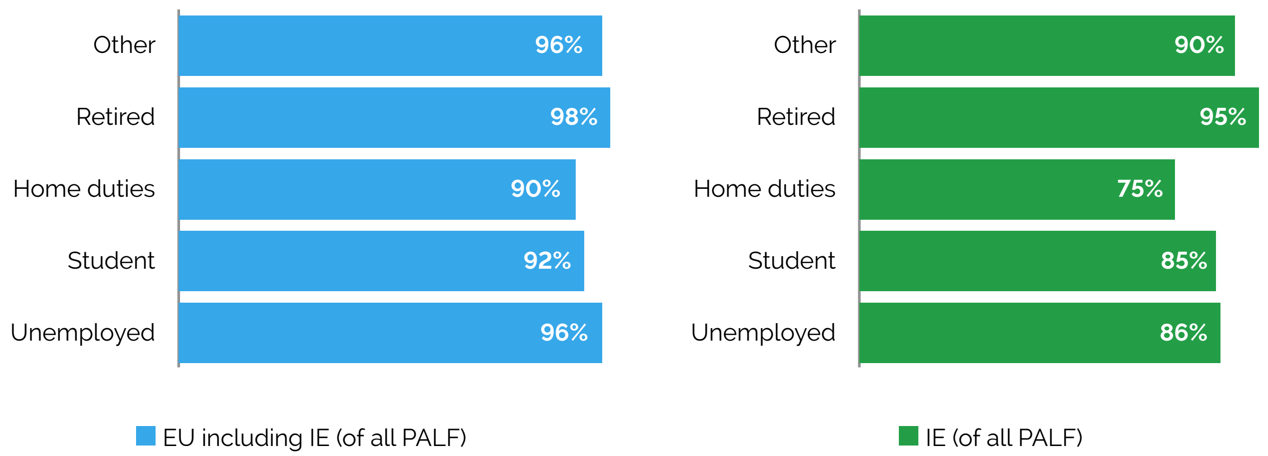


Source: SLMRU Analysis of CSO LFS data

PALF by nationality

In quarter 4 2017, 94% of the PALF were EU nationals; Irish nationals made up 85%. Most main labour status groups reflected the same pattern. However, with respect to home duties, the share of PALF who are non-Irish nationals (25%) is far higher than for the other categories, where a maximum of 15% are non-Irish (Figure 10.10).

Figure 10.10 PALF by CSO Main Labour Status and Nationality (quarter 4 2017)



Source: SLMRU Analysis of CSO LFS data

PALF by education attainment level

Of the potential additional labour force,

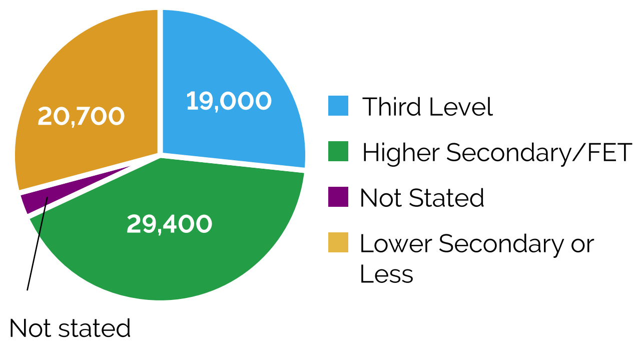
- at least 21% had acquired a third level qualification
- at least 40% had attained a higher secondary/FET qualification.

Of the PALF on home duties, 77% were persons with third or higher secondary education (9,300 and 11,000 respectively). Of those categorised as unemployed, almost 13,000 had completed higher secondary level or further education and training, and almost 11,000 had attained lower secondary education at most.

PALF by previous work experience

In total, 70,000 persons in the PALF had work experience; of these, 64% had attained third level or higher secondary/FET education (Figure 10.11). Of those aged less than 25 years old, at least two thirds had no previous work experience.

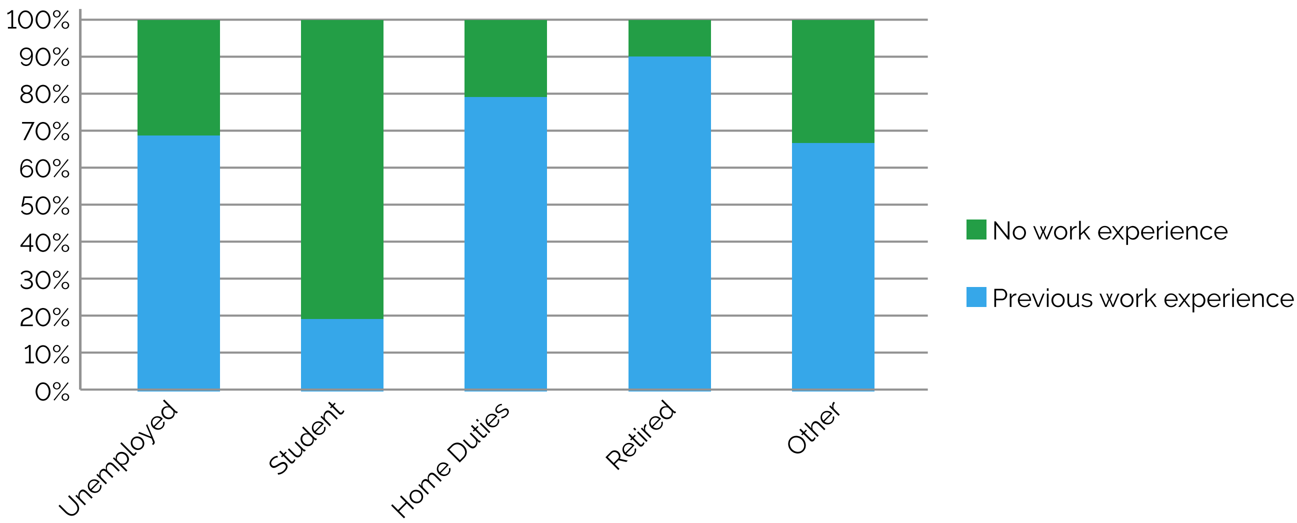
Figure 10.11 PALF with previous work experience by education, quarter 4 2017



Source: SLMRU Analysis of CSO LFS data

The share of those with previous work experience differs across the main labour market status types (Figure 10.12). For the PALF who were unemployed, 69% had previously worked, compared to 19% for students. At 79%, those categorised as on home duties had the highest share of those with work experience after the retired category.

Figure 10.12 PALF with previous work experience by main labour status, quarter 4 2017



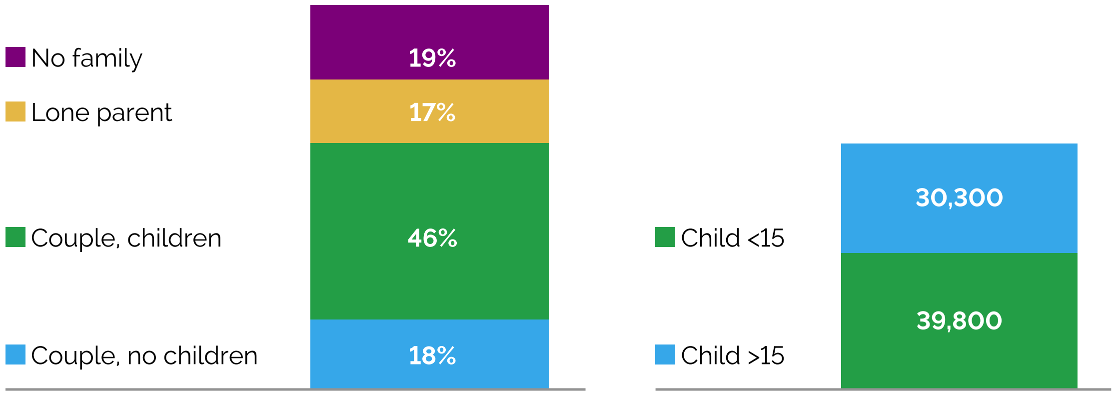
Source: SLMRU Analysis of CSO LFS data

PALF by family unit

In quarter 4 2017, 70,100 of those identified as PALF were either part of a couple (51,000) with a child or were lone parents (19,000). Of these 70,100 persons, almost 40,000 were guardians of at least one child below the age of 15 (Figure 10.13). Of the 19,000 lone parents classified as part of the PALF, 62% were females. In the case of lone parents, the majority considered themselves to be either unemployed or students (64% in total).

The majority of the PALF who were on home duties were part of a couple where the other person was at work (15,100 persons).

Figure 10.13 PALF family composition; couples and lone parents with small children, quarter 4 2017



Source: SLMRU Analysis of CSO LFS data

10.3 Conclusion

As the population continues to age and the labour market tightens, there is a need to both consider methods to encourage workers to remain in or return to the workforce, along with identifying other potential sources of labour supply. Initiatives providing flexible opportunities for those classified as the potential additional labour force, could nourish social inclusion and increase labour market participation levels. As evident from the analysis, a significant number of the PALF could benefit from non-standard working arrangements and, potentially, transition from inactivity into the labour force.

Potential target cohorts from the PALF that may be incentivised to enter or re-enter the workforce include:

- **Unemployed:** In terms of the 30,000 PALF who classify themselves as unemployed (and as such, are distinct from those who are officially classified as unemployed), 21,000 had previous work experience. A third of those unemployed had at most lower secondary education.
- **Home duties:** Of the 26,000 classified as on home duties, the majority were female, had either higher secondary/FET or third level qualifications and had previous work experience. There were 15,000 who were part of a couple where the other person was at work. Incentives around parental leave regulations and affordable child care services may enhance the labour market attachment amongst females.
- **Retired:** There were 18,000 PALF classified as retired, although only 13,300 of the total PALF were aged 65 or older. It may be possible to encourage these workers to remain or return to the workforce, even on a part-time basis.

Appendix A:

Demand and Supply Indicators by Occupational Group

9.1 Science & Engineering Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Chemical, biological & physical scientists	**17,900**	[40%]	94%		79%	95%	4.5%	105	X	Niche
Other engineering professionals	**14,200**	-	99%		84%	79%	7.2%	207	X	Niche Experience
Production, design & QC engineers	**13,000**	[56%]	93%		89%	91%	8.4%	239	X	Experience
Science & engineering technicians	**24,800**	35%	95%		93%	70%	3.1%	14	X	
Production managers in manufacturing, mining and energy	**19,000**	-	98%		93%	69%	9.5%	34	X	
Total	**88,900**	**23%**	**95%**	**12%**	**86%**	**80%**	**6.0%**	**599**		

9.2 ICT Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
ICT specialist & project managers	**18,800**	[30%]	97%		82%	84%	3.0%	336	X	
Programmers & software developers	**26,000**	-	99%		72%	91%	4.6%	1322	X	
ICT profs. n.e.c.	**19,600**	-	94%		72%	88%	6.4%	1183	X	
IT technicians	**20,300**	[26%]	96%		66%	70%	8.8%	59	X	Language skills
Total	**84,700**	**23%**	**95%**	**5%**	**72%**	**86%**	**5.5%**	**2,900**		

9.3 Business & Financial Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Accountants & tax experts	**40,400**	49%	89%	[14%]	93%	94%	1.2%	212	X	Niche Industry specific experience
Mgt. consultants, bus. analysts & project managers	**12,200**	50%	89%		83%	94%	7.8%	497	X	
Actuaries, economists & statisticians; other business profs.	**[5,800]**	-	95%		92%	[92%]	-0.5%			
Financial analysts and insurance underwriters	**16,000**	[37%]	97%		90%	86%	4.9%	49	X	
Other bus. associate profs.	**17,400**	48%	91%		89%	74%	10.1%	71	X	
Financial accounts managers	**12,000**	[57%]	95%		[75%]	[71%]	5.3%	27		
Financial managers & directors	**14,100**	[43%]	96%		91%	90%	5.9%	43	X	
Financial admin. occupations	**54,600**	73%	73%	19%	92%	55%	0.3%	25	X	
HR managers and officers	**17,000**	74%	92%		89%	84%	6.5%	32	X	
Total	**189,500**	**57%**	**86%**	**13%**	**88%**	**78%**	**3.2%**	**956**		

9.4 Healthcare Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Medical practitioners	**15,800**	[45%]	87%		82%	100%	2.2%	1,530	X	●
Therapy profs.	**11,700**	83%	[68%]		89%	96%	4.1%	7		●
Nurses & midwives	**58,500**	93%	79%	17%	89%	97%	-2.4%	1,526	X	●
Other healthcare profs.	**23,300**	71%	86%	[16%]	89%	87%	6.1%	53	X	●
Health associate profs.	**14,200**	69%	73%		90%	64%	4.9%	5		●
Total	**123,500**	**78%**	**80%**	**17%**	**86%**	**92%**	**0.9%**	**3,121**		

9.5 Education Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Higher & further education teaching profs.	**18,800**	57%	89%	[21%]	74%	98%	8.3%	38		●
Secondary teachers	**35,300**	72%	85%	[14%]	97%	99%	3.5%	1		●
Primary & nursery teachers	**41,900**	88%	88%		99%	93%	1.4%	3		●
Teaching & other educational profs.	**16,200**	64%	71%	[22%]	83%	89%	2.1%	12		●
Educational support assistants	**16,300**	94%	71%	[24%]	96%	[38%]	6.2%	3	X	●
Trainers & instructors, career guidance	**8,900**	-	[87%]		[75%]	[71%]	-4.0%	1		●
Total	**137,400**	**74%**	**83%**	**17%**	**92%**	**88%**	**2.9%**	**58**		

9.6 Social & Care Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Welfare & housing associate profs.	**9,700**	[74%]	[68%]		93%	[74%]	1.8%	3		●
Childminders, etc.	**25,600**	99%	53%		82%	35%	1.5%	10		●
Other caring services	**14,800**	69%	82%		86%	[41%]	9.2%	69		●
Social workers & welfare profs.	**8,700**	[62%]	[80%]		91%	96%	3.3%	1		●
Care workers, home carers, etc.	**61,700**	83%	62%	21%	88%	32%	4.7%	84	X	●
Total	**120,500**	**82%**	**64%**	**17%**	**87%**	**40%**	**4.1%**	**167**		

9.7 Legal & Security Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Barristers, judges, solicitors & related profs.	**13,500**	50%	93%		97%	98%	0.1%	16	X	●
Gardai	**10,500**	-	100%		100%	83%	-4.4%			●
Other protective service occupations	**14,700**	-	95%		96%	[36%]	1.9%			●
Security guards	**20,100**	-	77%		80%		4.5%			●
Total	**58,800**	**25%**	**89%**	**15%**	**89%**	**55%**	**1.0%**	**16**		

9.8 Construction Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Civil engineers & construction project managers	**11,000**	-	92%		90%	86%	6.3%	15	X	
Architects & town planners, architectural technologists, & surveyors	**12,400**	-	96%		81%	89%	2.3%	14	X	
Construction related technicians	**-**	-	-					1		
Bricklayers & plasterers	**9,900**	-	95%		81%		11.0%			
Plumbers	**9,100**	-	92%		91%		7.4%		X	
Carpenters & joiners	**18,100**	-	97%		90%		9.0%		X	
Painters & decorators	**8,100**	-	89%		[69%]		16.2%			
Other construction trades	**24,100**	-	93%	[20%]	81%		10.9%	2	X	
Construction operatives & elementary	**38.900**	-	85%	[15%]	79%		0.2%			
Total	**131,600**	**6%**	**88%**	**17%**	**85%**	**26%**	**5.1%**	**32**		

9.9 Other Craft Occupations n.e.c.

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Metal forming, welding & related trades	**10,200**	-	94%		76%		8.0%	2	X	
Metal machining, fitting & instrument making trades	**23,300**	-	95%		95%	[31%]	2.5%	10	X	Niche
Vehicle trades	**18,200**	-	94%		80%		1.8%			
Electrical & electronic trades, etc.	**36,200**	-	97%	[15%]	92%	34%	3.2%	7		
Other skilled trades	**11,800**	-	82%		83%		-0.3%	2		
Butchers, fishmongers, bakers etc.	**10,700**	-	91%		[54%]		1.0%	185	X	Labour shortage
Total	**110,400**	**8%**	**92%**	**17%**	**85%**	**27%**	**2.5%**	**206**		

9.10 Agriculture & Animal Care Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Managers in horticulture, agriculture and fishing	**-**	-	94%		[100%]			1		
Farmers	**75,300**	9%	90%	53%	99%	14%	-0.4%			
Horticultural, agricultural & fishing trades n.e.c.	**18,100**	-	70%	[30%]	94%	[28%]	5.6%	1		Labour
Elementary agriculture	**13,800**	-	53%		89%		-3.5%	1		Labour
Animal carers & pest controllers	**4,200**	-	-		[96%]					
Total	**111,400**	**12%**	**82%**	**43%**	**94%**	**16%**	**0.8%**	**3**		

9.11 Hospitality Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Hospitality managers	**19,800**	55%	92%		64%	48%	4.1%	3	X	●
Chefs & cooks	**31,700**	33%	80%	[13%]	63%	35%	7.9%	226	X	●
Catering & bar managers	**[5,800]**	-	[89%]		[80%]		4.2%	2	X	●
Kitchen & catering assistants	**33,600**	69%	57%		64%	[23%]	9.0%	16		●
Waiters & waitresses	**36,100**	78%	34%		77%	[18%]	9.2%	3	X	●
Bar staff	**20,100**	[34%]	40%		94%		0.7%	1		●
Housekeepers & caretakers, etc.	**7,600**	[81%]	[53%]		[48%]		1.6%	2		●
Total	**154,700**	**56%**	**58%**	**11%**	**70%**	**26%**	**6.3%**	**253**		

9.12 Arts, Sports & Tourism Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Media profs. & librarians	**10,400**	[69%]	79%		81%	83%	5.8%	6		●
Artistic, literary & media associate profs.	**26,900**	40%	75%	[14%]	84%	67%	4.9%	58		●
Sports & fitness occupations	**13,500**	45%	67%		82%	53%	3.4%	45	X	●
Leisure & travel service occupations	**13,300**	56%	59%		79%		6.5%			●
Hairdressers & beauticians, etc.	**25,600**	89%	56%		86%	[29%]	2.9%	2		●
Total	**89,700**	**60%**	**68%**	**12%**	**85%**	**53%**	**4.4%**	**111**		

9.13 Transport & Logistics Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Managers & directors in transport & logistics	9,200	-	93%		84%	[47%]	4.4%	9	X	
Stock control, transport & distribution admin. occupations	7,600	-	[93%]				5.8%	2	X	
Truck & van drivers	29,300		89%	23%	86%		4.3%	21	X	Labour shortage
Mobile machine drivers & operatives	14,400	-	96%		75%		5.5%		X	
Other drivers & transport operatives	37,000	-	84%	39%	90%	[14%]	1.7%		X	
Total	**97,500**	**6%**	**87%**	**25%**	**84%**	**16%**	**3.6%**	**32**		

9.14 Administrative & Secretarial Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Government admin. occupations	36,600	70%	88%	28%	95%	51%	0.9%	1		
Other administrators	62,600	78%	70%	21%	91%	47%	3.6%	14	X	
Office managers & supervisors administrative occupations	8,700	[76%]	91%	-	90%		6.9%	4		
PAs & other secretaries, etc.	28,000	95%	58%	[21%]	94%	37%	-0.6%	3	X	
Receptionists	13,300	90%	[55%]	-	84%		1.8%	3	X	
Elementary administrative	7,700	-	94%	-	97%		-4.0%	1		
Total	**156,900**	**77%**	**72%**	**21%**	**90%**	**41%**	**1.7%**	**26**		

9.15 Sales, Marketing & Customer Service Occupations

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Advertising, marketing & sales directors	**8,600**	-	97%		91%	[75%]	7.8%	52	X	
Managers & directors in retail & wholesale	**23,200**	40%	94%	[14%]	83%	44%	6.8%	13		
Business sales executives	**22,300**	[30%]	94%		77%	60%	-2.1%	333	X	Languages
Sales accounts & bus. dev. managers	**19,700**	[36%]	96%		93%	70%	2.2%	66		
Other sales and marketing assoc. prof.	**18,700**	52%	91%		89%	68%	5.1%	224	X	Languages
Sales assistants	**130,600**	69%	49%	10%	84%	20%	0.6%	27	X	
Sales related occupations n.e.c.	**19,300**	48%	78%		87%	41%	9.4%	2		
Customer service occupations	**25,400**	55%	86%		73%	45%	9.0%	60	X	Languages
Total	**267,800**	**56%**	**69%**	**10%**	**83%**	**39%**	**2.6%**	**777**		

9.16 Operatives & Elementary Occupations n.e.c.

Bulletin description	Number Employed, 2017 (Annual Average)	% Female	% Full-Time	Aged 55 years and over	% Irish Nationals	% Third Level Graduates	Annualised Employment Growth Rate, 2012-2017	New Employment Permits Issued, 2017 (Number)	SLMRU Recruitment Agency Survey	Shortage Indicator
Food, drink & tobacco	**16,600**	[31%]	85%		57%		1.3%			●
Chemical & related process	**7,600**	-	97%		[83%]		11.6%			●
Other process operatives and process plant occupations	**16,500**	[33%]	84%		71%		2.7%	1	X	●
Plant & machine	**9,600**	-	91%	[11%]	85%		6.2%	2	X	●
Assemblers & routine operatives	**33,300**	38%	90%	26%	70%	32%	0.5%	2		●
Cleaners	**44,400**	70%	48%		56%	[18%]	1.8%	10		●
Sales, storage & services	**26,500**	-	78%		77%		0.6%	5	X	●
Total	**154,500**	**38%**	**75%**	**14%**	**68%**	**21%**	**1.9%**	**20**		

Appendix B:
Breakdown of Occupational Groups

Occupational Groups	SOC Description
Science & Engineering Occupations	**Chemical, biological & physical scientists**
	Chemical scientists Biological scientists and biochemists Physical scientists Social and humanities scientists Natural and social science professionals n.e.c. Conservation professionals Environment professionals Research and development managers
	Production, design & QC engineers
	Design and development engineers Production and process engineers Quality control and planning engineers Quality assurance and regulatory professionals Environmental health professionals
	Other engineering professionals
	Mechanical engineers Electrical engineers Electronics engineers Engineering professionals n.e.c. Science & engineering technicians Laboratory technicians Electrical and electronics technicians Engineering technicians Quality assurance technicians Planning, process and production technicians Science, engineering and production technicians n.e.c.
	Production managers in manufacturing, mining and energy
	Production managers and directors in manufacturing
IT Professional Occupations	**ICT specialist & project managers**
	Information technology and telecommunications directors IT specialist managers IT project and programme managers
	Programmers & software developers
	Programmers and software development professionals
	ICT profs. n.e.c.
	IT business analysts, architects and systems designers Web design and development professionals Information technology and telecommunications professionals n.e.c.
	IT technicians
	IT operations technicians IT user support technicians

Business and Financial Occupations	**Accountants & tax experts**	
	Chartered and certified accountants and taxation experts	
	Taxation Experts	
	Mgt. consultants, bus. analysts & project managers	
	Management consultants and business analysts	
	Business and financial project management professionals	
	Actuaries, economists & statisticians; other business profs.	
	Actuaries, economists and statisticians	
	Business and related research professionals	
	Business, research and administrative professionals n.e.c.	
	Financial analysts and insurance underwriters	
	Brokers	
	Insurance underwriters	
	Finance and investment analysts and advisers	
	Other bus. associate profs.	
	Estimators, valuers and assessors	
	Importers and exporters	
	Financial and accounting technicians	
	Business and related associate professionals n.e.c.	
	Legal associate professionals	
	Financial accounts managers	
	Financial accounts managers	
	Financial managers & directors	
	Financial managers and directors	
	Financial institution managers and directors	
	Financial admin. occupations	
	Credit controllers	
	Book-keepers, payroll managers and wages clerks	
	Bank and post office clerks	
	Finance officers	
	Financial administrative occupations n.e.c.	
	Pensions and insurance clerks and assistants	
	HR managers and officers	
	Human resource managers and directors	
	Human resources and industrial relations officers	

Healthcare Occupations	**Other healthcare profs.**
	Psychologists Pharmacists Opticians (Incl. Dispensing Opticians, old Code 3216) Dental practitioners Veterinarians Medical radiographers Podiatrists Health professionals n.e.c. Health services and public health managers and directors Social services managers and directors Health care practice managers
	Medical practitioners
	Medical practitioners
	Therapy profs.
	Physiotherapists Occupational therapists Speech and language therapists Therapy professionals n.e.c.
	Nurses & midwives
	Nurses and midwives *Midwives*
	Health associate profs.
	Paramedics Dispensing opticians Pharmaceutical technicians Medical and dental technicians Health associate professionals n.e.c. Dental nurses
Education Occupations	**Higher & further education teaching profs.**
	Further and Higher education teaching professionals *Higher and further education teaching professionals*
	Secondary teachers
	Secondary education teaching professionals
	Primary & nursery teachers
	Primary and nursery education teaching professionals
	Teaching & other educational profs.
	Special education teaching professionals Senior professionals of educational establishments Education advisers and school inspectors Teaching, special needs, and other educational professionals n.e.c.
	Educational support assistants
	Teaching assistants Educational support assistants

Education Occupations continued	**Trainers & instructors, career guidance**
	Vocational and industrial trainers and instructors Careers advisers and vocational guidance specialists Driving instructors
Social and Care Occupations	**Welfare & housing associate profs.**
	Youth and community workers Child and early years officers Housing officers Counsellors Welfare and housing associate professionals n.e.c.
	Childminders, etc.
	Nursery nurses and assistants and playworkers Childminders and related occupations Playgroup leaders
	Other caring services
	Nursing auxiliaries and assistants Ambulance staff (excluding paramedics) Undertakers, mortuary and crematorium assistants
	Social workers & welfare profs.
	Social workers Probation officers Clergy Welfare professionals n.e.c.
	Care workers, home carers, etc.
	Houseparents and residential wardens Care workers and home carers Senior care workers Care escorts
Legal and Security Occupations	**Barristers, judges, solicitors & related profs.**
	Barristers and judges Solicitors Legal professionals n.e.c.
	Gardai
	Senior police officers Police officers (sergeant and below)
	Other protective service occupations
	Officers in armed forces Senior officers in fire, ambulance, prison and related services NCOs and other ranks Fire service officers (watch manager and below) Prison service officers (below principal officer) Police community support officers Protective service associate professionals n.e.c.

Legal and Security Occupations continued	**Security guards**
	Security guards and related occupations Parking and civil enforcement occupations School midday and crossing patrol occupations Elementary security occupations n.e.c.
Construction Occupations	**Civil engineers & construction project managers**
	Civil engineers Construction project managers and related professionals Production managers and directors in construction
	Architects & town planners, architectural technologists, & surveyors
	Architects and town planners (incl. Town planners, old code 2432) *Town planners* Quantity surveyors Chartered surveyors Chartered architectural technologists
	Construction related technicians
	Building and civil engineering technicians Architectural and town planning technicians Draughtspersons
	Bricklayers & plasterers
	Bricklayers and masons Plasterers
	Plumbers
	Plumbers and heating and ventilating engineers
	Carpenters & joiners
	Carpenters and joiners
	Painters & decorators
	Painters and decorators
	Other construction trades
	Steel erectors Roofers, roof tilers and slaters Glaziers, window fabricators and fitters Construction and building trades n.e.c. Floorers and wall tilers Construction and building trades supervisors
	Construction operatives & elementary
	Elementary construction occupations Scaffolders, stagers and riggers Road construction operatives Rail construction and maintenance operatives Construction operatives n.e.c.

Other Craft Occupations	**Metal forming, welding & related trades**	
	Smiths and forge workers Moulders, core makers and die casters Sheet metal workers Metal plate workers, and riveters Welding trades Pipe fitters	
	Metal machining, fitting & instrument making trades	
	Metal machining setters and setter-operators Tool makers, tool fitters and markers-out Metal working production and maintenance fitters Precision instrument makers and repairers Air-conditioning and refrigeration engineers	
	Vehicle trades	
	Vehicle technicians, mechanics and electricians Vehicle body builders and repairers Vehicle paint technicians Aircraft maintenance and related trades Boat and ship builders and repairers Rail and rolling stock builders and repairers	
	Electrical & electronic trades, etc.	
	Electricians and electrical fitters Telecommunications engineers TV, video and audio engineers IT engineers Electrical and electronic trades n.e.c. Skilled metal, electrical and electronic trades supervisors	
	Other skilled trades	
	Weavers and knitters Upholsterers Footwear and leather working trades Tailors and dressmakers Textiles, garments and related trades n.e.c. Pre-press technicians Printers Print finishing and binding workers Glass and ceramics makers, decorators and finishers Furniture makers and other craft woodworkers Florists Other skilled trades n.e.c.	
	Butchers, fishmongers, bakers etc.	
	Butchers Bakers and flour confectioners Fishmongers and poultry dressers	
Agriculture & animal care	**Managers in horticulture, agriculture and fishing**	
	Managers and proprietors in agriculture and horticulture Managers and proprietors in forestry, fishing and related services Managers and proprietors in horse-racing and related industries	

Agriculture & animal care continued	**Farmers**
	Farmers
	Horticultural, agricultural & fishing trades n.e.c.
	Horticultural trades Gardeners and landscape gardeners Groundsmen and greenkeepers Skilled workers in horse-racing and related industries Agricultural and fishing trades n.e.c.
	Animal carers & pest controllers
	Veterinary nurses Pest control officers Animal care services occupations n.e.c.
	Agriculture
	Farm workers Forestry workers Elementary occupations in horse-racing and related industries Fishing and other elementary agriculture occupations n.e.c.
Hospitality Occupations	**Hospitality managers**
	Hotel and accommodation managers and proprietors Restaurant and catering establishment managers and proprietors Publicans and managers of licensed premises
	Chefs & cooks
	Chefs Cooks
	Catering & bar managers
	Catering & bar managers
	Kitchen & catering assistants
	Kitchen & catering assistants
	Waiters & waitresses
	Waiters & waitresses
	Bar staff
	Bar staff
	Housekeepers & caretakers, etc.
	Housekeepers and related occupations Cleaning and housekeeping managers and supervisors
Arts, Sports and Tourism Occupations	**Media profs. & librarians**
	Librarians Archivists and curators Journalists, newspaper and periodical editors Public relations professionals Advertising accounts managers and creative directors

Arts, Sports and Tourism Occupations continued	**Artistic, literary & media associate profs.**
	Artists Authors, writers and translators Actors, entertainers and presenters Dancers and choreographers Musicians Arts officers, producers and directors Photographers, audio-visual and broadcasting equipment operators Graphic designers Product, clothing and related designers
	Sports & fitness occupations
	Leisure and sports managers Sports players Sports coaches, instructors and officials Fitness instructors
	Leisure & travel service occupations
	Sports and leisure assistants Travel agents Air travel assistants Rail travel assistants Leisure and travel service occupations n.e.c. Leisure and theme park attendants Travel agency managers and proprietors
	Hairdressers & beauticians, etc.
	Hairdressers, barbers, beauticians and related occupations *Beauticians and related occupations*
Transport and Logistics Occupations	**Managers & directors in transport & logistics**
	Managers and directors in transport and distribution Managers and directors in storage and warehousing
	Stock control, transport & distribution admin. occupations
	Stock control clerks and assistants Transport and distribution clerks and assistants
	Truck & van drivers
	Large goods vehicle drivers Van drivers
	Mobile machine drivers & operatives
	Crane drivers Fork-lift truck drivers Agricultural machinery drivers Mobile machine drivers and operatives n.e.c.

Transport and Logistics Occupations continued	**Other drivers & transport operatives**
	Bus and coach drivers Taxi and cab drivers and chauffeurs Train and tram drivers Marine and waterways transport operatives Air transport operatives Rail transport operatives Other drivers and transport operatives n.e.c.
	Aircraft pilots, ship officers, air traffic controllers
	Air traffic controllers *Aircraft pilots and flight engineers* *Ship and hovercraft officers*
Administrative and Secretarial Occupations	**Government admin. occupations**
	National government administrative occupations Local government administrative occupations Officers of non-governmental organisations
	Other administrators
	Records clerks and assistants Library clerks and assistants Human resources administrative occupations Sales administrators Other administrative occupations n.e.c.
	Office managers & supervisors administrative occupations
	Office managers Office supervisors
	PAs & other secretaries, etc.
	Medical secretaries *Legal secretaries* *Legal secretaries* *Legal secretaries* Personal assistants and other secretaries Typists and related keyboard occupations
	Receptionists
	Receptionists
	Elementary administrative
	Postal workers, mail sorters, messengers and couriers Elementary administration occupations n.e.c.
Sales and Customer Service Occupations	**Advertising, marketing & sales directors**
	Marketing and sales directors Purchasing managers and directors Advertising and public relations directors
	Managers & directors in retail & wholesale
	Managers and directors in retail and wholesale
	Business sales executives
	Business sales executives

Sales and Customer Service Occupations continued	**Sales accounts & bus. dev. managers**	Sales accounts and business development managers
	Other sales and marketing assoc. prof.	Buyers and procurement officers Marketing associate professionals Estate agents and auctioneers Conference and exhibition managers and organisers Property, housing and estate managers
	Sales assistants	Sales and retail assistants, cashiers and checkout operators *Retail cash desk and check-out operators* Telephone salespersons Pharmacy and other dispensing assistants Vehicle and parts salespersons and advisers
	Sales related occupations	Collector salespersons and credit agents Debt, rent and other cash collectors Roundspersons and van salespersons Market and street traders and assistants Merchandisers and window dressers Sales related occupations n.e.c. Sales supervisors
	Customer service occupations	Call and contact centre occupations Telephonists Communication operators Market research interviewers Customer service occupations n.e.c. Customer service managers and supervisors
Operatives & elementary occupations n.e.c.	**Food, drink & tobacco**	Food, drink and tobacco process operatives
	Chemical & related process	Chemical and related process operatives
	Other process operatives and process plant occupations	Glass and ceramics process operatives Textile process operatives Rubber process operatives Plastics process operatives Metal making and treating process operatives Electroplaters Process operatives n.e.c. Industrial cleaning process occupations Packers, bottlers, canners and fillers Elementary process plant occupations n.e.c.

Operatives & elementary occupations n.e.c. continued	**Plant & machine**
	Paper and wood machine operatives Coal mine operatives Quarry workers and related operatives Energy plant operatives Metal working machine operatives Water and sewerage plant operatives Printing machine assistants Plant and machine operatives n.e.c.
	Assemblers & routine operatives
	Assemblers (electrical and electronic products) Assemblers (vehicles and metal goods) Routine inspectors and testers Weighers, graders and sorters Tyre, exhaust and windscreen fitters Sewing machinists Assemblers and routine operatives n.e.c.
	Cleaning
	Window cleaners Street cleaners Cleaners and domestics Launderers, dry cleaners and pressers Refuse and salvage occupations Vehicle valeters and cleaners Elementary cleaning occupations n.e.c.
	Sales, storage & services
	Shelf fillers Elementary sales occupations n.e.c. Elementary storage occupations Hospital porters Other elementary services occupations n.e.c.

Skills and Labour Market Research Unit
SOLAS
Castleforbes House,
Castleforbes Road,
D01 A8NO,
Dublin 1.

Tel: 01 5332464
Email: annemarie.hogan@solas.ie
www.solas.ie

SOLAS
learning works