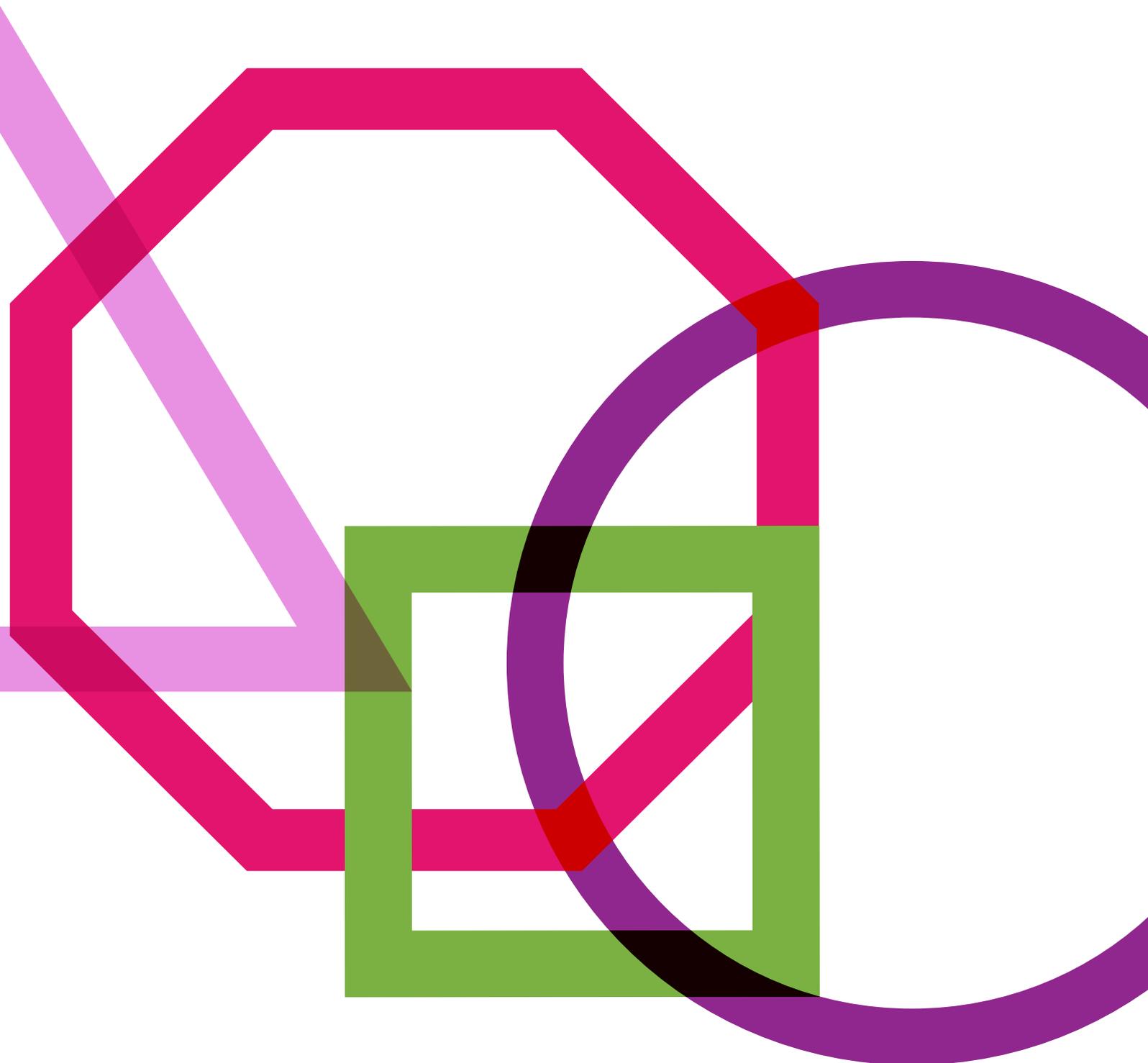


National Skills Bulletin

2022



National Skills Council

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National Skills Bulletin 2022

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

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Foreword by the Minister for Further and Higher Education, Research, Innovation and Science

Ireland emerged from the pandemic with a remarkable recovery marked by significant increases in employment levels, and a labour market undergoing considerable change. Ireland's workforce has never been larger and it continues to grow, with 2.5 million people in employment by the end of last year. There was significant movement in the economy with over 2 million labour market transitions, driven both by a return to work for those on Pandemic Unemployment Payments and a high degree of movements between jobs for those already employed. The wholesale and retail and accommodation and food sectors in particular saw a large number of hires over the year.

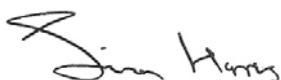
The growth in employment has not only led to an intensification of existing skills shortages, but also the emergence of additional shortages across a range of occupations. The Irish economy needs more ICT professionals and engineers, and there are many roles in healthcare, construction, hospitality and transport that need to be filled. While many of these shortages are being experienced globally, it is imperative that our education and training system continues to evolve to meet the needs of the labour market, particularly in relation to the changing skills requirements associated with technological change, and the transition to a low carbon economy.

We face many challenges in the socio-economic space. The rising cost of living and soaring energy prices, and a tightening labour market, mean it is more crucial now than ever before that we ensure everyone has the necessary skills to benefit from the opportunities that exist in the economy, and that employers can find candidates with the necessary skills to meet their business needs. We must continue to make upskilling and reskilling opportunities available across a range of areas for those in employment, and those seeking work.

Ireland has an advanced system of skills provision across Further and Higher Education, lifelong learning, and human capital development, a system which has proven to be agile and responsive to changes in the world of work in order to address evolving skills needs. The National Skills Council (NSC) and nine Regional Skills Fora (RSF), created under the National Skills Strategy, foster engagement and collaboration between relevant Government Departments and agencies, the education and training system, and enterprise. The broader skills ecosystem also encompasses entities including SOLAS, where Skills and Labour Market Research Unit (SLMRU) is hosted, the Expert Group on Future Skills Needs (EGFSN, Department of Enterprise, Trade and Employment) and the National Training Fund Advisory Group (NTFAG, DFHERIS). While my Department has responsibility for skills policy, the broader skills ecosystem informs and drives responsive, flexible forecasting, planning, and provision.

The tertiary education system is working to address identified skills shortages, with programmes including Skills to Compete, Skills to Advance, SkillNet, Springboard, courses in NZEB Centres of Excellence, eCollege, and our consistently expanding and diversifying Apprenticeship offerings. I am determined to continue delivering for our education system through targeted capital investment. Every community in Ireland deserves modern and professional facilities which offer citizens the opportunity to develop the skills needed for our evolving economy.

The National Skills Bulletin provides an excellent guide to inform and shape policy, especially in terms of the skills, including re-skilling opportunities, that can be delivered through Ireland's education and training system. The report offers a detailed overview of the labour market in 2021, and it examines a wide range of occupations which highlight the jobs most in demand, while identifying where challenges are occurring. I firmly believe that by continuing to work together, our skills policies can respond to future challenges and opportunities, and ensure that Ireland's best asset remains its people.



Simon Harris T.D.

Minister for Further and Higher Education, Research, Innovation and Science

Table of Contents

Executive Summary	1
Introduction	10
Section 1 Macroeconomic Context	13
Section 2 Labour Market Overview	20
Section 3 Employment by Economic Sector	32
Section 4 Employment by Broad Occupation	43
Section 5 Regional Labour Market Overview	52
Section 6 Unemployment	68
Section 7 Labour Market Transitions and Recent Job Hires	78
Section 8 Employment Permits	86
Section 9 Vacancies	96
Section 10 Occupational Employment Profiles	117
10.1 Science & Engineering Occupations	119
10.2 ICT Occupations	122
10.3 Business & Financial Occupations	124
10.4 Healthcare Occupations	127
10.5 Education Occupations	129
10.6 Social & Care Occupations	131
10.7 Legal & Security Occupations	133
10.8 Construction Occupations	135
10.9 Other Craft Occupations n.e.c.	138
10.10 Agriculture & Animal Care Occupations	141
10.11 Hospitality Occupations	143
10.12 Arts, Sports & Tourism Occupations	146
10.13 Transport & Logistics Occupations	148
10.14 Administrative & Secretarial Occupations	150
10.15 Sales, Marketing & Customer Service Occupations	152
10.16 Operatives & Elementary Occupations n.e.c.	155
Appendix A: Demand and Supply Indicators by Occupational Group	159
Appendix B: Breakdown of Occupational Groups	169



Executive Summary

The National Skills Bulletin 2022 is the eighteenth in an annual series of reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS and the sixth 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, and 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 reflects the data gathered by the SLMRU across a range of data sources, including the CSO's Labour Force Survey; it spans 95 occupational groups and examines a number of labour market indicators.

Snapshot of the Irish Labour Market in 2021

The COVID-19 pandemic continued to negatively impact some sectors of the Irish economy in 2021, particularly in the earlier months of the year. The second half of the year was characterised by significant rehiring and growth in employment. Although the number of persons in receipt of Pandemic Unemployment Payments (PUP) declined through the year, the numbers in receipt of payment through the Employment Wage Subsidy Scheme (EWSS) remained relatively consistent. As these schemes did not cease until May 2022, this Bulletin does not reflect the impact of the removal of these payments on employment numbers.

As Ireland's economy began to emerge from restrictions in 2021, a reversal of the declines seen with the onset of COVID-19 was evident across a number of labour market indicators:

- the labour force increased by 154,800 since 2020, standing at 2.55 million (annual average)
- employment increased by over 136,200 since 2020 to 2.39 million (annual average)
- the employment rate increased by 3.3 percentage points to 69.9% (annual average)
- the participation rate increased by 3.1 percentage points to 63.3% (annual average)
- the youth unemployment rate decreased by 4 percentage points to 10.2% (quarter 4)
- in terms of those aged 15-24 years, the NEET¹ rate decreased by 4 percentage points between quarter 4 2020 and quarter 4 2021 to 5.8%
- the broad unemployment measure (combining unemployed and part-time underemployed persons) decreased by 0.9 percentage points to 9.1% (quarter 4)
- the inactivity rate for those aged 15-64 years declined sharply since 2020, by 5.5 percentage points to 23.2% (annual average)
- average hourly earnings increased across almost all sectors apart from the accommodation and food sector between quarter 4 2020 and quarter 4 2021.

Other labour market developments over the period worth noting include the following:

- while the annual average unemployment level in 2021, at 157,800, was 18,600 higher than in 2020, this masks large changes that occurred throughout 2021: in quarter 1 2021, unemployment rose due to the re-introduction of COVID-related restrictions, but by quarter 4 2021, unemployment had fallen to 127,400 persons, or 4.9%
- the long-term unemployment rate increased marginally, by 0.2 percentage points to 1.7% between quarter 4 2020 and quarter 4 2021
- the old age dependency rate continued to increase, by 0.6 percentage points to 23.0% between quarter 4 2020 and quarter 4 2021

¹Not in Employment, Education or Training (NEET)

- inward migration declined to 65,200, its lowest level since 2014, resulting in a net migration of just 11,200; however, 2022 figures show that this fall in inward migration was temporary in nature, with numbers exceeding 120,000.

Sectoral Employment

In quarter 4 2021, with nearly 320,000 persons employed, health & social work was the largest sector, followed by industry (314,100 persons) and wholesale & retail (306,000 persons). Combined, these three sectors made up 37% of total national employment.

Despite the year-on-year growth that occurred across many sectors between quarter 4 2020 and quarter 4 2021, analysis of the two-year period since quarter 4 2019 shows that employment in a number of sectors remained below pre-COVID-19 levels, namely accommodation & food (10% lower compared to quarter 4 2019), admin & support services (15% lower) and other NACE activities (4% lower). At the same time, growth in employment levels was particularly strong for the ICT and professional services sectors, at 31% and 23% respectively.

Employment by Broad Occupation

In quarter 4 2021, professional, associate professional and managerial occupations made up 1.1 million persons, or 44% of total national employment. Compared to pre-COVID-19 levels, employment fell for sales, elementary, skilled trades (excluding farmers) and caring/personal services occupations; the number of workers grew for all other occupations, with the largest relative growth for associate professional occupations (+19%) and the largest absolute growth for professionals (74,000 additional persons employed).

When compared to quarter 4 2019,

- more than two thirds of the employment increase for those aged 15-24 years was in elementary and sales occupations; the number of 25-54-year-olds working in professional and associate professional occupations grew strongly, more than offsetting the fall in elementary, sales and skilled trades; the number of older workers (aged 55 years and over) fell in elementary and sales occupations but grew for all other occupations, particularly managers, professionals and associate professionals
- there was a further shift towards higher levels of educational attainment in the workforce, with an increase in the number of third level graduates for almost all occupations, except caring/personal services
- growth in full-time employment was strongest for professional and associate professional occupations, although it fell for others such as elementary and skilled trades occupations; for part-time employment, there were increases for all occupational groups except caring/personal services.

Regional analysis

Dublin had the highest labour force participation rate in quarter 4 2021, at 69.1%, followed by the Mid-East and Midland regions at 66.1% and 65.9%, respectively. For all other regions, the labour force participation rate was below the national average (65.1%), with the lowest rate of all being for the Border region at 59.9%.

Between quarter 4 2019 and quarter 4 2021,

- the labour force participation rate increased across all regions, with the largest gain, of nearly seven percentage points, in the Midland region
- employment numbers grew in each region, with the largest relative increases for the Midland and Mid-West regions, at 13% and 11% - considerably higher than the national average of 6%

- in the Border and South West regions, the share of workers in the wholesale and retail sector fell by three percentage points; the largest gains were in the share of the Mid-West's workforce in industry and the share of the Midland region in the education sector, which each rose by three percentage points
- the share of females in the workforce increased in all regions except the West (where it declined by 0.2 percentage points).

Unemployment

In 2021, unemployment levels stood at 157,800 based on the annual average, although the numbers in quarter 4 2021 (127,400) were far lower than at the beginning of the year (170,500 persons).

Based on the annual averages, between 2019 and 2021,

- unemployment rates for Irish citizens grew 1.2 percentage points to 6.0% compared to a 1.6 percentage point increase for non-Irish citizens, reaching 7.3%
- those previously employed in the accommodation/food sector saw the largest increase (8 percentage points) to 12.9%
- the unemployment rate increased across all occupations (except professionals), with the greatest increases observed for those previously employed in elementary (4.3 percentage points), sales occupations (2.8 percentage points) and skilled trades (1.5 percentage points), highlighting the significant impact that restrictions imposed as a response to COVID-19 had on lower skilled occupations.

Labour Market Transitions and Recent Job Hires

The change in the labour market status of individuals – employment, unemployment and economic inactivity – between two points in time is referred to as a 'labour market transition'. There were 2.02 million transitions recorded in the labour market in 2021, compared to 1.67 million in 2020. At 672,000, the number of transitions into employment from both unemployment and inactivity was considerably more than the number of transitions out of employment (433,000). The most significant change between 2020 and 2021 related to movements for those already in employment, with transitions for those changing occupations (inter-occupational) increasing by almost 200,000; transitions relating to those changing employers but remaining in the same occupations increased by 81,000.

Recent job hires data refers to those who commenced employment in the previous three months; analysis of this data provides information on the sectors and occupations in which hirings were occurring and a profile of those who have been recently hired. An occupation with a high level of recent job hires may signal a level of job churn particularly if there is no evidence of a corresponding employment growth. In 2021, when all four quarters were summed, there were almost 500,000 recent job hires, an increase of 50% on 2020 and 12% on 2019. The wholesale and retail and accommodation and food sectors accounted for the highest number of recent job hires, both seeing large increases since 2020. Elementary occupations (e.g. catering assistants, waiters and bar staff) accounted for 22% of all recent job hires in 2021, followed by professional (15%) and sales (14%) occupations.

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

Approximately 14,000 new employment permits were issued in 2021, a similar number to the previous year. At almost 5,100, the health sector accounted for the largest number of new employment permits issued. The health sector along with the financial and arts, entertainment and other sectors saw the largest growth in the number of permits issued in 2021, at 19%, 14% and 5% respectively.

The majority of new permits issued in 2021 were for professional roles. New permits for operative occupations decreased significantly in 2021, most likely related to the filling of quotas for certain roles; however, new general employment permit quotas for both elementary and operative occupations were introduced by the Department of Enterprise, Trade and Employment in October of 2021.

Vacancies

The CSO vacancy data examined in Section 9 shows that the number of job vacancies reported fell significantly in 2020 as a result of the pandemic but has seen a recovery since, with numbers peaking at over 31,000 in quarter 3 2021, far higher than any other year on record. There were 29,400 vacancies reported in quarter 4 2021, representing a job vacancy rate of 1.4%. When the vacancy rate in quarter 4 2021 was compared to that of quarter 4 2019, the rate increased across all sectors of the economy with the exception of administrative and support services. The highest job vacancy rate in quarter 4 2021 was for the professional activities sector at 3%.

The analysis of online job vacancy advertisements is based on two data sources: the Ireland subset of CEDEFOP's OVATE (online vacancy analysis tool for Europe) system and the Public Employment Services (PES) vacancy data (from Department of Social Protection's vacancy portal, Jobs Ireland).

In 2021, the OVATE database held more than half a million job vacancy adverts for posts in Ireland, 26% more than the total number observed in 2020. These job vacancy adverts were concentrated in professional (especially those related to IT) and associate professional occupations, which combined accounted for 57% of the total. In contrast, elementary and operative occupations combined made up just 10% of the total. The skills in the most frequently mentioned job adverts included adapt to change, work in teams, teamworking skills, use a computer, use Microsoft Office, and communication skills.

Newly advertised vacancies through DSP Jobs Ireland in 2021 were concentrated in operative (e.g. meat processing operatives), sales (e.g. sales assistants), elementary (e.g. agricultural roles in horticulture/dairy), skilled trades (e.g. chefs, carpenters), and personal services (e.g. healthcare assistants, care workers) occupations.

The SLMRU Recruitment Agency Survey from October 2021 indicated that mentions of difficult-to-fill (DTF) vacancies continued to occur particularly for professional occupations (with the majority for IT programmers and engineers). Mentions arose across all other occupational groups, albeit in smaller numbers.

Occupational Employment Outlook and Shortages

Employment outlooks are provided across the 16 occupational groups and the 95 occupations detailed in this report. A number of data sources at occupational level, as detailed in Section 10, were analysed so as to examine the level of demand for these jobs, to derive an outlook for each of the occupations, and to identify where shortages or potential shortages were arising.

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. 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. 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

Employment grew strongly in this occupational group over the five-year period, particularly in the year since 2020 with an additional 16,000 persons employed. This has been driven primarily by growth in employment in high tech manufacturing. Provision from the third level education system for science and engineering graduates remains strong. However, the strong employment growth for these occupations and the demand for the skillsets associated with scientists and engineers (e.g. critical analysis, problem solving) across a range of other occupations (e.g. public administration professionals, teachers, among others), will ensure continued demand and job opportunities for these roles. Furthermore, the shift towards a low carbon economy is expected to result in a demand for additional skills amongst scientists (e.g. ecology, environmental, conservation), electrical engineers (e.g. renewable and high voltage) and technicians (e.g. solar/wind).

Future demand for these occupations is anticipated to be strong, with shortages likely to continue. The shortages are expected to be small in number and, for some, will relate to those with experience in niche areas.

Skills shortages:

- analytical, process, and medical scientists
- engineers (quality control/assurance, process, design, mechanical, electrical, automation, validation)
- maintenance/lab technicians

IT Occupations

ICT occupations had both the highest annual average growth over the five-year period compared to all other occupational groups and the highest absolute growth since 2020. The growth in 2021 was driven primarily by those employed as programmers and software developers and IT technicians. This occupational group had the second highest share of new employment permits issued in 2021, after healthcare occupations. Supply from the education/training system continued to grow steadily with almost 8,000 graduates emerging from the third level system in 2020, primarily at NQF levels 8-10.

The COVID-19 pandemic does not appear to have negatively impacted employment for those in ICT occupations. The significant take-up of working from home amongst those in ICT occupations may have alleviated some of the issues in sourcing suitably qualified staff for these roles through accessing skills from outside Ireland without the requirement to be located here. If employment continues to grow at the rate seen in recent years, however, significant shortages for those with the specific skills in demand may intensify.

Skills shortages:

- IT project managers
- Software developers/engineers
- IT analysts/engineers
- IT technicians with foreign languages

Business & Financial Occupations

Employment has grown strongly in this occupational group, particularly since 2019. Just over a third employed in these occupations were in the financial sector with the remainder spread across a range of sectors.

Skills gaps in financial services include data analytics, digital transformation, risk and compliance, leadership, and GDPR/cybersecurity. Enterprise Ireland's Spotlight on Skills data highlights a demand for financial skills, including relationship management, critical thinking, negotiation, commercial acumen, business analysis, financial forecasting, and communication. The imminent closure of Ulster Bank and KBC, along with restructuring within the remaining banks, will impact on future demand for retail banking skills. Many roles within this group have been identified as being at risk of automation, particularly financial administrative roles.

Healthcare Occupations

Those employed in healthcare occupations have been particularly impacted by the COVID-19 pandemic in terms of both increased demands for services and exposure to infection. Overall employment levels fell in 2020 but had almost recovered to pre-COVID-19 levels by 2021, with growth particularly evident in the latter quarters of 2021. The employment permit system continues to be a main source of skills for these roles with almost 5,000 new permits in 2021, accounting for over a third of all new permits issued. In June 2022, a number of healthcare occupations including pharmacists, cardiac physiologists, occupational therapists, physiotherapists, podiatrists/chiropractors, psychologists and speech and language therapists, were added to the Critical Skills Occupations List in response to issues in sourcing suitable candidates for these roles.

Demand for healthcare services continues to be high as the system deals with the backlog as a result of the pandemic and is likely to continue to be strong for future years given Ireland's ageing demographics. Future expansion, for the most part, will be dependent on the availability of government funding.

Skills shortages: medical practitioners, nurses

Education Occupations

Overall employment levels grew strongly over the five-year period with an average annual growth of approximately 7,600 persons. Future demand for these roles will be very much driven by demographic factors and the availability of government funding. Enrolments in primary schools are projected to decline annually to 2033 which is likely to have an impact on staffing requirements. In post-primary schools, enrolments are forecast to continue to grow to 2024, declining thereafter. At third level, an additional 1,000 places have been announced for 2022.

Furthermore, the war in Ukraine has had an additional impact on enrolment figures in the education and training system, as the official enrolment projections pre-date the war. This will create additional demand for teachers across all levels of the education system.

Social & Care Occupations

The majority of those employed in social and care occupations work in the health sector providing care typically for the very young and the older age cohorts.

In 2021, some of those employed in the health sector continued to avail of income support payments (PUP and EWSS). Although there is no occupational breakdown for persons on income support payments, it is likely that many of these occupations included here would have had some share in receipt of payments. The impact on employment levels when the schemes ended in 2022, particularly in relation to EWSS, has yet to be realised in the data.

The changing demographics in Ireland (both the fall in the number of 0-4-year-olds and the increasing number of those aged 65 years and older in the population) will be primary drivers of employment for these occupations in the coming years.

Skills shortages: healthcare assistants

Labour shortages: care workers

Legal & Security Occupations

Employment growth for the five-year period was slightly above the national average for this occupational group. Future growth for these occupations will depend on a resumption of economic activities that were impacted by COVID-19, especially in the areas of hospitality and entertainment (for security guards in particular), and on Government policies for those reliant on public sector funding.

Construction Occupations

Although overall employment grew in 2021, it remained below pre-COVID-19 levels. At the end of 2021, over 14,000 persons in the construction sector were availing of income support payments (a combination of both PUP and EWSS). Government targets in relation to housing and climate action will continue to drive demand for construction-related skills across a variety of occupations (operatives, skilled trades/supervisors, engineers) with future skills and labour shortages potentially emerging. The transition to a zero carbon economy has significant implications for construction-related skills, from green buildings to renewable energy generation; while a small number of relatively new occupations (e.g. wind turbine technician, retrofit coordinator) are likely to grow in size, the most significant impact will be changes in the skills mix of a range of existing occupations (e.g. civil engineers, plumbers, roofers, glaziers, etc) as well as an increased demand for some.

The increased construction activity observed since the last financial crisis has resulted in growing numbers of apprentices in construction related trades. Further increases in apprenticeship registration is likely to be required to meet the additional demands arising from Government ambitions.

Issues with the supply and increased cost of construction-related materials could dampen demand in the short-term, although Government targets are likely to see continued demand for construction skills in the short-medium term.

Skills shortages: quantity surveyors

Potential skills shortages: civil engineers & construction project managers, plumbers, carpenters

Other Craft Occupations n.e.c.

The five-year annual average employment growth was negative for this occupational group with employment falling between 2020 and 2021. Employment in these occupations was across industry, construction and wholesale and retail, with each of these sectors impacted by COVID-19 at varying levels. A significant share of persons from these sectors remained in receipt of income support payments (both EWSS and PUP) in 2021, with the impact of the withdrawal of these payments in 2022 on employment numbers unknown as yet.

Skills shortages: CNC programmers

Potential skills shortages: welders, electricians

Agriculture & Animal Care Occupations

Employment numbers for agriculture and animal care occupations were lower in 2021 compared to five years' previously, despite an increase in the most recent year since 2020; this increase was driven primarily by a recent rise in the number of farmers. Brexit, Government targets in relation to climate action, and disincentives to engage in low paid work are likely to impact on employment numbers for these occupations in the coming years.

Hospitality Occupations

Employment in 2021 for hospitality occupations remained below pre-COVID-19 levels although the significant levels of rehiring for the accommodation and food sector, particularly for part-time roles, was evident in the employment data in the latter half of the year. A high share of those in the accommodation and food sector (where the majority in these occupations were employed) were in receipt of income support payments (both EWSS and PUP) in 2021. The impact on employment levels of the withdrawal of these income support payments in 2022 have yet to be realised in the data.

The rising business costs and the potential fall in disposable income due to increasing inflation will likely impact on any further recovery of the sector and demand for these skills.

Skills shortages: Chefs

Arts, Sports & Tourism Occupations

Employment in this occupational group has yet to see a full recovery since the onset of the COVID-19 pandemic. The EWSS accounted for an average of a fifth of total earnings for the arts, entertainment and other services sector in 2021 where over half of persons in these occupations were employed. The impact of the cessation of this scheme (in May 2022) is yet to be observed in terms of employment levels. A continued increase in inflation is likely to have a knock-on effect for consumer demand which will particularly impact those in service-related roles.

Transport & Logistics Occupations

Overall employment levels fell for this occupational group over the five-year period, driven primarily by a fall in the number of other drivers/operatives. Employment in the transport sector, in which many of these workers were employed, was slow to return to pre-COVID-19 levels, although the latter quarters of 2021 saw growing employment levels. The continued knock-on effects of Brexit, the supply chain issues that emerged during the COVID-19 pandemic, rising fuel costs and the increasing levels of inflation, will all have an impact on the overall demand for these occupations. Changes in the nature of the roles, due to factors such as automation, technological changes, and the implementation of the Climate Action Plan, will result in upskilling/reskilling requirements across all occupations in this field (e.g. enhanced digital skills, green skills for business).

Potential skills shortages: HGV drivers

Labour shortages: taxi drivers

Administrative & Secretarial Occupations

The strong employment growth in this occupational group continues to be driven primarily by growth for those employed in government roles, particularly in relation to annual growth in 2021. Over a quarter of all those employed in this occupational group worked in the public administration and defence sector, with the remainder spread across all other sectors in the economy. Demand for administrative workers in 2021 was likely driven by continued COVID-19 related activities in the public and health sectors, such as contact tracing centre operations, annual recruitment activity in the Civil Service, and the re-opening of businesses following COVID-19 closures. Although automation of services may result in a fall in demand for some administrative occupations, job opportunities will continue to arise due to the replacement demand (due to retirement, etc.) for such a large occupational group.

Sales, Marketing & Customer Service Occupations

Employment growth over the five-year period remained below the national average, although overall employment in 2021 exceeded that of 2019. Over two-thirds of persons employed in these occupations were in the wholesale and retail sector, which has been particularly impacted by COVID-19, accounting for a high share of those in receipt of income support payments (both EWSS and PUP). The impact of the cessation of these payments in 2022 is yet to be realised in the data. Rising inflation and a fall in consumer spending will impact on future demand for these occupations.

For those employed outside the wholesale and retail sector (e.g. industry), demand for a combination of sales skills with specific industry knowledge and technical expertise persists. Analysis from Enterprise Ireland's Spotlight on Skills data highlights the fact that skills including consultative sales, technical sales and digital marketing are in demand across a variety of sectors and occupations. The demand for those with both sales and language skills is primarily related to the ICT sector, evidenced in the employment permit data, although the numbers employed in sales in this sector are comparatively small. The difficulty in sourcing candidates with these skills will vary across occupations.

Operatives & Elementary Occupations n.e.c.

The overall employment growth for this occupational group was marginally above the national average, although levels in 2021 remained below that of 2019. The majority of those employed were in industry, wholesale and retail, and the administrative and support services sectors, all of which saw significant numbers of persons employed accessing income support payments (both EWSS and PUP) since the start of the COVID-19 restrictions. These occupations have a high share of persons employed with lower secondary education or less and a higher share who are non-Irish than the national average.

There is a continued demand for operatives in various manufacturing subsectors (food, machinery, high-tech etc), with a range of technical (e.g. goods manufacturing) and transversal skills (team work, problem solving, health & safety) being sought. Automation is likely to see the skills required for some operative occupations, particularly those in manufacturing, to shift upwards, and training and upskilling of the employed will be important in ensuring not just that there is an adequate supply of skills for this occupation but also that workers are not displaced due to automation.

Introduction

The National Skills Bulletin 2022 is the eighteenth in an annual series of reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS and the sixth 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 1 2021, the CSO introduced new Integration of European Social Statistics (IESS) regulations for the Labour Force Survey. This has resulted in changes to the LFS questionnaire from Q1 2021 with the addition of new questions, the removal of certain questions and a change in relation to response options or frequency. The CSO has undertaken a revision of the historic LFS series, which has resulted in changes to the numbers employed reported earlier (i.e. pre-IESS employment data). This report uses the post-IESS revised data; as such it will not be possible to compare data with previous Bulletins.

It should also be noted that in quarter 3 2017, the CSO introduced a new Labour Force Survey (LFS), replacing the Quarterly National Household Survey (QNHS). As a result, there is a break in the time series for data before and after quarter 3 2017. Some occupations experienced a significant change in employment after quarter 3 2017 due to methodological changes introduced with the LFS; where possible, this change is highlighted in our occupational analysis, although any significant change in employment over the five-year period (2016-2021) may need to be interpreted with caution.

Impact of COVID-19 on the Irish Labour Market

Restrictions imposed as a result of COVID-19 continued to impact on the Irish labour market in the first half of 2021. In the latter half of the year, many sectors particularly affected by restrictions, such as the accommodation and food, construction, and administration and support services, saw significant increases in employment. The number of people in receipt of the Pandemic Unemployment Payment fell throughout the year; however, the numbers in receipt of payments from the Employment Wage Subsidy Scheme remained relatively consistent throughout the year, with payments accounting for a significant share of total earnings for some sectors but in particular the accommodation and food sector. In determining the outlooks across occupations, consideration was given to employment patterns for each of the quarters in 2021, rather than just the annual average, and the possible impact caused by the cessation of the income support payments in 2022.

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. Details of the occupations included in each occupational group are available in Appendix B.

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)
 - the trend analysis covers the five-year period 2016–2021, 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 (e.g. age, gender, citizenship, employment type and education level); the analysis is based on the LFS data for quarter 4 2021
- vacancies advertised through the Department of Social Protection's (DSP) Jobs Ireland vacancy portal (i.e. the Public Employment Service (PES)) and the Ireland subset of CEDEFOP's OVATE (online vacancy analysis tool for Europe) system in 2021
- the level of difficulty in filling vacancies; the analysis is based on data from the SLMRU Recruitment Agency Survey conducted in October 2021, from skills audits conducted by Regional Skills Fora managers and employers through the Skills For Growth initiative, and data on employers' skills needs gathered from Enterprise Ireland's Spotlight on Skills workshops
- the number of new employment permits issued to non-EEA nationals by the Department of Enterprise, Trade and Employment (DETE) in 2021.

The unemployment rate by detailed occupation was excluded from the analysis in this edition of the Bulletin as the number of persons unemployed in 2021 who stated their previous occupation was too small to report.

The National Skills Bulletin 2022 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, citizenship, education etc.)
- **Section 3:** examines employment trends in economic sectors (quarter 4 2021 is compared with the same period in 2016, 2019 and 2020)
- **Section 4:** analyses employment trends by broad occupational group (i.e. employment growth and the composition of employment) up to quarter 4 2021
- **Section 5:** provides an overview of the labour market at regional level up to quarter 4 2021
- **Section 6:** examines recent trends in Irish unemployment (levels and rates), including the impact of COVID-19, and details the characteristics of the unemployed population (i.e. gender, age, educational attainment, nationality, occupation and sector) up to quarter 4 2021
- **Section 7:** presents an analysis of labour market transitions between unemployment, employment and economic inactivity and an analysis of recent job hires in 2021 in terms of age, education level, sector and occupation
- **Section 8:** examines the inflow of labour from non-EEA countries through the various employment permit schemes
- **Section 9:** provides an overview of trends and the types of vacancies advertised through the DSP Jobs Ireland vacancy portal and the Ireland subset of CEDEFOP's OVATE (online vacancy analysis tool for Europe) system in 2021; it also reports the findings of the October 2021 SLMRU Recruitment Agency Survey on difficult-to fill vacancies and reports on the CSO vacancy rate by sector
- **Section 10:** provides labour market indicators for 95 occupations presented in 16 occupational groups and provides an outlook for each occupation.



Section 1

Macroeconomic Context

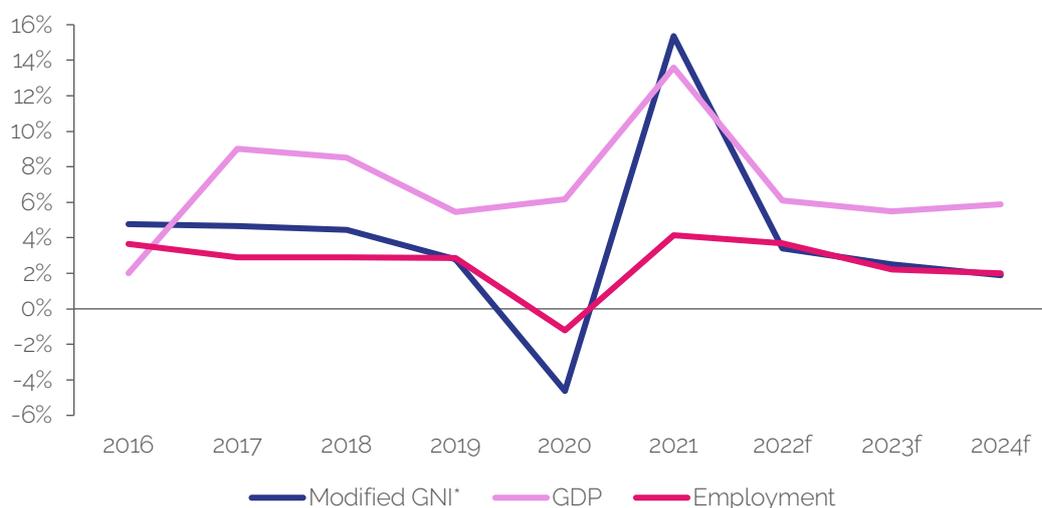
1.1 Introduction

The Irish and international economies have undergone considerable change in recent years. In the aftermath of the COVID-19 pandemic many economies, including Ireland's, saw a significant recovery. However, the outbreak of the war in Ukraine, rising inflation and issues with global supply chains are all having knock-on effects on economic growth and are likely to continue to do so for the foreseeable future. The impact of Brexit on the Irish economy continues to pose a potential threat for growth. This section will provide an overview of Ireland's economic performance in 2021 and examine the macroeconomic outlook, both globally and nationally, and how this may impact Ireland's labour market.

1.2 Economic performance

The onset of COVID-19 restrictions resulted in significant falls in both employment and GNI*² (Figure 1.1). In 2021, both experienced a subsequent rebound, particularly for GNI* which grew by 15.4%. With the exception of 2021, changes in employment have broadly followed the same pattern as GNI* since 2016. The Central Bank indicate a similar outlook for both employment and GNI*, with growth of approximately 2% forecast for both 2023 and 2024³. GDP, for the most part, has seen greater increases over the period examined with the Central Bank forecasting a relatively steady growth of 5.5% and 5.9% for 2023 and 2024 respectively. These forecasts have been revised downwards in this latest bulletin as a result of the uncertainty arising from the external factors discussed above. Forecasts by the Department of Finance for GDP are slightly more cautious than those of the Central Bank, with a growth rate of 4.4% in 2023⁴.

Figure 1.1 GDP, GNI* (Market Prices**) and Employment, Annual Change, 2016-2021, Forecast 2022-2024



Source: SLMRU (SOLAS) analysis of CSO data, Central Bank Quarterly Bulletin, Q2 2022

**Constant Market Prices, chain linked annually and referenced to year 2019, seasonally adjusted

^ GNI* is based on GNI less depreciation of R & D related service imports and trade in IP, depreciation of aircraft for leasing, and net factor income of re-domiciled PLCs.

² Modified Gross National Income or GNI* is an indicator designed specifically to measure the size of the Irish economy by excluding globalisation effects (i.e. intellectual property (IP) and leased aircraft).

³ Central Bank Quarterly Bulletin, Q2 2022

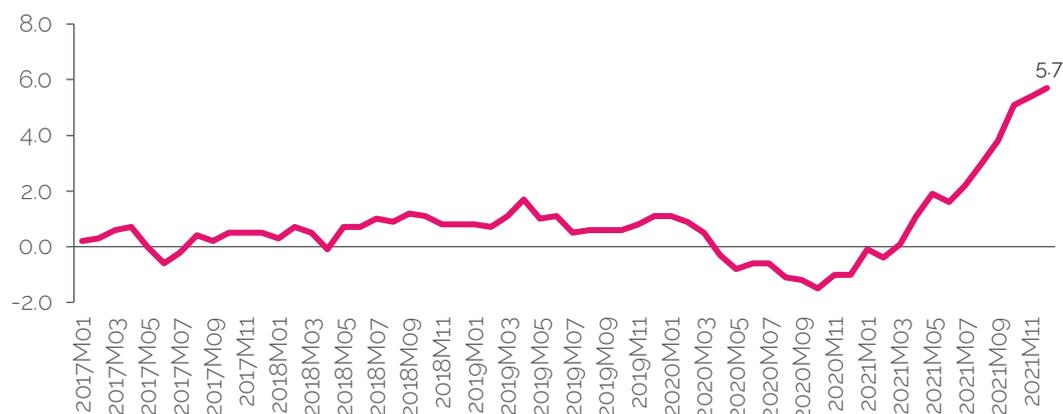
⁴ Department of Finance, Stability Programme Update, April 2022.

The Central Bank asserts that strong export growth was the main driver of GDP growth in 2021, particularly in relation to the pharmaceutical and ICT sectors. In 2021, gross value added was higher for foreign-owned multinational enterprise (MNE) dominated sectors (€210.1 billion) compared to non-MNE sectors (€186.4 billion) for the first time⁵. While output grew strongly since the onset of COVID-19 for MNE dominated sectors (rising by 51% since 2019), output for non-MNE sectors did not grow as strongly in 2021, and indeed declined since 2019 (by 2%). This pattern is reflected in the employment figures with growth in the ICT sector and high-tech manufacturing, while other sectors of the economy were slower to recover (discussed in more detail in Section 3).

Domestic demand has also been a key driver of growth in the Irish economy with consumer spending increasing as restrictions lifted. While the Central Bank forecast a continued growth in domestic demand, with growth rates of 4.3% and 3.9% for 2023 and 2024 respectively, these have been revised down since the previous Bulletin due to rising prices and a fall in household incomes in real terms. Private consumption is expected to continue to be the main driver of domestic demand, although a recent survey suggests that consumers are intending to reduce their spending as a result of higher energy and other costs⁶. A significant reduction in consumer spending and rising inflation would likely have a particular effect on the services sector, potentially impacting on employment numbers.

Inflation grew steadily in 2021, with a 5.7% growth in December 2021 when compared with December 2020 based on CSO figures (Figure 1.2). Prior to 2020, Ireland had an extended period of historically low levels of inflation. The upward trend appears to be continuing in 2022 based on the latest available data⁷. In a recent bulletin, the National Competitiveness and Productivity Council (NCPC) noted that the annual increase of 7.0% in the Consumer Price Index in April 2022 was the highest year-on-year change in 22 years with rising energy prices accounting for almost half of this increase⁸. The Central Bank, in their Quarter 2 2022 Bulletin, forecast a rate of inflation of 6.5% in 2022 but easing to 2.8% in 2023 and 2.1% in 2023. The impact of the rising levels of inflation on the economy are yet to be fully realised but the knock-on effects for consumer spending and the cost of doing business may be reflected in the employment figures in the coming quarters.

Figure 1.2 Annual Rate of Change (%) in Harmonised Index of Consumer Prices (HICP), 2017-2021



Source: SLMRU (SOLAS) analysis of CSO data

⁵ Based on CSO National Accounts (constant prices): PXStat NA018

⁶ KBC Consumer Sentiment Survey, March 2022

⁷ <https://www.cso.ie/en/releasesandpublications/er/cpi/consumerpriceindexjune2022/>

⁸ NCPC (2022): Inflation and the Competitiveness of Irish Enterprises

1.3 Enterprise sector

Despite the uncertainty in the economy as a result of COVID-19, the enterprise sector remained strong. Ireland continues to be an attractive location for foreign direct investment. In their 2021 Performance Highlights report, the IDA reported their highest employment on record for client companies at 275,000, with a net job gain of 16,800⁹. There was also encouraging news with regard to indigenous firms, with Enterprise Ireland (EI) reporting a net jobs growth of almost 12,000 in 2021, with total employment across their client companies reaching 208,000¹⁰.

1.4 Competitiveness

The IMD World Competitiveness Ranking 2022 saw Ireland move up two places in the rankings to 11th among 63 countries benchmarked, from 13th place in 2021. While Ireland had a high score in relation to its economic performance (7th), it had a relatively low ranking in relation to infrastructure (23rd). Challenges facing Ireland in 2022, according to the report, include geo-political tensions, inflationary pressures (including energy pricing), capacity constraints including housing and infrastructure, availability of talent to meet critical skills gaps and global supply chain disruption and bottlenecks¹¹.

In its Competitiveness Challenge 2021 report, the National Competitiveness and Productivity Council identified four key challenges (based on the best available domestic and international evidence) to be addressed, namely, ensuring Ireland has a dynamic business environment, increasing productivity growth in Ireland, delivering key housing and associated social and economic infrastructure, and progressing sustainability and inclusivity policies as a matter of priority¹².

1.5 Hours worked and earnings

This section examines both the average weekly paid hours and average hourly earnings across the sectors in the Irish economy. Three time periods (quarter 4 2019, quarter 4 2020, quarter 4 2021) are examined to illustrate the change as a result of COVID-19 restrictions and the subsequent recovery. An analysis of the Employment Wage Subsidy Scheme (EWSS) and its share of total earnings for selected sectors is also provided.

Average weekly paid hours

Figure 1.3 presents the average weekly paid hours by sector. In quarter 4 2021, the number of average weekly paid hours for the overall economy was 32.9, an increase from 32.5 hours in quarter 4 2019, although a slight decline on quarter 4 2020. In terms of sectors, construction had the highest average weekly paid hours at 38.6. This was followed by industry (38.5 hours), ICT (37.0 hours), transport and public administration and defence (both at 35.9 hours). The education sector recorded the lowest average hours worked within a week (24 hours), followed by accommodation & food (26.2 hours).

When compared with quarter 4 2019, the average weekly paid hours increased across most sectors, with the exception of the accommodation and food, administrative and support, and public administration and defence sectors. Many sectors experienced a decline in average weekly paid hours since quarter 4 2020; with employment increasing in many of these sectors over this period, the decline most likely relates to an increase in the number of persons in part-time roles.

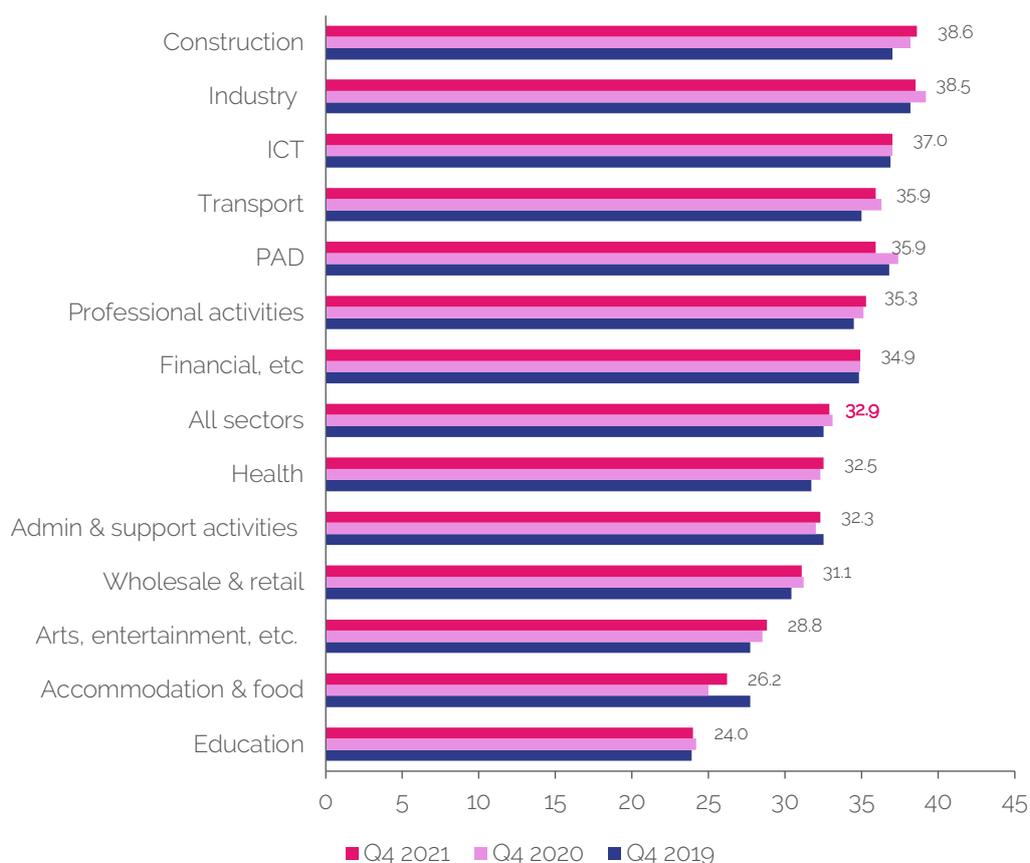
⁹ <https://www.idaireland.com/newsroom/publications/ida-ireland-2021-performance-highlights.pdf>

¹⁰ Enterprise Ireland, 2021 End of Year Statement.

¹¹ <https://worldcompetitiveness.imd.org/countryprofile/IE/wcy>

¹² Ireland's Competitiveness Challenge 2021, NCPC, September 2021

Figure 13 Average Weekly Paid Hours by Sector



Source: CSO, Earnings, Hours and Employment Costs Survey

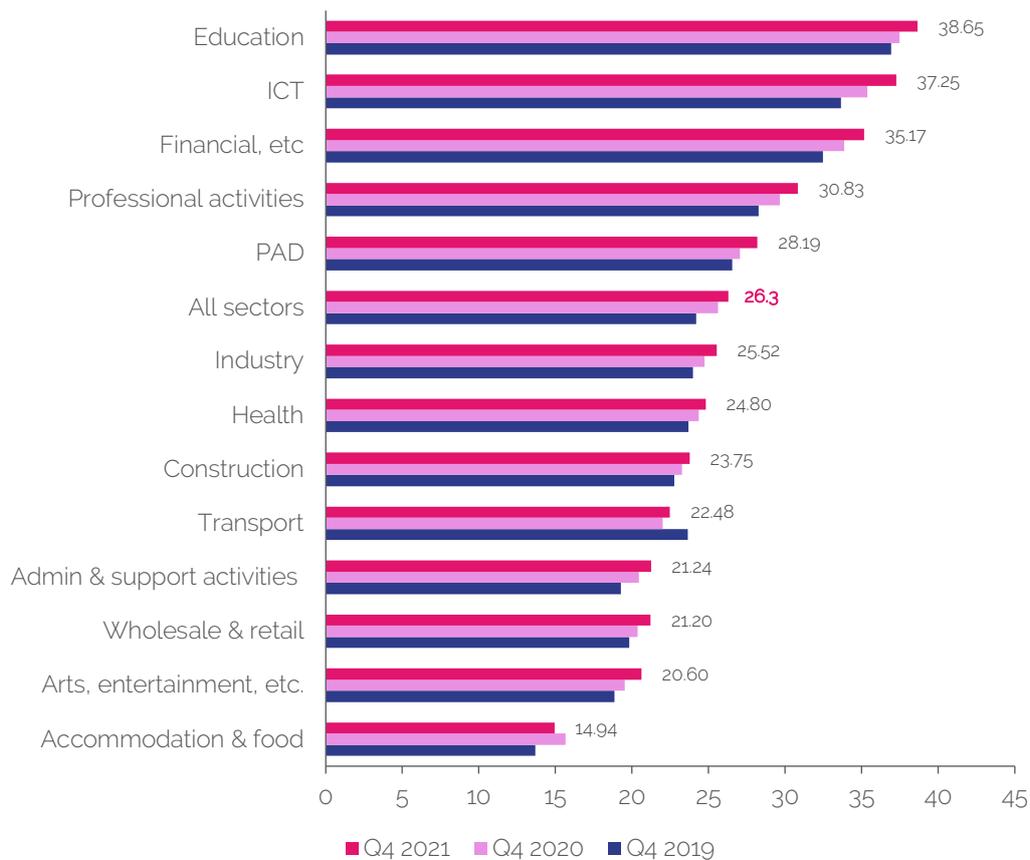
Average hourly earnings

In quarter 4 2021, average hourly earnings were €26.30, which was €2.10 more than in quarter 4 2019. In quarter 4 2021, average hourly earnings were highest in the education sector at €38.65 per hour and lowest in the accommodation & food sector at €14.94 per hour (Figure 1.4). Almost all sectors saw increases in both quarter 4 2020 and 2021. The largest increase between quarter 4 2019 and quarter 4 2021 occurred for the ICT sector, with an increase of €3.61, followed by the financial activities sector at €2.95.

The transport sector was the only sector to record lower average hourly earnings in quarter 4 2021 when compared to quarter 4 2019. The accommodation and food sector saw a fall in average hourly earnings between quarter 4 2020 and quarter 4 2021, although still higher than in quarter 4 2019; this fall may be attributed to an increase in the number of lower paid jobs available in the sector as restrictions have eased (e.g. waiting/bar staff, kitchen assistants), thereby reducing average earnings for the sector rather than a decrease in actual earnings. Indeed, with most of the recent growth in employment in higher skilled roles, the increase in average hourly earnings across the sectors may relate to more people in higher paid roles rather than an increase in earnings for an individual. Despite forecasts of wage growth for 2022 and 2023, rising inflation is expected to result in a decline in real wages at least in the short-term¹³.

¹³ ESRI, Quarterly Economic Commentary, Summer 2022

Figure 1.4 Average Hourly Earnings by Sector, €



Source: CSO, Earnings, Hours and Employment Costs Survey

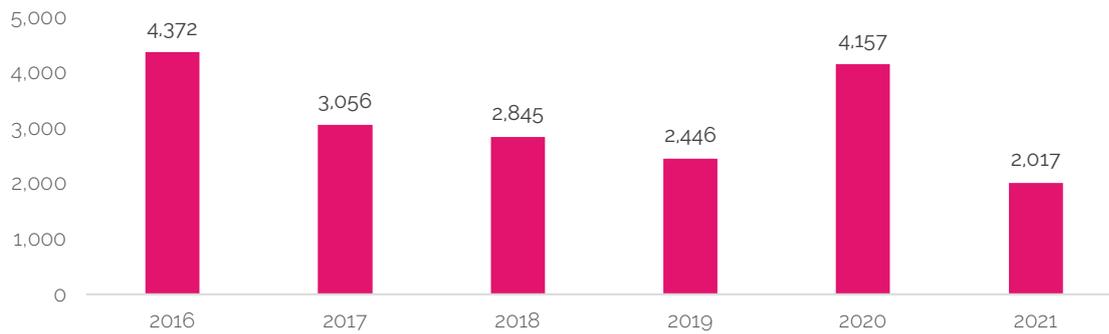
Recent analysis by the CSO examined earnings through the Employment Wage Subsidy Scheme (EWSS) across all sectors¹⁴. The scheme was due to end in April 2022 but was extended to May 2022 for those businesses that were directly impacted by renewed public health restrictions as a result of the pandemic in December 2021. In quarter 4 2021, EWSS payments accounted for 4% of total earnings in the economy; of the total earnings in the accommodation and food sector, 45% was through EWSS with a share of almost 20% of total earnings for the arts, entertainment and other services sector. Both of these sectors saw subsequent declines in quarter 1 2022 (to 35.9% and 11.8% respectively), although the share of EWSS of total earnings remained far higher than any other sector. The potential impact on these sectors with the removal of these supports is yet to be realised.

1.6 Redundancies

As a result of COVID-19 restrictions in the Irish economy, the number of applications for redundancies grew in 2020 following a period of decline. However, the increase in the number of redundancy applications may have been significantly higher if not for the introduction of income support payments, such as EWSS, which were thought to have protected many businesses who were impacted by the restrictions imposed. Indeed, applications for redundancies in 2021 were below pre-COVID-19 levels (Figure 1.5).

¹⁴<https://www.cso.ie/en/releasesandpublications/br/b-lfs/labourmarketinsightbulletinseries11q12022/>

Figure 1.5 Applications Received Under the Redundancy Payment Scheme, 2016-2021



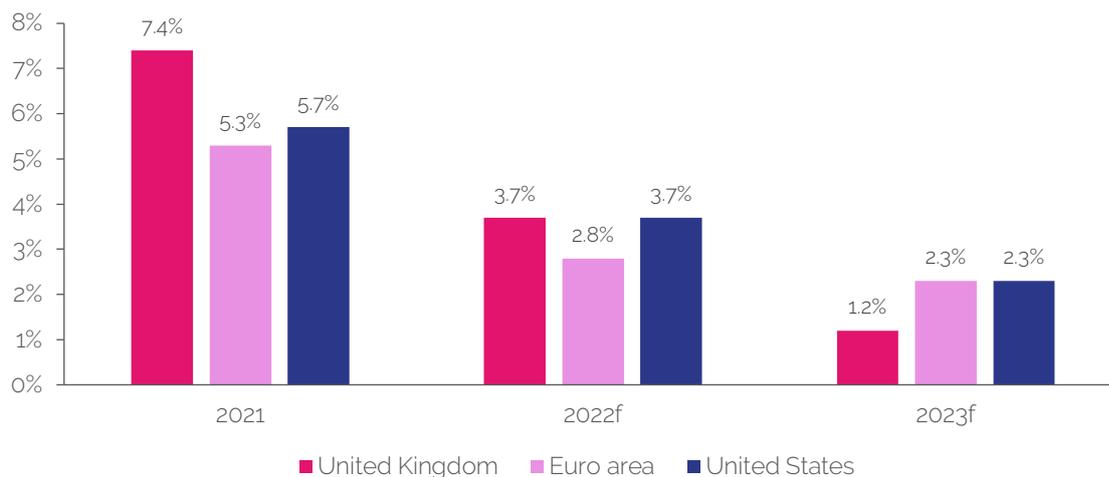
Source: DSP

1.7 Global and national outlook

Following a significant recovery in 2021 after the onset of the COVID-19 pandemic, a slowdown of growth is expected across the global economies with the war in Ukraine, inflation and rising interest rates all factors of concern. Figure 1.6 provides growth projections from the IMF for the United Kingdom, United States, and the Euro area. All three economies showed strong economic growth in 2021. While growth is expected to continue over the forecast period to 2023, this is likely to be at a slower rate; this is particularly evident for the UK with a growth in GDP of 1.2% forecast for 2023, compared to 2.3% for the Euro area and the United States.

The IMF forecast GDP growth for the Irish economy of 5.2% in 2022 and 5.0% in 2023, far exceeding the projected growth for the Euro area over the same time periods of 2.8% and 2.3% respectively.

Figure 1.6 Growth Projections (Real GDP, Annual Percentage Change)



Source: International Monetary Fund, World Economic Outlook, April 2022



Section 2

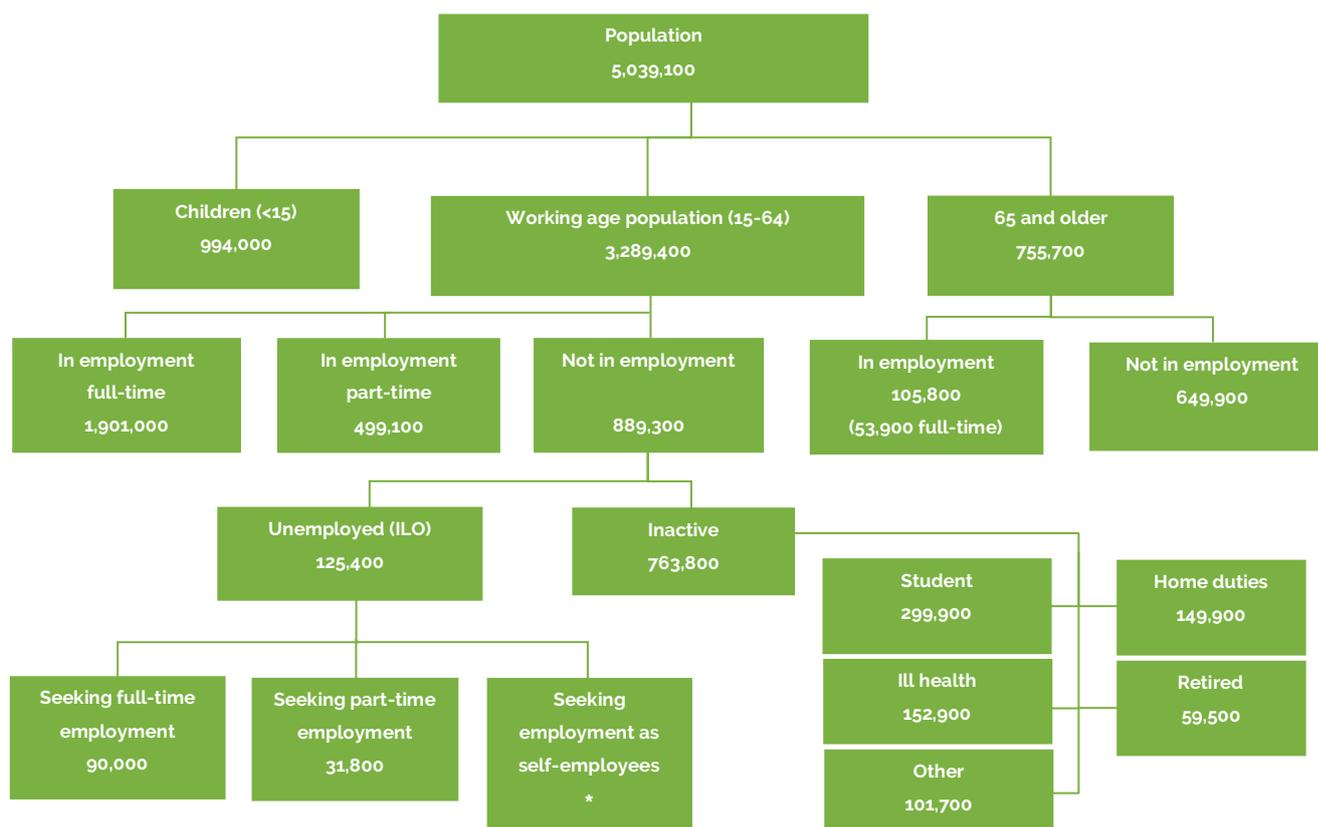
Labour Market Overview

2.1 Population: Labour Market Status

In quarter 4 2021, Ireland's population was estimated at 5.04 million persons (Figure 2.1), 45,800 more than in quarter 4 2020, while the working age population (persons aged 15-64) was 3.29 million, 28,900 more than in quarter 4 2020.

The number of children (persons younger than 15 years) was 994,000 (a decrease of 7,700 when compared to quarter 4 2020), while the number of persons aged 65 or older was 755,700, 24,600 more than in quarter 4 2020. Between quarter 4 2020 and quarter 4 2021, the cohort of persons aged 65 and over was the fastest growing, in relative terms (at 3.4%).

Figure 2.1 Population by Labour Market Status (ILO defined), Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

Note: Discrepancies are due to rounding.

* Indicates that the number is too small to report.

As shown in Table 2.1, in quarter 4 2021, the total age dependency rate¹⁵ (youth and older age) was 53.2% (on a par with the rates observed in both quarter 4 2020 and quarter 4 2019). Between quarter 4 2020 and quarter 4 2021, the youth age dependency rate decreased by 0.5 percentage points to 30.2% (which was 1 percentage point below the rate observed in quarter 4 2019), while over the same one-year period the older age dependency rate increased by 0.6 percentage points to 23% (which was 1.1 percentage points higher than that observed in quarter 4 2019).

In quarter 4 2021, 2.40 million persons of working age (15-64 years) were in employment (216,800 more than in quarter 4 2020 and 134,900 more than in quarter 4 2019). Almost 80% of persons of working age in employment (or 1.90 million persons) were in full-time employment in quarter 4 2021, while 20% (or 499,100 persons) were in part-time employment. Compared to quarter 4 2020, there were 102,000 more persons (or 6%) of working age in full-time employment and 114,700 more persons (or 30%) in part-time employment.

In quarter 4 2021, 889,300 persons of working age were not in employment (187,800 fewer persons than in quarter 4 2020 and 78,700 fewer persons than in quarter 4 2019). Of the working age population not in employment, 125,400 persons were unemployed, while 763,800 were economically inactive. Compared to quarter 4 2020, the number of unemployed persons decreased (by 14,900, or 11%); however, there were 15,800 more (or 14.4%) unemployed persons than in quarter 4 2019 (pre-COVID-19). Compared to quarter 4 2020, the number of persons classified as economically inactive decreased (by 173,000, or 18%), and there were 94,600 fewer economically inactive persons (or 11% less) than in quarter 4 2019.

Within the economically inactive group of the working age population in quarter 4 2021, there were:

- 299,900 students – 64,600 fewer than in quarter 4 2020 and 31,900 fewer than in quarter 4 2019
- 149,900 persons engaged in home duties – 56,700 fewer than in quarter 4 2020 and 81,900 fewer than in quarter 4 2019
- 59,500 retired persons – 2,600 more than in quarter 4 2020 but 5,500 fewer than in quarter 4 2019
- 152,900 persons were inactive due to ill health – similar to the number observed both in quarter 4 2020 and quarter 4 2019
- 101,700 persons were inactive for other reasons – 54,900 fewer than in quarter 4 2020 but 24,100 more than in quarter 4 2019; of those inactive for other reasons, 12,600 were discouraged workers, while 18,900 persons were available, but not seeking work (which decreased by 45,900 persons compared to quarter 4 2020, but broadly similar to the number observed in quarter 4 2019).

In quarter 4 2021, the inactivity rate of the working age population¹⁶ was 23.2%, representing decreases of 5.5 percentage points compared to quarter 4 2020 and 3.3 percentage points compared to quarter 4 2019. The economic dependency ratio¹⁷ was 1.09 in quarter 4 2021, above the rates observed in both quarter 4 2020 and quarter 4 2019 (Table 2.1).

Table 2.1 Dependency and Inactivity Rates (Quarter 4)

	2019	2020	2021
Total dependency rate (0-14 and 65+)	53.1%	53.1%	53.2%
Youth dependency rate (0-14)	31.2%	30.7%	30.2%
Old age dependency rate (65+)	21.9%	22.4%	23.0%
Inactivity rate (15-64)	26.5%	28.7%	23.2%
Economic dependency ratio	0.99	0.94	1.09

Source: SLMRU (SOLAS) analysis of CSO data

¹⁵ The age dependency rate compares the non-working age population to those of working age.

¹⁶ 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.

¹⁷ 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 this sub-section, key labour market and related indicators in 2021 are compared with those in earlier years, as well as the expected changes for the next few years based on projections from the Central Bank of Ireland.¹⁸ The focus is on labour force, employment and unemployment levels and rates; an outline of population migration trends is also provided.

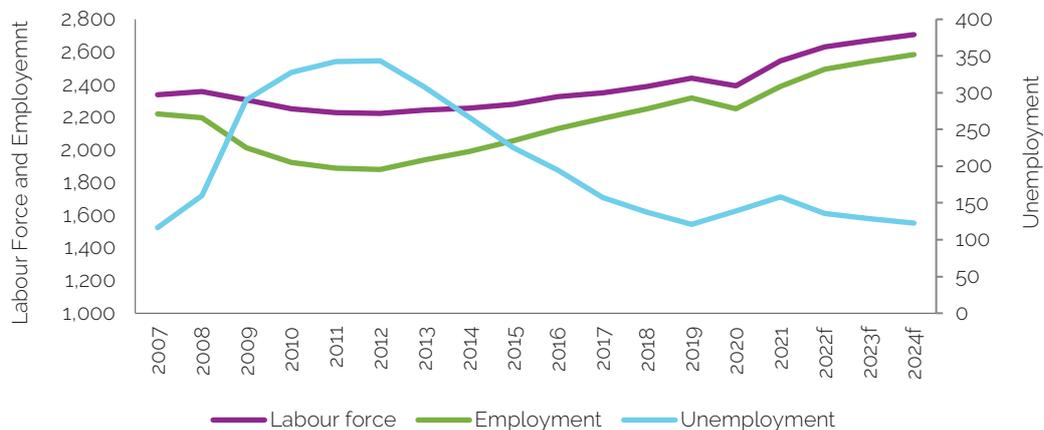
Labour force, employment and unemployment levels

In 2021, there were 2.55 million persons (annual average) in the labour force (Figure 2.2). Compared to 2020, this represents an increase of 154,800 persons (or 6.5%) and 107,200 persons more (or 4.4%) than in 2019 (pre-COVID-19). The Central Bank predicts that the labour force will increase by 3.3% in 2022 before slowing to 1.5% in 2023.

In 2021, there were 2.39 million persons in employment on average annually (standard LFS measure based on ILO criteria) (Figure 2.2). This figure represents an increase of 136,200 persons (or 6%) compared to 2020, and 70,400 persons (or 3%) above 2019 pre-pandemic levels (2.32 million persons). Based on the COVID-19 measure, employment was estimated at 2.18 million persons in 2021, representing an increase of 282,100 persons (or 14.9%) compared to the comparative level in 2020 (1.90 million persons), and 140,400 persons (or 6.1%) below the 2019 standard LFS measure. The Central Bank predicts that employment will increase by 4.5% in 2022 followed by slower growth of 1.8% in 2023.

In 2021, based on the standard LFS methodology, there were 157,800 persons unemployed (aged 15-74), an increase of 18,600 persons (or 13.4%) compared to 2020 and 36,800 persons (30.4%) above pre-pandemic levels in 2019. The COVID-19 adjusted estimate indicates that there were 363,600 persons unemployed in 2021, which was 205,800 persons more (or 2.3 times higher) compared to the standard LFS estimate in 2021. Central Bank forecasts unemployment to fall to 136,000 in 2022, with further marginal falls to 123,000 by 2024.

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



Source: SLMRU (SOLAS) analysis of CSO data; Central Bank of Ireland, Quarterly Bulletin (July 2022)

¹⁸ Central Bank of Ireland, Quarterly Bulletin July 2022.

Persons 'away from work'

In the LFS, a person can still be classified as employed even if absent from work due to layoff, off season, parental leave or any other reason (other than holidays, maternity/paternity leave, leave due to illness or education and training) when interviewed using the ILO criteria provided they expect to return to the job within three months or that combined with receiving some job related income or benefit in the case of parental leave.

In 2021, of the 2.39 million persons employed, 271,400 persons were classed as 'Away from Work', 35,200 persons fewer (or 11.5%) than in 2020 but 100,900 persons more (or 59.2%) than in 2019 (Table 2.2). The number of persons 'Away from Work' as a percentage of the numbers employed was 11.4% in 2021, compared to 13.6% in 2020 and 7.4% in 2019. In 2021, there were 171,400 more employed persons at work¹⁹ (or 8.8%) than in 2020 and 30,500 persons fewer (or 1.4%) than in 2019.

Between 2020 and 2021, the increase in employment and the decrease in the number of employed persons who were 'Away from Work' resulted in an increase in the number of actual hours worked per week (by 6.6%, from 70.2 million hours to 74.8 million hours per week). However, the number of actual hours worked per week remained below 2019 levels.

Table 2.2 Number of persons classified as 'Away from Work' ('000s); Actual Hours Worked per Week (millions)

	Employment	'Away from Work': Not working, but classified as employed	Actual hours worked per week (millions)
Quarter 1 2019	2,298.3	134.8	77.8
Quarter 2 2019	2,296.2	142.8	78.5
Quarter 3 2019	2,323.4	217.3	77.0
Quarter 4 2019	2,357.3	186.9	77.5
Annual 2019	2,318.8	170.5	77.7
Quarter 1 2020	2,347.2	208.4	76.3
Quarter 2 2020	2,138.1	468.5	61.0
Quarter 3 2020	2,250.0	253.8	72.7
Quarter 4 2020	2,276.8	295.7	70.8
Annual 2020	2,253.0	306.6	70.2
Quarter 1 2021	2,230.6	309.5	68.7
Quarter 2 2021	2,349.1	220.9	75.9
Quarter 3 2021	2,471.2	303.2	77.1
Quarter 4 2021	2,506.0	252.1	77.6
Annual 2021	2,389.2	271.4	74.8

Source: SLMRU (SOLAS) analysis of CSO data

¹⁹Persons employed at work was calculated by subtracting those 'Away from Work' from those in employment.

Labour force, employment and unemployment rates

In 2021, the labour force participation rate averaged 63.3%, which was 3.1 percentage points above the 2020 average rate of 60.2%, and one percentage point above the 2019 average rate of 62.3% (Table 2.3). In 2021, the employment rate (persons aged 15-64) associated with the standard LFS measure of employment averaged 69.9%, compared with 66.6% in 2020 and 69.5% in 2019. However, the COVID-19 adjusted employment rate for the same age group was much lower (at 63.4% in 2021 and 58% in 2020), or 6.5 and 8.6 percentage points below the unadjusted rate respectively.

In 2021, the unemployment rate for those aged 15-74 (standard LFS measure) declined markedly during the year and averaged 6.3% (just above the rate of 5.9% in 2020 and 5% in 2019). The COVID-19 adjusted estimate indicates that the unemployment rate (persons aged 15-74) was as high as 21.2% in 2020, followed by a sharp decline to 14.6% in 2021.

Table 2.3 Participation, Employment and Unemployment Rates (Annual Averages)

	Participation rate (%) (15+)	Employment rate (%) (15-64)	Unemployment rate (%) (15-74)
2019	62.3	69.5	5.0
2020	60.2	66.6	5.9
2021	63.3	69.9	6.3

Source: CSO

In quarter 4 2021, the long-term unemployment rate (i.e. those unemployed for one year or longer) was 1.7% (similar to the rates observed in quarter 4 2020 and quarter 4 2019) (Table 2.4). There were 44,300 persons classified as long-term unemployed, 7,500 (or 20%) more than in quarter 4 2020, and 5,700 more (or 15%) than in quarter 4 2019. Between quarter 4 2020 and quarter 4 2021, long-term unemployment as a share of total unemployment increased from 26% to 35%, reverting back to the pre-COVID-19 rate.

The broad unemployment measure (combining those unemployed and part-time underemployed) declined from 10% in quarter 4 2020 to 9.1% in quarter 4 2021 (almost a one percentage point decline). The rate in quarter 4 2021 was broadly similar to the rate observed in quarter 4 2019 (at 8.9%) (Table 2.4).

In quarter 4 2021, the youth unemployment rate (i.e. persons aged 15 to 24) was 10.2%, compared with 14.2% in quarter 4 2020 and 9.6% in 2019. In absolute terms, youth unemployment stood at 35,000 persons; this represents a decline of 1,700 persons (or 5%) compared to quarter 4 2020 and an increase of 7,000 persons (or 25%) compared to quarter 4 2019 (when 28,000 youths were unemployed). In quarter 4 2021, the NEET rate (the share of 15-24-year-olds who were not in employment, education or training) was 5.8% compared to 9.8% in quarter 4 2020 and 8.8% in quarter 4 2019.

Table 2.4 Other Unemployment Indicators, Quarter 4 2019, Quarter 4 2020 and Quarter 4 2021

	Long term UE rate (%) (15-74)	Broad UE rate (%) (15-74)	Youth UE rate (%) (15-24)	NEET* rate (%) (15-24)
Quarter 4 2019	1.6	8.9	9.6	8.8
Quarter 4 2020	1.5	10.0	14.2	9.8
Quarter 4 2021	1.7	9.1	10.2	5.8

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

Since 2015, inward migration has exceeded outward migration, resulting in positive net migration (Table 2.5). In 2022, net migration was 61,100, which was considerably above the 2021 level (11,200). Between 2015 and 2022, inward migration increased (44,800, or 59%), while outward migration decreased (10,400, or 15%).

Table 2.5 Migration Estimates (000s)

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Inward	66.5	75.9	82.3	84.6	90.3	88.6	85.4	65.2	120.7
Outward	75	70	66.2	64.8	56.3	54.9	56.5	54	59.6
Net migration	-8.5	5.9	16.2	19.8	34	33.7	28.9	11.2	61.1

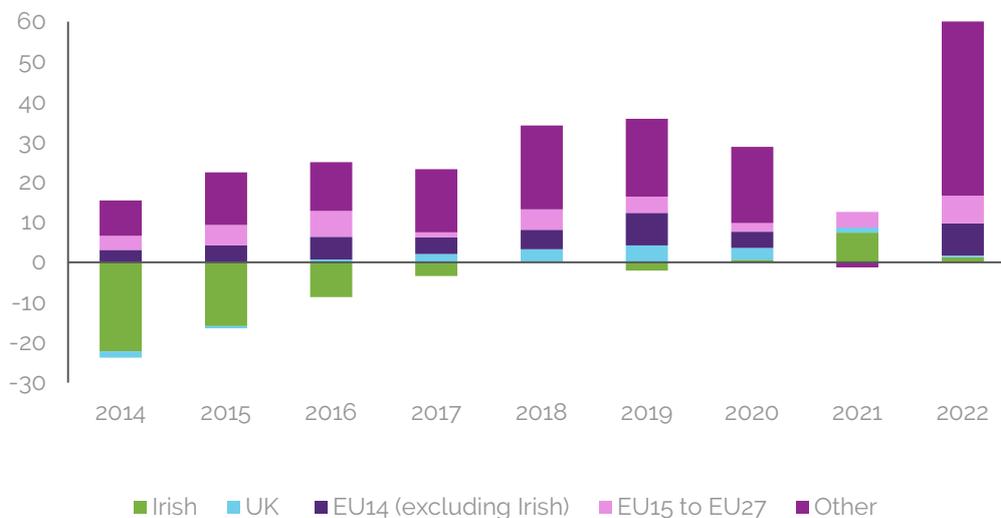
Source: CSO

Note: Data for 2017-2022 is preliminary and subject to revision following publication of detailed Census 2022 results (2023).

In 2022,

- of the 120,700 immigrants to Ireland (the highest number since 2007, at 151,100 persons), non-EU nationals (excluding the UK) accounted for 52% (63,000 persons), Irish nationals for 24% (or 28,900 persons), EU nationals (excluding Ireland) for 20% (24,300 persons) and UK nationals for 4% (or 4,500 persons); of the 63,000 non-EU nationals entering the country, almost 28,000 were Ukrainian nationals
- of the 59,600 emigrants from Ireland, Irish nationals made up 46% (or 27,600 persons), non-EU nationals (excluding the UK), 31% (or 18,500 persons); other EU nationals 16% (or 9,400 persons); and UK nationals, 7% (or 4,100 persons)
- Irish nationals experienced net inward migration (1,300 persons): 28,900 Irish nationals returned from abroad to live in Ireland, while 27,600 Irish nationals emigrated from Ireland (Figure 2.3)
- net inward migration was largest for non-EU nationals, at 44,500 persons, a reversal of 2021 where net outward migration occurred for this group (Figure 2.3)
- net migration was positive for those aged 25 to 44 years; almost 50% of immigrants and 48% of emigrants were aged 25 to 44 years (prime working age group)
- a total of 58% of immigrants aged 15 years or older (70,300 persons) held third level qualifications, compared to 52% of emigrants (30,700 persons); 17% of immigrants (21,000 persons) held at most a higher secondary qualification, while the corresponding share was 26% for emigrants (15,700 persons)

Figure 2.3 Net Migration Estimates 2014-2022 by Nationality (000s)



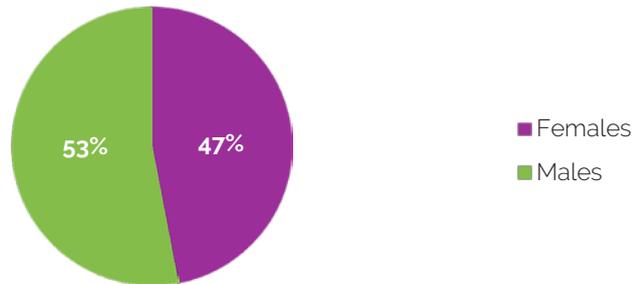
Source: CSO

Note: 2016 data is based on 2016 Census; figures for 2017 to 2022 inclusive are preliminary.

2.3 Employment Composition

In quarter 4 2021, 2.51 million persons were in employment (aged 15 or older). Males accounted for 53% (1.33 million persons) (Figure 2.4). The gender distribution of employment has shifted slightly, with a one percentage point gain for females when compared to quarter 4 2020 and quarter 4 2019.

Figure 2.4 Employment by Gender, Quarter 4 2021



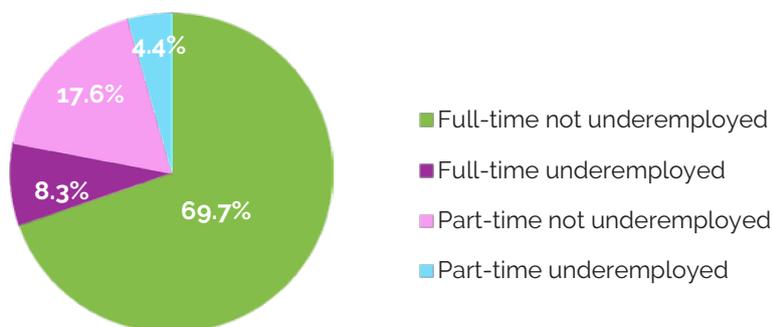
Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2021, full-time employment accounted for 78% (1.96 million persons) of total employment (Figure 2.5). Of those working full-time, 11% (or 207,400 persons) were underemployed (wished to work more hours and were available). Of those working part-time (551,000 persons), 20% (or 110,200 persons) were underemployed.

Between quarter 4 2020 and quarter 4 2021, the number of persons in both full-time and part-time employment increased (102,000, or 6% and 127,200, or 30% respectively). Over the same period, the number of persons in full-time employment who were underemployed increased (22,900, or 12%), while the number of persons in part-time employment who were underemployed also increased (11,300 persons, or 11%).

Compared to quarter 4 2019, there were 88,800 more persons (or 5%) in full-time employment, while 59,900 more persons (or 12%) were in part-time employment, each exceeding respective pre-COVID-19 pandemic employment levels.

Figure 2.5 Employment by Employment Type, Quarter 4 2021

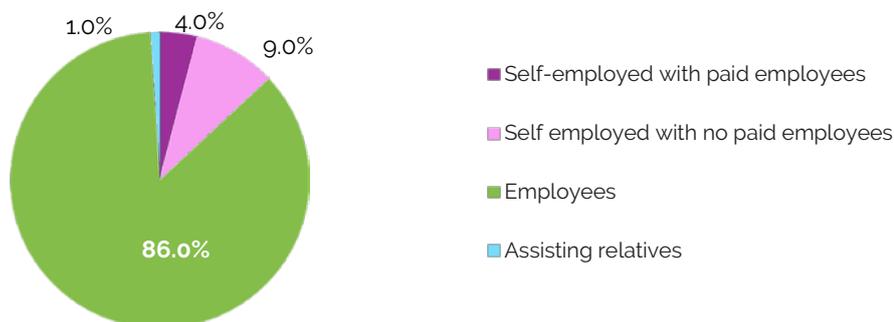


Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2021, 86% of those in employment (2.15 million persons) were employees (of which 0.8% were employees on Government supported employment schemes). Self-employment accounted for 13% (or 326,500 persons) of total employment, of which 69.1% were self-employed with no paid employees (Figure 2.6). Compared to quarter 4 2020, the share of employees increased by one percentage point, with a concomitant decrease (one percentage point) in the share of self-employed. Between quarter 4 2019 and quarter 4 2021, the share of self-employed decreased by one percentage point, while the share of employees increased by 0.5 percentage points.

Employment growth observed between quarter 4 2020 and quarter 4 2021 was primarily due to an increase in the number of employees (216,500 persons, or 11%). The number of persons assisting relatives increased (12,000 persons, or 92%), while the number of self-employed remained broadly unchanged.

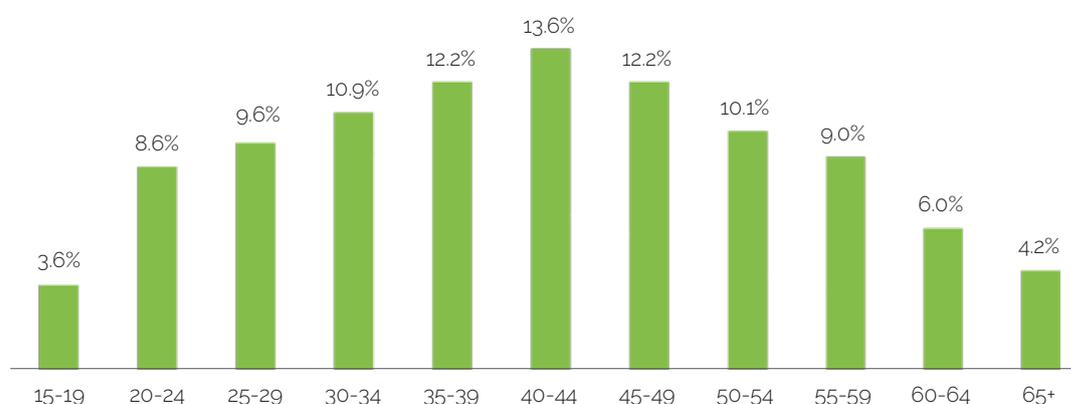
Figure 2.6 Employment by Employment Status, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

Figure 2.7 presents the age profile of persons in employment. In quarter 4 2021, 69% (1.72 million persons) of employment was concentrated in the 25-54-year age group. Those aged under 25 years accounted for 12% (307,000 persons), while those aged 55 years or older accounted for 19% (or 480,100 persons). Between quarter 4 2020 and quarter 4 2021, the age distribution of employment shifted towards younger age cohorts, with the share younger than 35 years increasing (from 30% to 33%) and the share 35 years or older decreasing (from 70% to 67%). However, between quarter 4 2019 (pre-COVID-19 pandemic) and quarter 4 2021, the age distribution of employment did not change considerably, with a 0.5 percentage increase for those younger than 35 years and a decrease of 0.5 percentage points for those 35 years or older.

Figure 2.7 Employment by Age, Quarter 4 2021

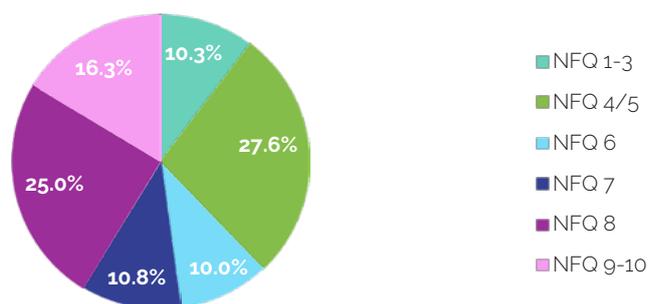


Source: SLMRU (SOLAS) analysis of CSO data

Figure 2.8 presents the education profile of those in employment in Ireland by NFQ level. In quarter 4 2021, 10.3% of persons in employment had attained at most qualifications at NFQ levels 1-3 (e.g. Junior Certificate); 27.6% had qualifications at NFQ levels 4-5; 10% had qualifications at NFQ level 6, while the remaining 52.1% had the equivalent of ordinary degree level or higher (NFQ 7-10).

Between quarter 4 2020 and quarter 4 2021, the education distribution of employment remained relatively unchanged. However, when quarter 4 2021 is compared to quarter 4 2019, the education distribution of employment shifted toward higher education levels: the share of persons with qualifications at NFQ levels 7 and above increased by 4.4 percentage points (from 47.6% to 52%), with a concomitant decline in the share who had attained qualifications below NFQ level 7 (from 52.4% to 48.0%).

Figure 2.8 Employment by Education (NFQ), Quarter 4 2021

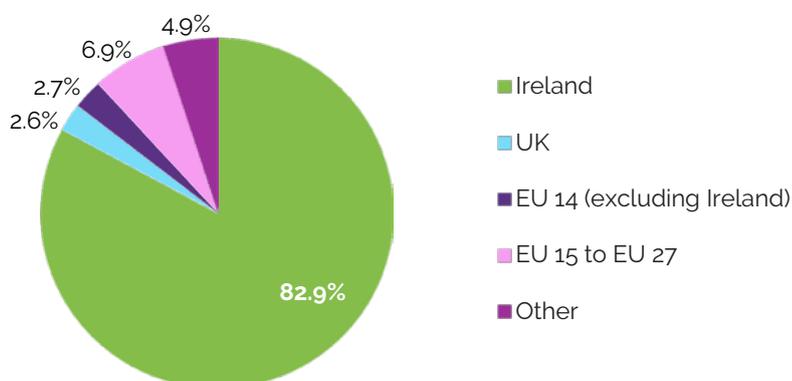


Source: SLMRU (SOLAS) analysis of CSO data

Note: excludes those who did not state their education level.

Employment by citizenship is presented in Figure 2.9. In quarter 4 2021, non-Irish citizens accounted for 17.1% of total employment (or 429,200 persons). Of the non-Irish employment, EU citizens accounted for 56.5% (242,300 persons), UK citizens accounted for 14.9% (64,000 persons), while those classified as other accounted for the remainder. This distribution of employment by citizenship has remained broadly unchanged when compared to both quarter 4 2019 and quarter 4 2020.

Figure 2.9 Employment by Citizenship, Quarter 4 2021



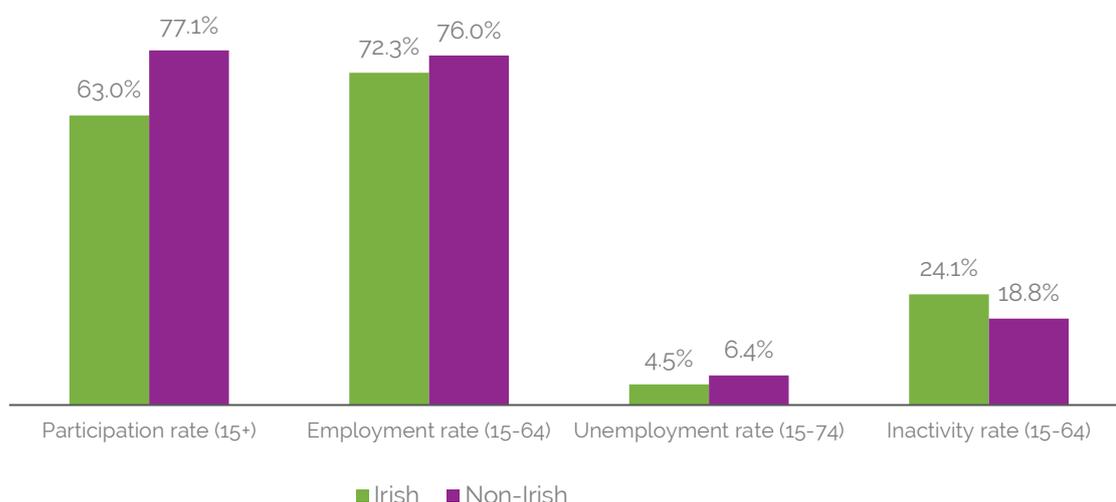
Source: SLMRU (SOLAS) analysis of CSO data

In quarter 4 2021, non-Irish citizens had higher participation, employment rates and unemployment rates but lower inactivity rates compared to Irish citizens (Figure 2.10).

Between quarter 4 2019 and quarter 4 2021, there were increases for both Irish and non-Irish citizens in the participation rate (2.2 and 4.1 percentage points respectively) and employment rate (2.7 and 3.6 percentage points respectively), although these rises mask declines that occurred between quarter 4 2019 and quarter 4 2020, due to the pandemic. Conversely, despite increases, also due to the pandemic, between quarter 4 2019 and quarter 4 2020, the inactivity rate for both Irish and non-Irish citizens fell between quarter 4 2020 and quarter 4 2021. In quarter 4 2021, the inactivity rates for both Irish and non-Irish citizens were below their pre-COVID 19 rates in quarter 4 2019 (3.1 percentage points and 4.3 percentage points respectively).

Between quarter 4 2020 and quarter 4 2021, the unemployment rate for both Irish and non-Irish citizens decreased (0.9 and 1.7 percentage points respectively). In quarter 4 2021, the unemployment rates for both Irish and non-Irish citizens were broadly similar to those observed in quarter 4 2019 (pre-COVID-19 pandemic).

Figure 2.10 Participation, Employment, Unemployment and Inactivity Rates by Citizenship, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

2.4 National Skills Strategy: Progress to Date

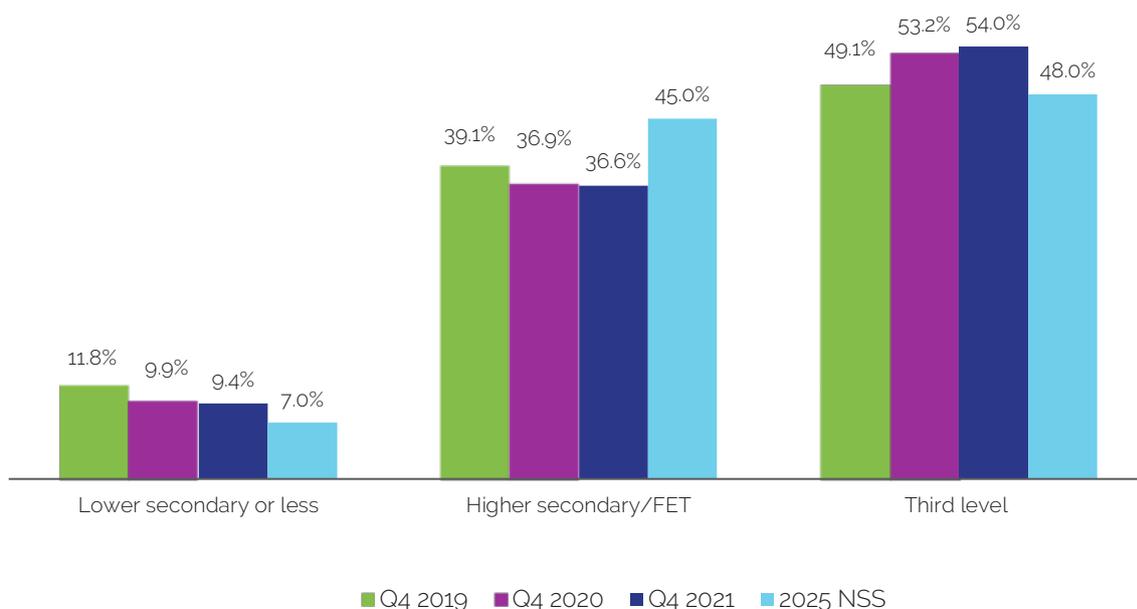
Figure 2.11 presents the educational attainment of the labour force (15-64 years) and the targets set out in the 2007 National Skills Strategy (NSS) and carried over in the National Skills Strategy 2025.²⁰

In quarter 4 2021, the share of working age third level graduates (those aged 15-64 years) in the labour force was 54% (exceeding the 2025 NSS target of 48%). At lower levels of education, the share who had attained lower secondary or less qualifications (as their highest level of education) was 9.4%, while the share was 36.6% for those who had attained higher secondary/FET qualifications.

Between quarter 4 2020 and quarter 4 2021, the share of third level graduates increased by 0.8 percentage points, while the share with lower secondary or less qualifications decreased by 0.5 percentage points, and the share with higher secondary/FET qualifications decreased by 0.3 percentage points.

The gap to the 2025 target was 2.4 percentage points for those who had attained lower secondary or less qualifications, and 8.4 percentage points for those with higher secondary/FET qualifications.

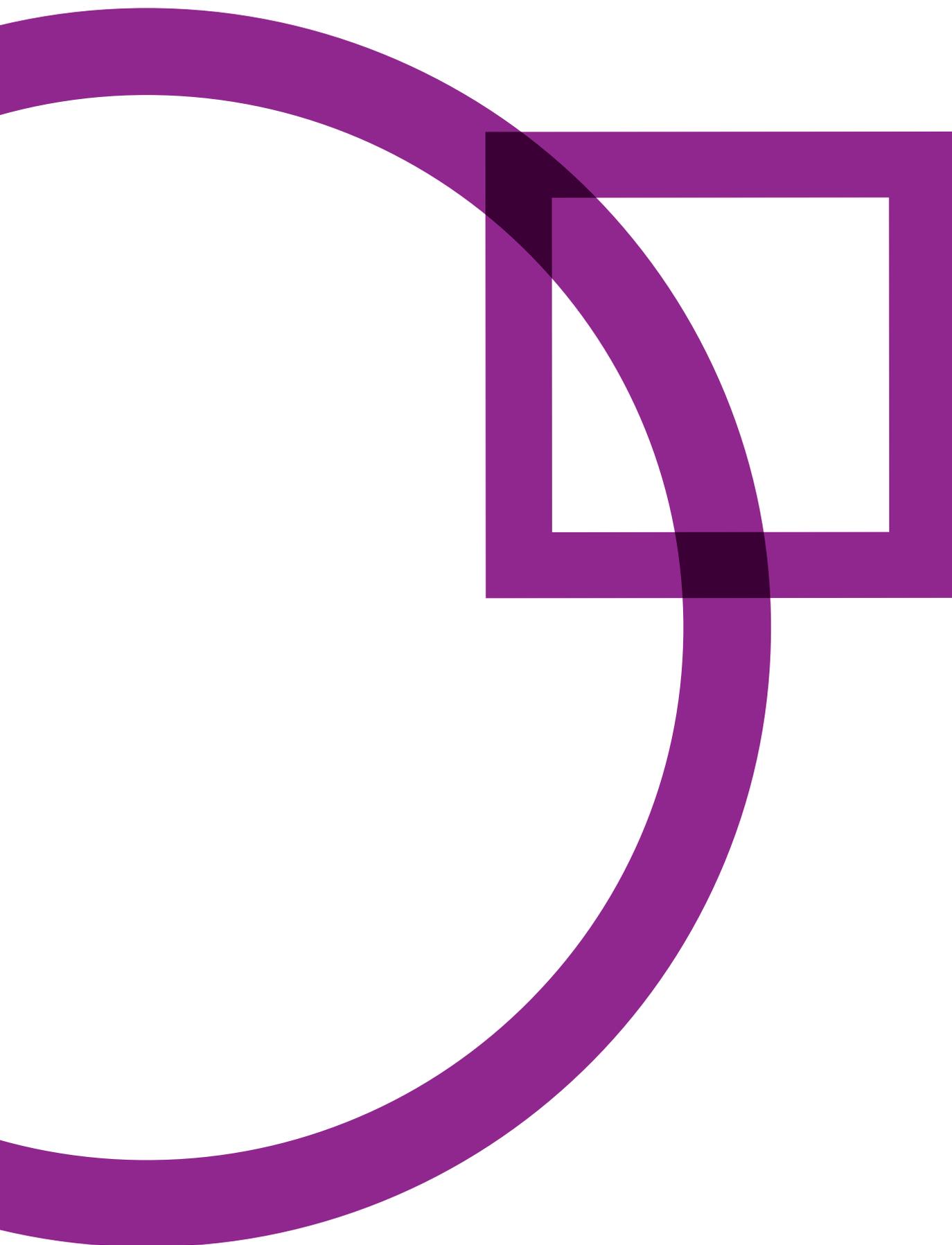
Figure 2.11 Labour Force (15-64 years) by Education (Quarter 4 2021) and the NSS Target



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.
<https://assets.gov.ie/24412/0f5f058feec641bb92d34a0a8e3daff.pdf>



Section 3

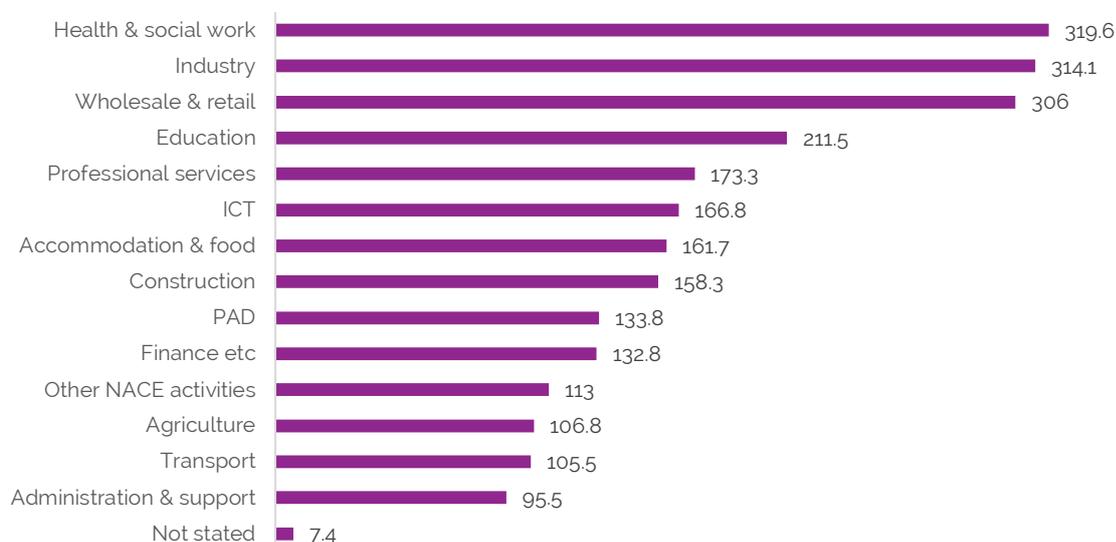
Employment by Economic Sector

This section analyses Ireland's workforce at sectoral level, presenting the sectors in which Ireland's 2.5 million persons were employed in quarter 4 2021. The economic shocks to which Ireland's labour market (e.g. COVID-19, Brexit) was exposed in recent years did not affect all sectors equally, with some such as construction, accommodation & food, and wholesale & retail, being more severely impacted and others, such as ICT and professional services, proving to be more resilient. The strong growth that occurred in total employment in the year to quarter 4 2021 masks the fact that much of this recovery (or, for a small number of sectors, *partial* recovery) occurred in the latter half of the year, typically in quarter 4 2021.

3.1 Employment by sector

Figure 3.1 presents national employment by broad economic sector (NACE Rev 2). In quarter 4 2021, the largest sectors in terms of numbers employed were health & social work (319,600 persons), industry (314,100 employed), and wholesale & retail (306,000 persons). Combined, these three sectors alone accounted for more than one third (37%) of total national employment.

Figure 3.1 Employment by Sector (000s), Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

Other NACE includes activities such as arts, entertainment & recreation, other service activities (e.g. repair of goods), etc.

3.2 Employment growth by sector

Employment growth by sector is presented in Figure 3.2. This year, in addition to the one-year and five-year sectoral growth rates, data for the two-year growth is also presented, as this allows for a comparison of sectoral employment before and after the restrictions imposed on economic activity as a result of COVID-19.

Between quarter 4 2020 and quarter 4 2021, the highest growth rates were for the accommodation & food (+30%), ICT (+20%), and professional services (+20%) sectors, each of which had growth rates at least double the national average (10%) over the period. The numbers employed declined for just two sectors, namely transport (-1%) and wholesale and retail (-2%).

Despite the year-on-year growth that occurred across many sectors between quarter 4 2020 and quarter 4 2021, the two-year growth shows that employment in a number of sectors remained below pre-COVID-19 levels: most notably, compared to quarter 4 2019, employment levels in accommodation & food were 10% lower, amounting to 17,300 fewer workers in the sector. Similarly, the recent growth in employment levels in administrative & support services and in other NACE activities was not sufficient to offset the declines that occurred during COVID-19, and employment levels in quarter 4 2021 were 15% and 4% respectively below their pre-COVID levels; as a result, there were 16,300 fewer persons employed in administration & support services and 5,300 fewer persons employed in other NACE activities. At the same time, there was strong growth, of 31% and 23% respectively, for the ICT and professional services sectors, which combined resulted in 71,600 additional persons employed.

Over the five-year period, quarter 4 2016-quarter 4 2021, the strongest relative growth was observed for ICT (48%), public administration and defence (PAD) (43%), and education (36%). Combined, these three sectors accounted for nearly 150,000 additional persons in employment, or more than two-fifths of the total growth in employment that occurred over this period.

Figure 3.2 Employment Growth by Sector, Q4 2016-Q4 2021, Q4 2019-Q4 2021 and Q4 2020-Q4 2021



Source: SLMRU (SOLAS) analysis of CSO data
Excludes not stated

3.3 Employment by economic sub-sector

In this section, we examine economic sectors within four broad categories:

- industry, comprising manufacturing, utilities and extraction/mining
- construction
- agriculture, forestry and fishing (abbreviated in this document to 'agriculture')
- services, which includes 11 NACE sectors; services are firstly analysed by knowledge intensive services and less knowledge intensive services, followed by a detailed breakdown by individual sector.

Industry

In quarter 4 2021, 314,100 persons were employed in industry, accounting for almost 13% of total national employment. Employment in this sector rose by 6% compared with quarter 4 2020, by 10% compared to pre-COVID (i.e. quarter 4 2019) levels, and by 13% compared to quarter 4 2016. In absolute terms, the year-on-year growth to quarter 4 2021 amounted to 17,300 additional persons in employment, while compared to quarter 4 2019 and quarter 4 2016, there were an additional 27,800 and 37,100 persons employed respectively.

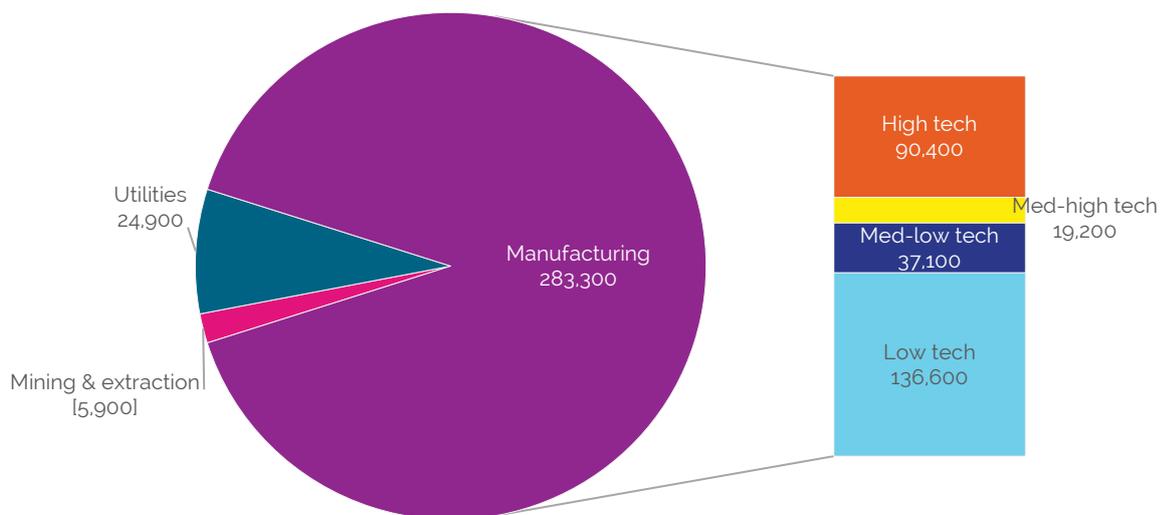
Figure 3.3 presents industrial employment by sub-sector and technological intensity. In quarter 4 2021, 90% of industrial employment was in manufacturing (283,300 persons), with utilities accounting for 8% (24,900 persons) and extraction/mining, the remaining 2%. In terms of technological intensity, low-technology manufacturing accounted for nearly one half (48% or 136,600 persons) of total manufacturing employment. High technology manufacturing accounted for nearly a further third (90,400 persons) of manufacturing employment, while medium-low technology employment and medium-high technology employment made up 13% and 7% respectively. Of the 90,400 persons employed in high-technology manufacturing in quarter 4 2021, more than 70% were employed in pharmaceuticals.

Between quarter 4 2020 and quarter 4 2021, employment grew for each of the industrial sub-sectors, with the largest growth, in both relative and absolute terms for manufacturing (+6%, or 16,000 additional persons). Nearly three quarters of the growth in manufacturing employment was due to increases in high-technology manufacturing (+11,400 people or +14%), although there were also strong increases in low-technology manufacturing employment (+8,300 persons or +6%). In contrast, the numbers employed in medium-high technology fell (by 17%, or 3,900 fewer persons) while numbers in medium-low technology remained almost unchanged. The number of persons working in utilities and mining/extraction grew by 3% and 5% respectively.

When compared to quarter 4 2019 (i.e. pre-COVID), employment in quarter 4 2021 for both the manufacturing and utilities sub-sectors grew, exceeding pre-COVID levels by 11% (28,200 persons) in manufacturing and by 3% (or just 700 extra persons) in utilities. The increases in manufacturing were due to growth in high-tech (+39%) and low-tech (+6%) manufacturing. Although the numbers in mining and extraction declined over the same period (by 16%), given the comparatively small size of the sector, this translated into just 1,100 fewer persons.

Over the five-year period, quarter 4 2016-quarter 4 2021, employment levels increased across each of the industrial sub-sectors. Although the overall manufacturing sub-sector grew by 13%, or 33,300 extra persons, the growth was driven by additional workers in low-tech manufacturing (+43,700 or 47%) and high-tech manufacturing (+21,700 persons, or 32%).

Figure 3.3 Industrial Employment by Sector and Technological Intensity, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

[] Numbers in square brackets are small and should be interpreted with caution

Construction

In quarter 4 2021, construction accounted for a 6% share of national employment with 158,300 persons employed in the sector. The construction of buildings and specialised construction activities sub-sectors each employed approximately 68,600 persons, combined making up 87% of total construction employment. The remaining 13% (or 21,100 persons) were engaged in the civil engineering sub-sector.

Between quarter 4 2020 and quarter 4 2021, construction sector employment grew by 17%, representing an additional 23,300 persons. The two largest sub-sectors, construction of buildings and specialised construction activities grew by 18% (10,500 extra persons employed) and 8% (4,800 extra persons) respectively; in relative terms, the increase in civil engineering was strongest, growing by 60%, amounting to an additional 7,900 persons employed.

Although construction sector employment in quarter 4 2021 was 8% higher when compared to pre-COVID levels (i.e. quarter 4 2019), employment growth was stronger for both the construction of buildings and the civil engineering sub-sectors (at 30% and 29% respectively); in contrast, employment fell by 12% (or 9,500 fewer persons) for those working in the specialised construction activities sub-sector.

Over the five-year-period, quarter 4 2016-quarter 4 2021, employment grew by nearly a third (31%, or 37,500 additional persons employed). Growth occurred in each of the sub-sectors but the strongest growth was in civil engineering, where numbers more than tripled; as civil engineering accounted for a relatively small number of persons, this translated into just 14,000 additional persons employed.

Agriculture, forestry and fishing

In quarter 4 2021, 106,800 persons were employed in the agriculture sector representing 4.3% of national employment. Of the total employment in the sector, the vast majority (94%) was in crop and animal production, with the remainder in forestry and fishing. In terms of employment levels, this sector was largely unaffected by the COVID-19 economic restrictions, with the numbers working in the sector in quarter 4 of each year over the period 2019-2021 remaining relatively stable. Employment levels declined slightly, by 3,100 persons or nearly 3%, over the five-year period quarter 4 2016-quarter 4 2021.

While this sector has been identified (ESRI 2020²¹) as among those that are most exposed to shocks in trade with the UK as a result of Brexit, the impact on employment numbers is as yet to be fully determined with future developments in relation to Brexit likely to have knock-on effects for the sector.

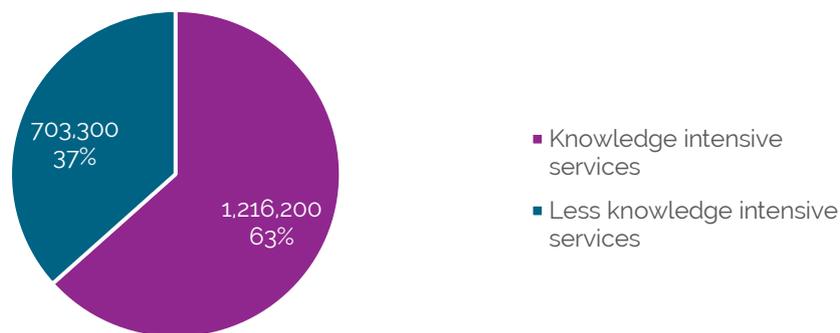
Services

In quarter 4 2021, there were almost 1.92 million persons employed in services-related activities, accounting for more than three quarters of national employment. The composition of the services sector in terms of knowledge intensity is presented in Figure 3.4. Of the total services employment, 63% (1,216,200) was in knowledge intensive services - KIS (e.g. ICT, finance, legal, accounting, engineering, R&D, education, health and arts etc.). The remainder was in less knowledge intensive services – LKIS (e.g. wholesale & retail, transport, accommodation & food, office administration, real estate, travel, etc.).

Between quarter 4 2020 and quarter 4 2021, employment levels in the services sector rose by nearly 185,000 persons (or 11%), more than off-setting the 4% pandemic-related decline observed in the previous year. While employment numbers in both the KIS and LKIS segments grew between quarter 4 2020 and quarter 4 2021, employment levels for LKIS remained 5% lower than their quarter 4 2019 levels; in contrast, employment levels for KIS grew by almost 14% (or 148,500 extra persons) between quarter 4 2019 and quarter 4 2021.

When compared to quarter 4 2016, employment in services increased by nearly 17%, resulting in 274,400 additional persons employed, with growth being driven primarily by an increase of nearly 26% (or 248,800 additional persons) in the KIS segment.

Figure 3.4. Services Sector Employment, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

²¹Daly, L., and M. Lawless. Examination of the sectoral overlap of Covid-19 and Brexit Shocks. ESRI Working Paper No. 77. September 2020.

Wholesale and retail

Employment Q4 2021	% share of total employment Q4 2021	Sub-sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
306,000	12%	69% - retail trade 21% - wholesale trade: 10% - motor trade:	-1%	+1%
<p>More than two thirds of employment in this sector was in the retail trade. The effect of the pandemic on employment in this sector was particularly strong on the motor trade segment, where employment fell by 17% (6,500 fewer persons) over the period quarter 4 2019-quarter 4 2021; the number of persons employed in the retail trade segment also declined slightly (by 1%, or 2,500 fewer workers) over the same period, although numbers fluctuated considerably in the intervening quarters. Over the same two-year period, the number of persons employed in the wholesale trade grew by 10% (or 5,700 additional persons), masking a fall in employment levels between quarter 4 2019 and quarter 4 2020.</p> <p>While the number of persons employed increased over the five-year period quarter 4 2016-quarter 4 2021, the growth, at just 1%, was well below the five-year national average of 16% and was confined to the wholesale trade and retail trade segments only, as employment in the motor trade segment fell by 27% over the same period.</p>				

Accommodation and food services

Employment Q4 2021	% share of total employment Q4 2021	Sub-sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
161,700	6%	75% - food & beverage services 25% - accommodation	-10%	4%
<p>The accommodation and food services sector was particularly severely impacted by the COVID-19 restrictions with employment throughout 2020 and the early part of 2021 increasing and decreasing as the pandemic related restrictions were lifted and (re)imposed. Employment in quarter 4 2021 remained 10% below pre-pandemic levels. Most of the decline related to a fall in employment of 13,400 (-25%) in the numbers employed in the accommodation sub-sector, with the fall in food & beverages services, at 3%, translating into just 4,000 fewer persons employed.</p> <p>Over the five-year period quarter 4 2016-quarter 4 2021, employment in the sector grew by 4% (or 6,400 additional persons), although this masks a 26% decline in the accommodation sub-sector and an increase of a fifth (20,700 additional persons) in the food & beverages sub-sector.</p>				

Professional, scientific and technical activities

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
173,300	7%	33% - legal and accounting 25% - architectural & engineering activities; technical testing/analysis 9% - Activities of head offices; management consultancy activities Remainder includes scientific R&D (8%) advertising/market research (7%), other professional services and veterinary activities	23%	23%

In quarter 4 2021, employment in the professional services sector was 23% greater than in the same period in 2019, translating into 32,300 additional persons employed. Growth occurred in all segments of the sector except advertising/market research. By far the strongest increases were in architectural/engineering activities, head offices/management consultancy activities, and scientific R&D activities, which grew by 16,800 persons, 5,400 persons and 7,000 persons respectively. Most of the growth in the sector over the two-year period occurred in the latter half of 2021.

When compared to quarter 4 2016, employment also grew strongly, although this masks a slight decline and subsequent recovery in the years to quarter 4 2019.

Financial, insurance and real estate services

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
132,800	5%	56% - financial services (e.g., banking) 20% - insurance 15% - auxiliary financial services 9% - real estate activities	15%	23%

Between quarter 4 2019 and quarter 4 2021, employment grew in each of the four segments of the financial, insurance and real estate activities sector, although it was particularly strong, in absolute terms, in the auxiliary financial services segment (+7,000 workers) and the financial services segment (+6,700 persons). While employment levels also grew in each of the segments over the five-year period quarter 4 2016-quarter 4 2021, there was a shift in the distribution of employment away from financial services (down to 56% from 63%) towards auxiliary financial services (up from 7% to 15%).

Transportation and storage

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
105,500	4%	51% - land transport 25% - warehousing 16% - postal & courier activities 9% - water & air transport	-2%	13%
<p>The number of persons employed in this sector fell by approximately 2% between quarter 4 2019 and quarter 2021, resulting in 2,500 fewer persons employed; increases in the postal/courier activities and land transport activities were negligible (combined amounting to just 500 additional workers) and were insufficient to offset the declines in warehousing (3,200 fewer workers) and air transport (1,000 fewer workers). Over the five-year period, however, employment increased by 13%.</p>				

Information and communications (ICT)

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
166,800	7%	69% - computer programming 13% - telecommunications 6% - motion picture, tv & music production Remainder includes broadcasting, publishing information services	31%	48%
<p>The ICT sector proved to be particularly resilient to the negative effects of the pandemic on employment. Compared to pre-COVID levels (in quarter 4 2019), employment in this sector grew by almost a third, amounting to 39,400 additional persons employed, with most of the growth occurring between quarter 4 2020 and quarter 4 2021. Although growth occurred in all sub-sectors for which numbers were large enough to report, approximately four fifths of the total two-year growth in the sector was due to increases (+39% or 32,700 additional people) in the computer programming sub-sector. In relative terms, the telecommunications sub-sector also grew strongly (by 34%), although given the comparatively small numbers employed, this translated into just 5,600 additional persons over the two-year period.</p> <p>Over the five-year period quarter 4 2016-quarter 4 2021, employment in the ICT sector also grew strongly – by almost a half, well above the national average of 16%.</p>				

Administrative and support service activities

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
95,500	4%	39% - buildings & landscape services 17% - security activities 17% - office administrative activities Remainder includes employment activities, travel services and renting/leasing activities	-15%	12%

Administrative and support service activities was among the sectors most severely impacted by economic restrictions imposed as a result of the pandemic. Despite an 18% rise in employment levels in the year to quarter 4 2021, it was not enough to compensate for the decline that occurred during the pandemic and by quarter 4 2021, the numbers employed in this sector remained 15% lower than their pre-pandemic (quarter 4 2019) levels; as a result, there were 16,300 fewer persons employed over the two-year period.

Despite increases for most segments (except rental and leasing activities, which fell slightly) between quarter 4 2020 and quarter 4 2021, employment for almost all segments (except employment activities) was lower in quarter 4 2021 compared to pre-pandemic levels (i.e. quarter 4 2019); the largest falls over the two-year period were for building & landscape services (e.g. cleaning activities) and security activities which decreased by 5,900 persons and 4,000 persons respectively.

Employment activities and travel services were the only segments of this sector where employment levels declined over the five-year period, quarter 4 2016-quarter 4 2021. Levels grew for all other segments.

Health and social work

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
319,600	13%	59% - human health activities 29% - social work activities 12% - residential care activities	9%	15%

While employment in the health and social work sector fell slightly (by 1%) between quarter 4 2019 and quarter 4 2020, employment numbers subsequently recovered and by quarter 4 2021 were 9% higher than they had been two years earlier, resulting in 25,900 additional persons employed. The increases were driven entirely by a rise in the number of persons employed in human health activities (+19%) as employment in the remaining two segments declined over the same period.

Compared to quarter 4 2016, employment grew in each of the three segments, with an additional 26,300 (+16%) persons employed in human health activities, an additional 5,100 (+16%) in social work, and an additional 10,700 (+13%) in residential care activities.

Education

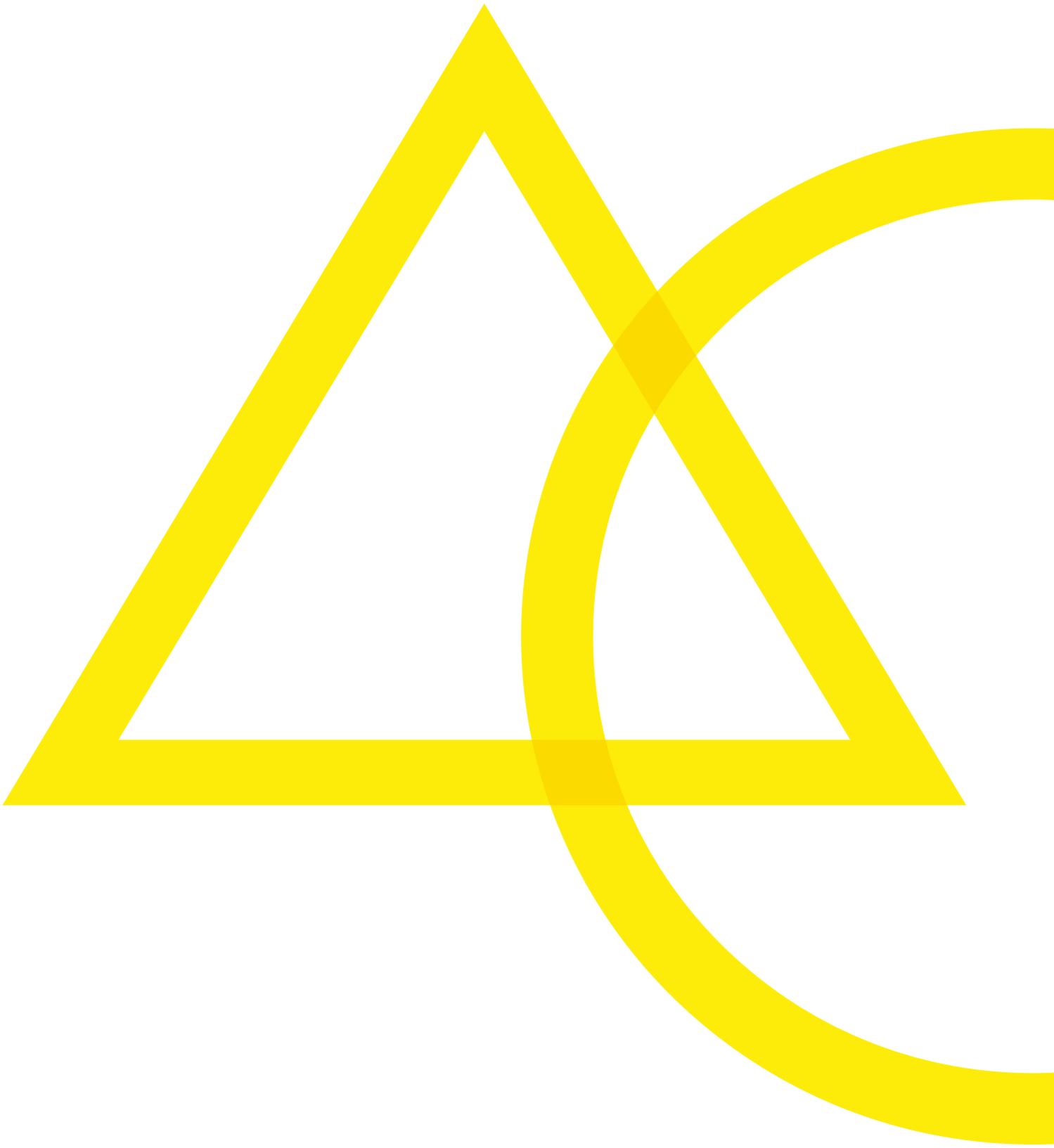
Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
211,500	8%	-	11%	36%
<p>In terms of numbers, employment in the education sector was not impacted negatively by the pandemic-related economic restrictions: employment grew over the period quarter 4 2019-quarter 4 2020 and again in the year to quarter 4 2021; as a result, by quarter 4 2021, employment levels in the education sector were 11% higher than before the pandemic (quarter 4 2019), with 21,000 additional workers and 36% higher than in quarter 4 2016 (an additional 55,800 persons employed).</p>				

Public administration and defence (PAD)

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
133,800	5%	-	15%	43%
<p>Employment levels in PAD grew by 15% (or 17,200 additional persons) between quarter 4 2019 and quarter 4 2021 and by 43% (or 40,100 additional persons) between quarter 4 2016 and quarter 4 2021.</p>				

Other NACE activities

Employment Q4 2021	% share of total employment Q4 2021	Sub-Sectors	% Growth	
			2-year Q4 '19-'21	5-year Q4 '16-'21
113,000	5%	30% - other personal services (e.g. hairdressing) 25% - sports activities 26% - activities of membership of organisations 10% - gambling activities Remainder in libraries, repair of computers/household equipment, and arts/entertainment activities.	-4%	-5%
<p>Despite a strong increase (16%, or 16,000 persons) in the numbers employed between quarter 4 2020 and quarter 4 2021, employment levels in this sector in quarter 4 2021 were 4% lower than they were immediately prior to the pandemic (in quarter 4 2019). The largest declines over the two-year period were for sports activities (-8%, or 2,400 fewer workers) and arts/entertainment activities (-10%, or 1,000 fewer workers). In contrast, the largest growth was for those engaged in gambling activities, where employment increased by 30%, resulting in 2,500 additional workers.</p> <p>Over the five-year period, quarter 4 2016-quarter 4 2021, employment declined for arts/entertainment (-48% or 8,600 fewer people) and other personal services (-10%, or 3,800 fewer people). All other segments (where numbers were large enough to report) grew.</p>				



Section 4

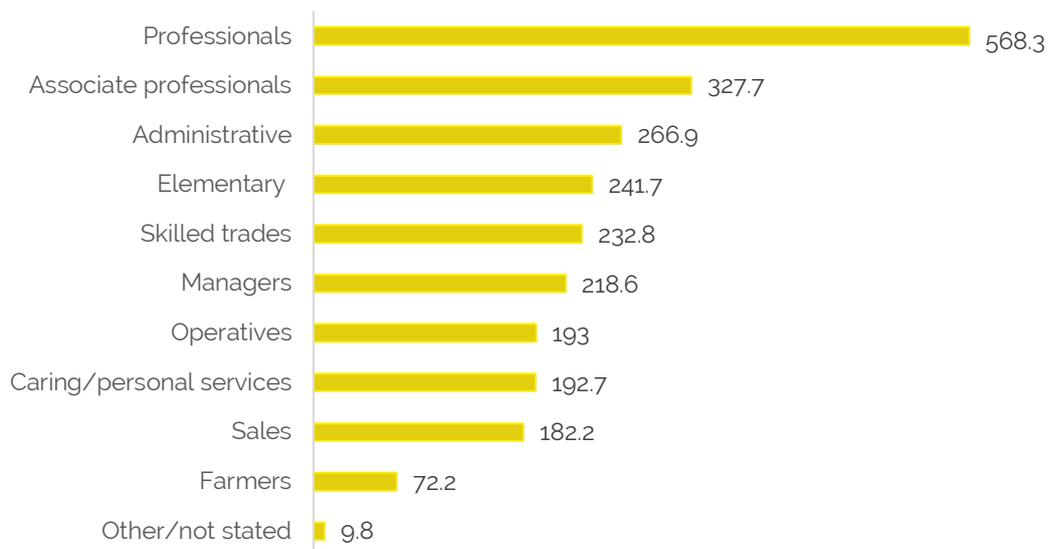
Employment by Broad Occupation

This section examines employment by broad occupation across several variables. Throughout this section, farmers are presented as an occupation separately from other skilled trades.

4.1 Employment by occupation

Figure 4.1 presents employment in Ireland in quarter 4 2021 by broad occupation. In quarter 4 2021, professionals had the highest level of employment, at 568,300 persons followed by associate professionals (327,700 persons). Combined, the high skilled occupations (professionals, associate professionals, and managers) accounted for approximately 1.1 million persons or 44% of the total national workforce. Elementary workers, with 241,700 persons employed, accounted for 10% of total employment while farmers (72,200 persons) accounted for 3%.

Figure 4.1 Employment by Broad Occupational Group (000s). Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

4.2 Employment growth

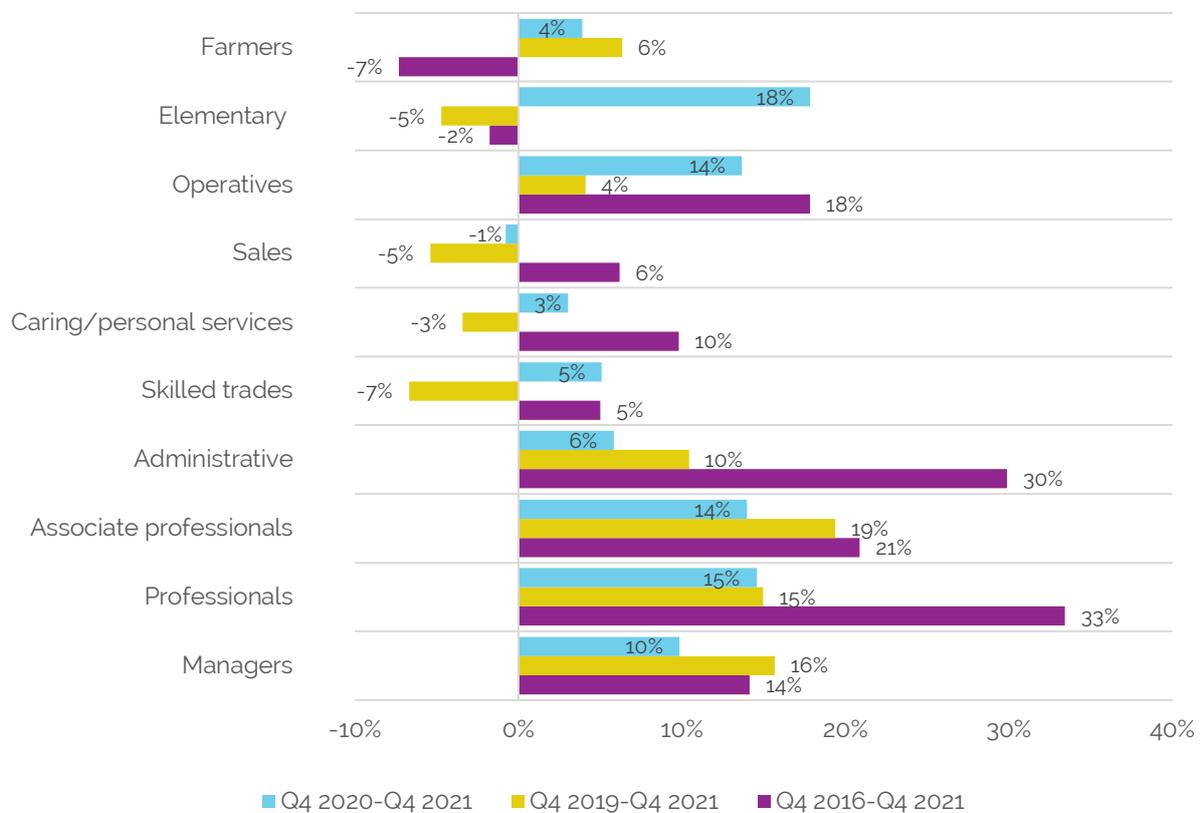
Figure 4.2 presents employment growth by broad occupational group. This year, in addition to the one-year and five-year occupational growth rates, data for the two-year growth is also presented, as this allows for a comparison of occupational employment before and after the restrictions imposed on economic activity as a result of COVID-19.

The 10% increase in employment that occurred between quarter 4 2020 and quarter 4 2021 was not evenly spread across occupational groups, with above average growth for elementary (+18%), professional (+15%), associate professional (14%), and operative occupations (14%); combined these four occupational groups accounted for three quarters of all additional workers (172,200 persons) over the one-year period. At the same time, the number of persons working in sales occupations fell by 1%.

Compared to pre-COVID levels, the largest relative growth between quarter 4 2019 and quarter 4 2021 was for associate professional occupations (+19%); however, the largest absolute growth was for professionals, where the 15% increase translated into 74,000 additional persons employed. In contrast, employment fell for skilled trades, elementary, sales and caring/personal services workers.

Over the five-year period, quarter 4 2016 and quarter 4 2021, employment numbers grew across almost all occupations, with the exception of elementary workers and farmers, which fell by 2% and 7% each respectively. The strongest employment growth was for professional occupations where the numbers employed rose by a third, resulting in an additional 142,400 persons employed, followed by administrative workers (+30%) and associate professionals (+21%).

Figure 4.2 Employment Growth by Broad Occupational Group, Q4 2016-Q4 2021, Q4 2019-Q4 2021 & Q4 2020-Q4 2021



Source: SLMRU (SOLAS) analysis of CSO data

4.3 Employment by gender and age

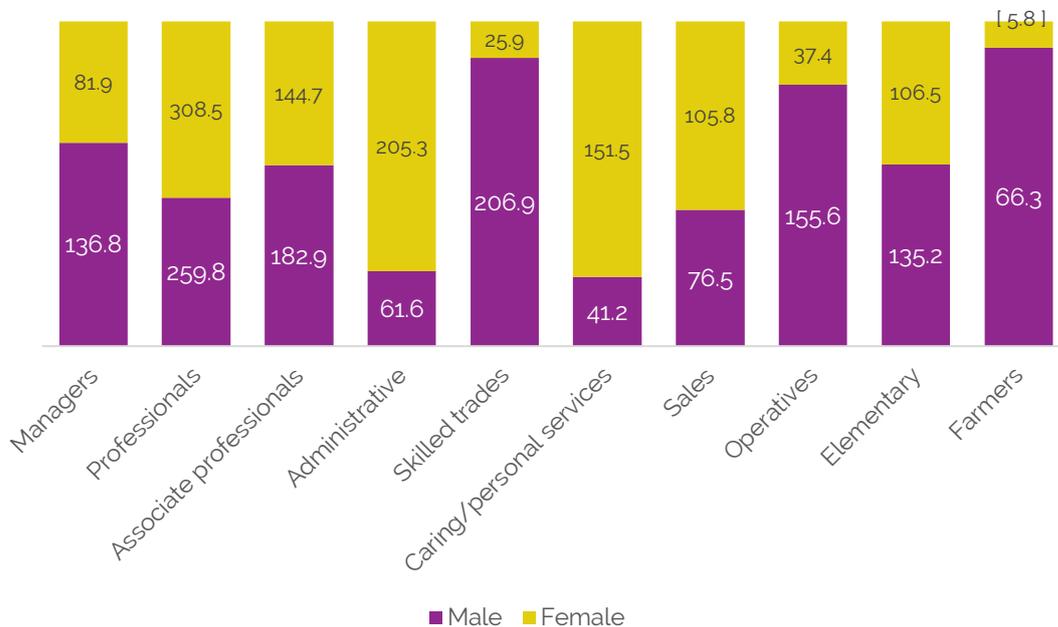
Gender

Employment by gender for broad occupations is presented in Figure 4.3. Although females made up just under half (47%) of all employment in quarter 4 2021, they accounted for at least three quarters of employment amongst administrative (77%) and caring/personal services (79%) occupations. Males in contrast accounted for at least four fifths of employment amongst farmers (92%), skilled trades (89%) and operatives (81%). Employment was closest to gender balanced for professional, associate professional and elementary occupations, where the gender gap was nine, twelve and twelve percentage points respectively.

In absolute terms, the highest numbers of females were employed in professional (308,500 persons) and administrative (205,300) occupations, while the highest numbers of males were employed in professional (259,800) and skilled trades (206,900) occupations.

When compared to quarter 4 2019, there were 55,400 additional males and 93,200 additional females in employment, more than offsetting the 3% decline in male employment and the 4% decline in female employment that occurred as a result of the pandemic between quarter 4 2019 and quarter 4 2020. For both males and females, the largest absolute increases were for professional occupations, resulting in 33,300 (+15%) extra employed males and 40,700 extra (also +15%) employed females. Over the two-year period, growth also occurred, for both males and females, in associate professional, managerial and administrative occupations. However, while the number of females also rose in operative occupations (by 10,900), the number of males declined (by 3,000). The strongest declines for males occurred in skilled trades occupations (16,100, or 7% fewer people) and elementary occupations (9,400 or 6% fewer workers), while for females the strongest decline, at 11%, was for sales occupations (13,500 fewer persons employed).

Figure 4.3 Employment by Gender and Broad Occupational Group (000s). Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

Age

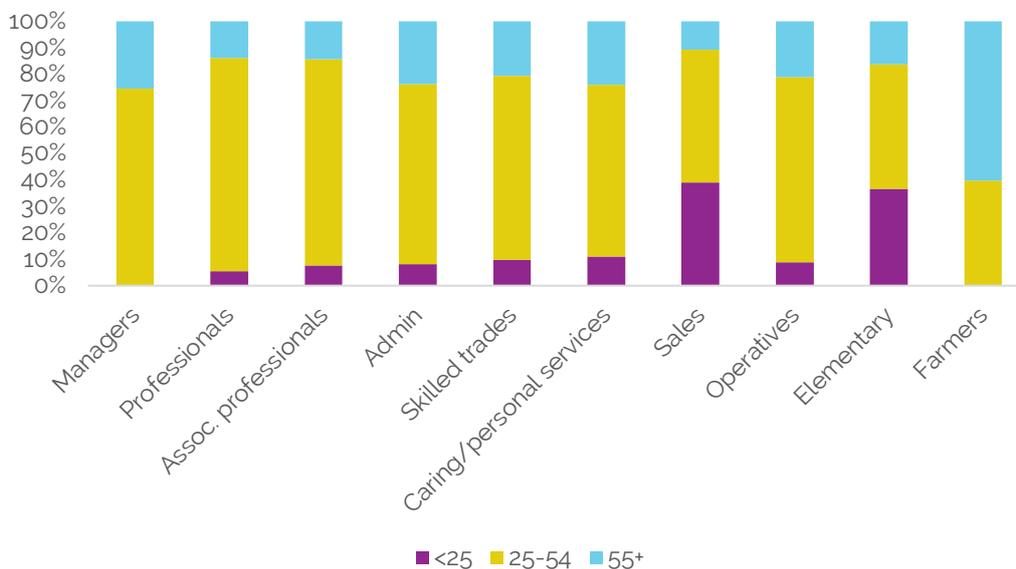
Figure 4.4 presents the age distribution of employment by broad occupational group. In quarter 4 2021, with the exception of farmers, employment in all occupational groups was highest in the 25-54 age cohort. Elementary and sales occupations had the youngest age profile, with more than a third of employment aged 15-24 years and lower than average shares aged 55 years or older.

When compared to quarter 4 2019, there were 43,400 additional **15-24-year-olds** in employment in quarter 4 2021; while the number of young persons increased in almost all occupational groups except caring/personal services and skilled trades, more than two thirds of the total employment growth for this age cohort was concentrated in elementary or sales occupations, with numbers rising by 17,900 and 11,600 persons, respectively.

Although in quarter 4 2021, employment levels for those **aged 25-54 years** were 4% (60,700 extra people) higher than in quarter 4 2019, the number of persons working in some of the individual occupation groups actually fell. Over the two-year period, the strongest decline was for elementary occupations where the numbers employed decreased by 20%, resulting in 28,200 fewer workers; there were also strong declines of 18% and 12% respectively in the numbers working in sales (20,100 fewer workers) and skilled trades (23,100 fewer persons). Conversely, the number of 25-54-year-olds working in professional and associate professional occupations grew strongly, by 14% or 57,600 persons and 18% or 39,500 persons, respectively. There was little growth for farmers and operative occupations, which combined resulted in fewer than 1,000 additional persons employed.

Despite a 10% increase in the number of persons **aged 55 years and older** in employment over the two-year period quarter 4 2019-quarter 4 2021, employment in elementary and sales occupations for this age cohort fell by 4% and 6% respectively, resulting in a combined total of 2,700 fewer persons employed across these occupations. In absolute terms, employment growth for this cohort was particularly strong for managers (+9,600 extra workers), professionals (+9,300 workers) and associate professionals (+9,000).

Figure 4.4 Employment by Age and Broad Occupational Group, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

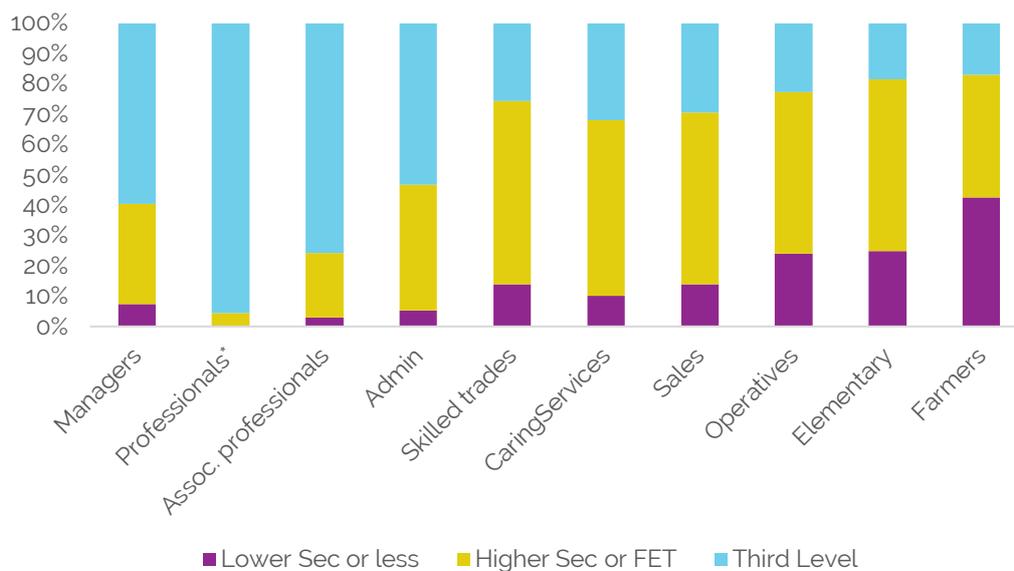
*The numbers of managers and farmers aged under 25 were too low to report

4.4 Employment by education

Figure 4.5 presents the educational distribution of employment for each occupational group. In quarter 4 2021, more than half (54%) of Ireland's workforce held third level qualifications, but the share was considerably higher for professionals (96% held third level), associate professionals (76%) and managers (60%). Occupations with the highest shares of higher secondary/FET qualification holders were skilled trades (at 60%), caring (58%), elementary (57%) and sales (57%) occupations – shares that were much higher than the national average of 36%. Farmers had the lowest education attainment profile, with 43% holding lower secondary or less, considerably more than the national average (10%).

Compared to quarter 4 2019, there was a further shift towards higher levels of educational attainment in Ireland's workforce in quarter 4 2021. For almost all occupations, except caring/personal services, the number of third level graduates in employment grew, with the largest increases in terms of numbers for professionals (+76,800 workers) and associate professionals (+50,900). At the same time, there were declines in most occupations except sales (which remained the same) for persons with, at most, lower secondary education attainment; the largest falls in both absolute and relative terms were for skilled trades (-10,600 workers, or -25%) and caring/personal services (-6,600, or -26%). The number of persons holding higher secondary/FET qualifications fell for sales, skilled trades, elementary and professional occupations, but increased for all others.

Figure 4.5 Employment by Education and Broad Occupational Group, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

*Number of professionals with lower secondary or less level of education attainment was too low to report.
 *Excludes those who did not state their level of education.

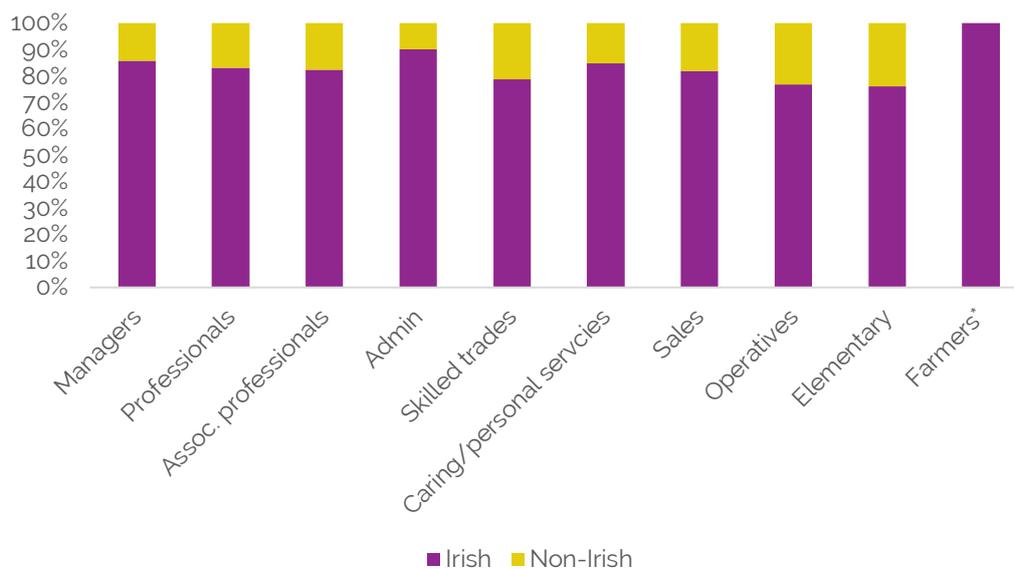
4.5 Employment by citizenship

The distribution of employment in broad occupational groups by citizenship is presented in Figure 4.6. In quarter 4 2021, at 24%, elementary workers had the highest share of non-Irish citizens; this was followed by operatives (23%) and skilled trades (21%). In contrast, apart from farmers (where the number of non-Irish citizens is too small to report), administrative workers had the lowest share of non-Irish citizens, at 10%.

Over the two-year period, quarter 4 2019-quarter 4 2021, the number of Irish citizens in employment grew by 6% (approximately 110,000 additional persons) and the number of non-Irish by 10% (or 38,200). This growth was not uniform across occupations: for both Irish citizens and non-Irish citizens, the largest growth in numbers employed was concentrated in professional and associate professional occupations; these two occupations combined accounted for 96,600 additional Irish citizens and 30,600 additional non-Irish citizens in the workforce.

At the same time, the largest declines in employment for both Irish and non-Irish citizens were in elementary (5,500 fewer Irish and 6,700 fewer non-Irish) and sales (8,500 fewer Irish and 1,700 fewer non-Irish) occupations. For Irish citizens, there were also relatively large falls in the numbers working in caring/personal (6,700 fewer persons, -4%) and in skilled trades (16,900 fewer employed, -8%), while numbers in these occupations remained relatively unchanged for their non-Irish counterparts.

Figure 4.6 Employment by Citizenship and Broad Occupational Group. Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

*Number of non-Irish farmers was too low to report.

4.6 Employment status

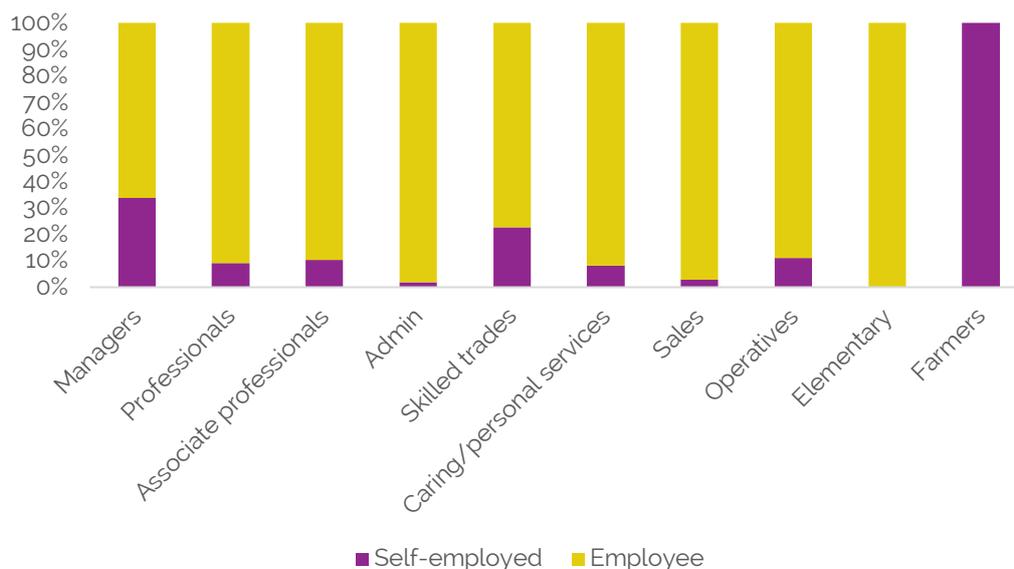
Self-employed/employee

Figure 4.7 presents employment in broad occupational groups by employment status. In quarter 4 2021, the majority of workers across all occupations were employees, with the exception of farmers. After farmers (where almost all were self-employed²²), managers and skilled trades workers had the highest share of workers who were self-employed (at 34% and 23% respectively).

Over the two-year period quarter 4 2019-quarter 4 2021, the number of self-employed persons fell by 1%, with the largest decreases in self-employed operatives (-17%, or 4,300 fewer workers) and skilled trades (-4%, 2,300 fewer persons). These declines are in spite of some growth (of 6% and 4% respectively) occurring in the most recent year to quarter 4 2021 for self-employed operatives and skilled trades workers.

The number of people working as employees, in contrast, increased by 7% over the two-year period quarter 4 2019-quarter 4 2021, with the largest growth for associate professionals (22%), professionals (16%) and manager (22%) occupations. Like the self-employed, the number of persons in skilled trades occupations who were employees fell (-8%), as did the number of employees working in elementary (-6%), sales (-6%) and caring/personal service (-4%) occupations; nonetheless, all but sales employees showed some recovery in the year to quarter 4 2021.

Figure 4.7 Employment by Employment Status* and Broad Occupational Group (%). Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

*Excludes those assisting relatives and on employment schemes.

**Number of employee farmers were too low to report.

²² The share of farmers who were employees was too small to report.

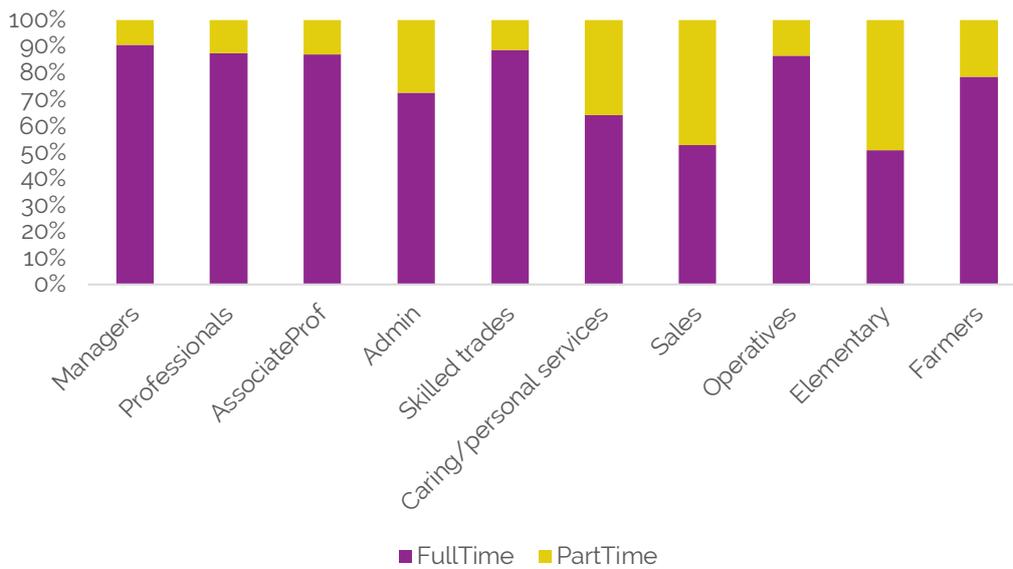
Full-time/part-time

Figure 4.8 presents the breakdown of employment in broad occupational groups by full-time and part-time work status. In quarter 4 2021, most workers across all occupational groups were in full-time employment. Occupations where the shares of full-time workers were highest were managers (91%), skilled trades (89%) and professionals (88%); occupations with the lowest share of full-time workers were elementary occupations, where just over a half (51%) were working full-time, followed by sales (53%) and caring/personal services (64%) occupations.

While the total number of persons in full-time employment increased over the two-year period, quarter 4 2019-quarter 4 2021, the growth was confined to only half of the 10 occupational groups considered here. Growth in full-time employment was strongest for professional occupations (67,200 additional persons, or 16%) and associate professional occupations (45,300 extra persons, or 19%). In contrast, the largest declines were for full-time workers in elementary (-20,500 persons, or -14%) and skilled trades occupations (18,300 fewer persons, or -8%).

For part-time employment, in contrast, there were increases over the two-year period for all occupational groups except caring/personal services, which fell slightly by 900 persons (or 1%). The strongest increase in part-time employment was for farmers (9,400 extra persons, more than offsetting the fall in the number of full-time farmers) and administrative (9,200 extra persons) occupations.

Figure 4.8 Full-time and Part-time Employment by Occupational Group. Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data



Section 5

Regional Labour Market Overview

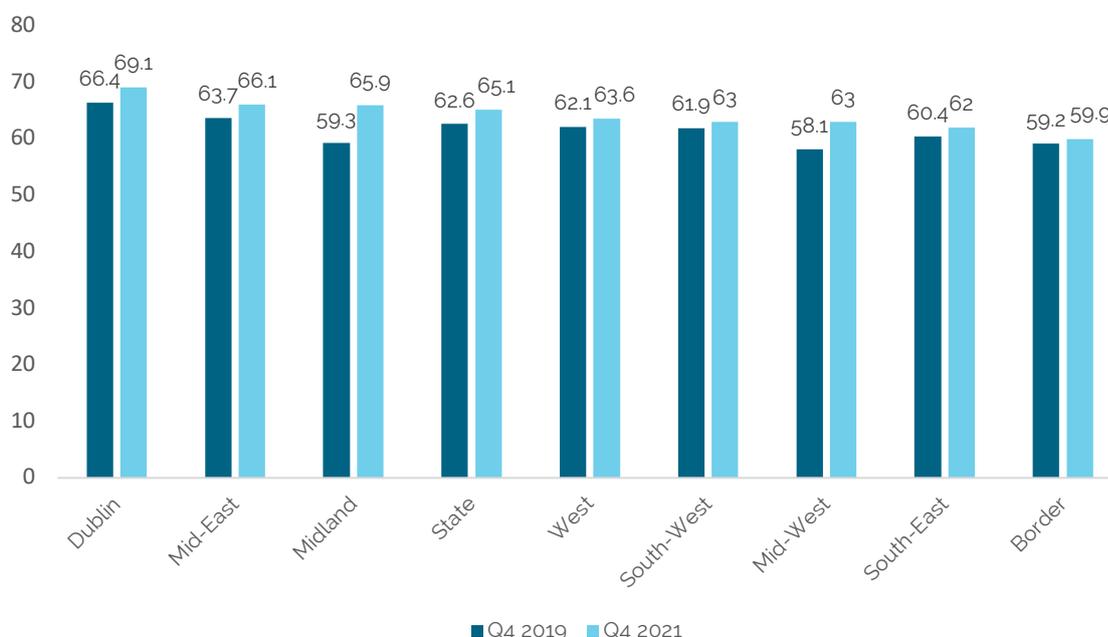
This section provides an overview of Ireland's labour market at regional level. Key indicators, comprising labour force participation rates, employment (by a range of variables including sector, occupation, education, age, and professional status) and unemployment are examined.

5.1 Labour force participation by region

Figure 5.1 shows the labour force participation rates for persons aged 15 years and over for each of Ireland's eight NUTS 3 administrative regions²³. In quarter 4 2021 Dublin had the highest labour force participation rate at 69.1%, followed by the Mid-East and Midland regions at 66.1% and 65.9%, respectively. For all other regions, the labour force participation rate was below the national average (65.1%), with the lowest rate of all being for the Border region at 59.9%.

When compared to quarter 4 2019, the labour force participation rate increased across all regions, more than compensating for the declines that occurred in all except the Midland region over the period quarter 4 2019-quarter 4 2020. In terms of percentage points, the largest gain over the two-year period was for the Midland region, which grew by nearly seven percentage points, with a growth of 3.3 percentage points in each of the two years. This was followed by the Mid-West region, where the labour force participation rate rose by nearly five percentage points. The Border region was the only region where the change in the labour force participation rate was less than one percentage point.

Figure 5.1 Labour Force Participation (%) by Region, Quarter 4 2019 & Quarter 4 2021



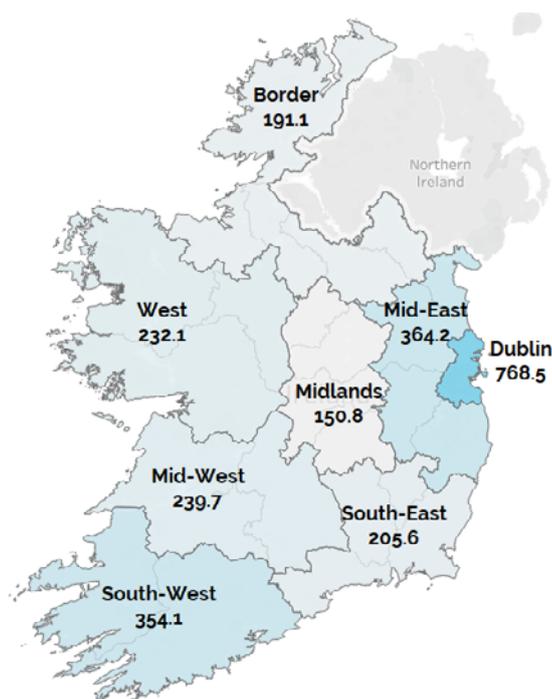
Source: CSO LFS

²³NUTS stands for Nomenclature of Territorial Units for Statistics

5.2 Employment and employment growth

Figure 5.2 shows the number of persons employed in quarter 4 2021 in each region. The Dublin region had the largest number of persons in employment, at 768,500 persons, followed by the Mid-East region with 364,200 persons employed. Combined the Dublin and Mid-East regions made up 45% of total national employment. In contrast, the Border and Midland regions were the smallest regions in terms of employment, with 191,100 and 150,800 employed respectively, making up less than a fifth (17% of total national employment).

Figure 5.2 Employment (000s) by Region, Quarter 4 2021

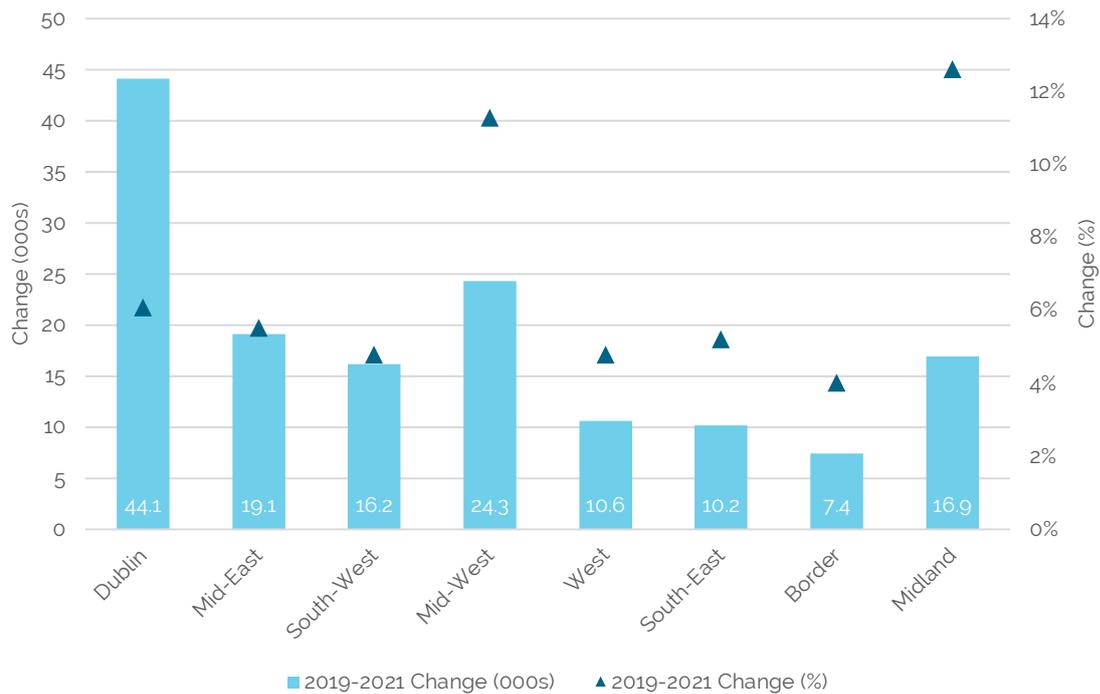


Source: CSO LFS

Figure 5.3 shows the change (000s and %) in employment that occurred between quarter 4 2019 and quarter 4 2021. Over this two-year period, employment grew in each region, despite the declines that had occurred for almost all regions (except the Midland region) due to the pandemic between quarter 4 2019 and quarter 4 2020. The largest increase in employment in absolute terms was for the Dublin region, where 44,100 additional persons were in employment in quarter 4 2021 compared to quarter 4 2019. This was followed by the Mid-West region, where employment grew by 24,300 persons. In relative terms, however, the largest gains in employment were in the Midland region (+13%) and the Mid-West region (+11%), with rates that were considerably higher than the national average of 6%. At 4%, (or 7,400 extra persons) the smallest growth in employment over the two-year period was in the Border region.

When compared to quarter 4 2016, the numbers employed increased in all regions. However, following growth in most of the intervening quarters, employment growth in the Midland region was particularly strong, at 30%; the five-year growth rates were also above the national average (16%) for the West (21%), Dublin (18%) and the Mid-East (18%) regions. The Border region had the lowest growth rate at 6% - less than half the national average.

Figure 5.3 Employment Change (000s & %) by Region, Q4 2019-Q4 2021



Source: CSO LFS

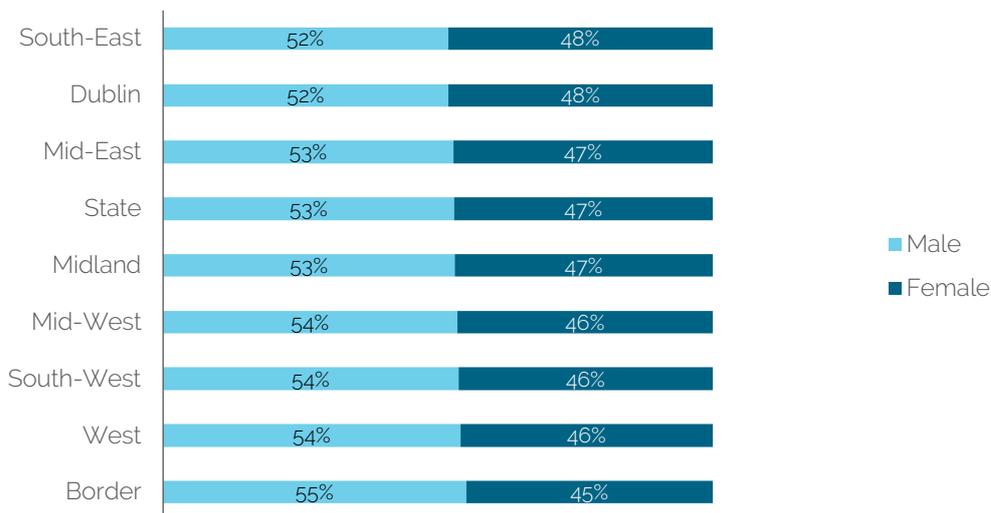
5.3 Employment by gender

Figure 5.4 compares the employment in each region by gender in quarter 4 2021. The share of females in the workforce was higher than the State average (47%) in three regions: the South East (48.2%), Dublin (48.1%) and, albeit only slightly, the Mid-East (47.1%). The share of females was lowest in the West, at 45.8% and the Border, at 44.8%.

When compared to quarter 4 2019, the share of females in the workforce increased in all regions except the West (where it declined by 0.2 percentage points). While the gains for females in the workforce were relatively small for most regions (one percentage point or less), the share of females in the workforces of the South East, the Midlands and the Mid-East rose by 1.2 percentage points, 2.9 percentage points and 2.7 points respectively.

Over the period quarter 4 2016–quarter 4 2021, the share of females grew in most regions, except the Border region, where it declined slightly by 0.9 percentage points. The Midland region’s workforce had the largest gain in the share of females, with an increase of 3.7 percentage points over the five-year period, followed by the South East region (+2.6 percentage points).

Figure 5.4 Regional Employment by Gender, Quarter 4 2021



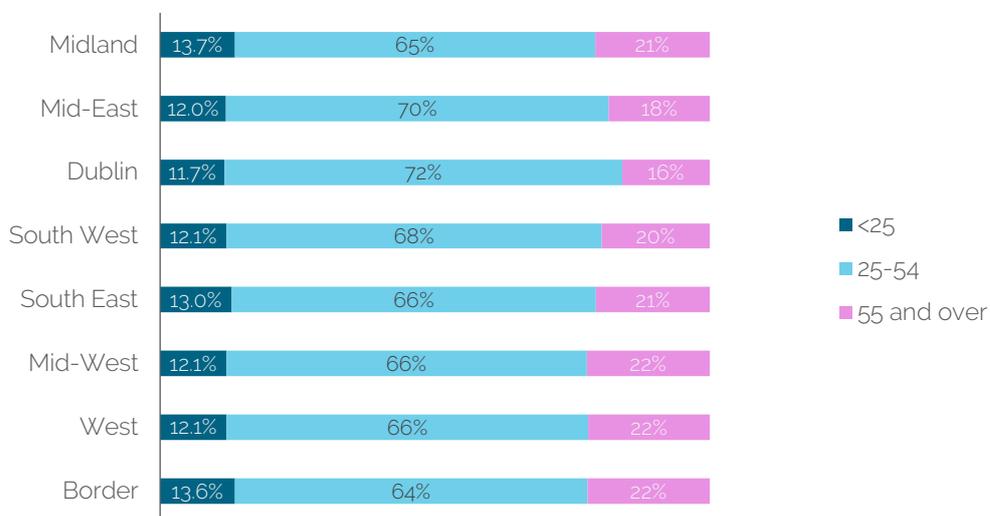
Source: CSO LFS

5.4 Employment by age

The distribution of regional employment by age group in quarter 4 2021 is shown in Figure 5.5. In line with the national average (69%), approximately two thirds of regional workforces are aged between 25 and 54 years, except for the Dublin and Mid-East regions where this share rises to 72% and 70% respectively. The Border, South East and Midland regions each had higher than average (12.3%) shares of younger workers, i.e. aged less than 25 years. With the exception of Dublin and the Mid-East, where the share of older workers was below the national average (19%), older workers, aged 55 years or over, made up at least a fifth of each region's workforce.

When compared to quarter 4 2019, the share of younger workers (<25 years) and older workers (55 years or over) grew in each region, not only recovering from the pandemic-related declines observed between quarter 4 2019 and quarter 4 2020 but exceeding their pre-Covid levels, albeit only slightly. There was a concomitant decline in the share of workers aged 25-54 years.

Figure 5.5 Regional Employment by Age, Quarter 4 2021



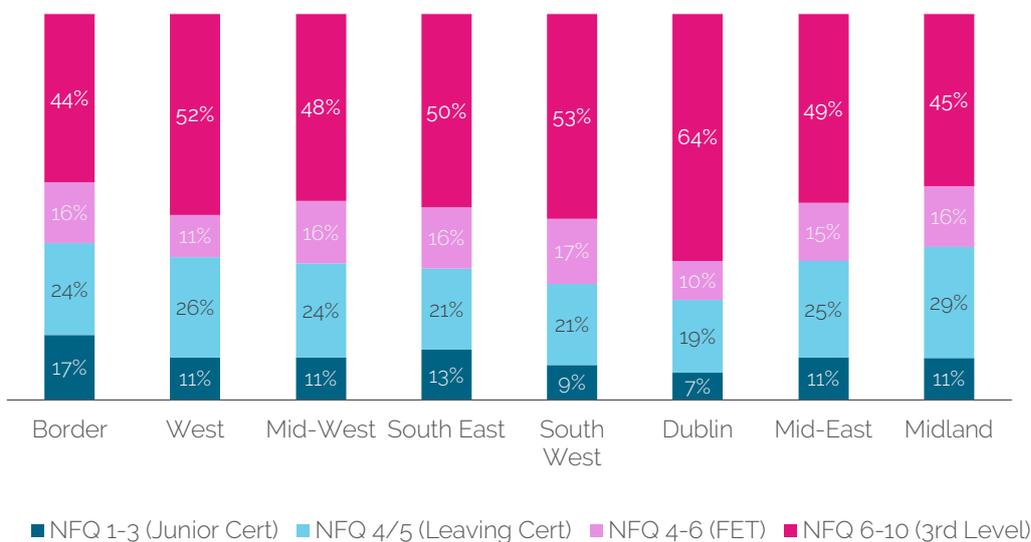
Source: SLMRU (SOLAS) analysis of CSO data

5.5 Employment by education

Figure 5.6 shows the highest level of education attained amongst employed persons by region in quarter 4 2021. At 64%, the share of employed persons with qualifications at NQF levels 6-10 (3rd Level) was highest in the Dublin region, well above the State average of 54%. For all other regions the share of third level graduates was below the national average but was lowest in the Border (44%) and Midland (45%) regions. The share of those employed with FET qualifications (NFQ 4-6) was highest in the South West, at 17%, and the share of Leaving Cert holders (or other equivalent NFQ 4/5 qualifications) was highest in the Midland region (29%). The Border region had the largest share with at most a Junior Cert (NFQ 1-3).

When compared to quarter 4 2019, the share of persons holding NFQ levels 6-10 (3rd level) qualifications grew for all regions; the growth was particularly strong for the South East region (12 percentage point increase, from 38% to 50%) and the Border and Midland regions (which increased by seven percentage points each). There were declines for most regions in each of the other NFQ categories, but particularly at NFQ 1-3, where the share of employment declined for each region except the Mid-East (where it remained unchanged).

Figure 5.6 Regional Employment by Education Level (NFQ), Quarter 4 2021



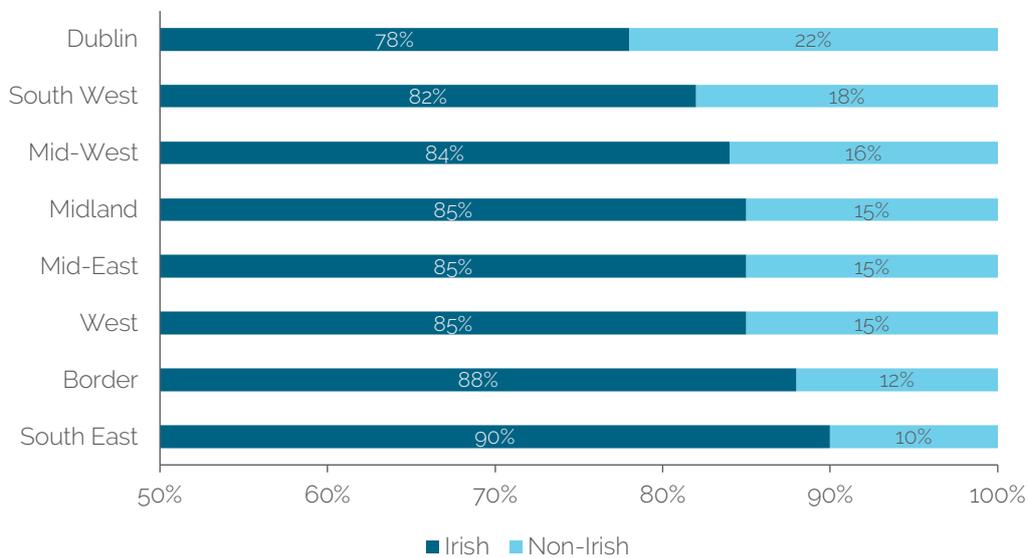
Source: SLMRU (SOLAS) analysis of CSO data

5.6 Employment by citizenship

Figure 5.7 presents regional employment by citizenship in quarter 4 2021. On average, approximately 17% of employed persons in Ireland in quarter 4 2021 were non-Irish citizens. The share of non-Irish citizens was highest in the Dublin region, at 22%, followed by the South West, at 18%. The lowest share was in the South East, where 10% of workers were non-Irish citizens.

When compared to quarter 4 2019, while the overall share of non-Irish citizens in the national workforce remained unchanged at 17%, the share of non-Irish citizens in the workforce declined in three regions, namely, the South East (down from 13%), Dublin (down from 23%) and the Midland region (down from 17%); for all other regions, except the Border region, which remained unchanged, the share of non-Irish citizens in the workforce grew, particularly in the Mid-West region, where the share of non-Irish citizens rose from 11% to 16% over the two-year period.

Figure 5.7 Regional Employment by Citizenship, Quarter 4 2021



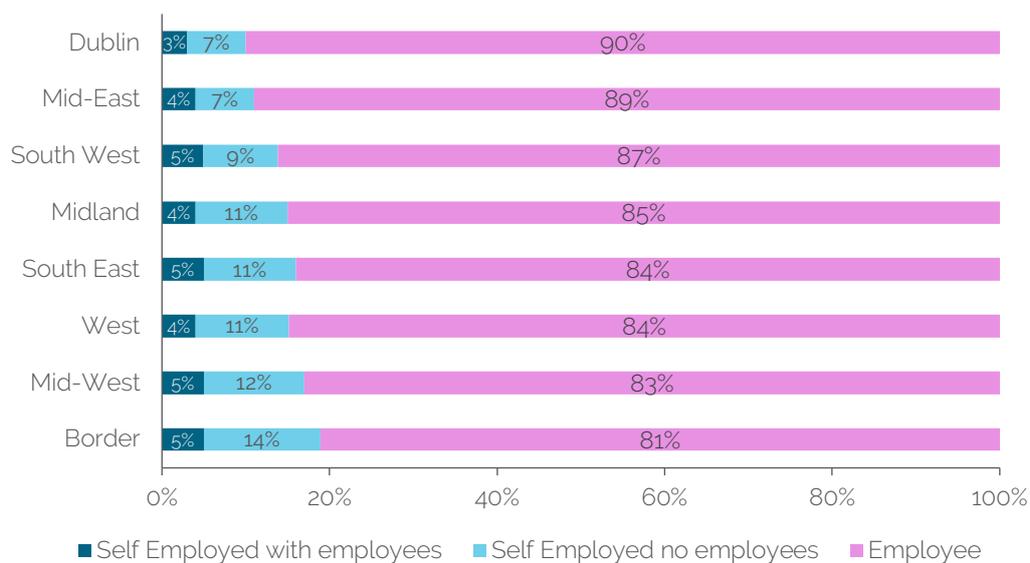
Source: SLMRU (SOLAS) analysis of CSO data

5.7 Employment by professional status (employee vs self-employed)

The distribution of regional employment by professional status is shown in Figure 5.8. The share of employees was highest in Dublin and the Mid-East, at 90% and 89% respectively, above the national average of 87%; the share of employees was lowest in the Border region, at 81%. Conversely, at 14%, the share of persons who were self-employed with no employees was greatest in the Border region, driven in part by a higher-than-average share of farmers in the region (see Figure 5.11), while the shares were lowest in Dublin and the Mid-East, at 7% each, which was somewhat lower than the national average of 9%. While 4% of employment nationally was made up of those who were self-employed with employees, the share varied between 3% for Dublin and 5% for the Border, Mid-West, South East and South West regions.

When compared to quarter 4 2019, the share of employees rose slightly for the West, South West, Dublin and Mid-East regions, remained almost unchanged for the Border and Midlands, and declined slightly in the Mid-West and South West. The share of self-employed with employees rose in the Border, Mid-West and South West regions, while the share of self-employed with no employees rose in only one region – the Mid-West.

Figure 5.8 Regional Employment by Professional Status*, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

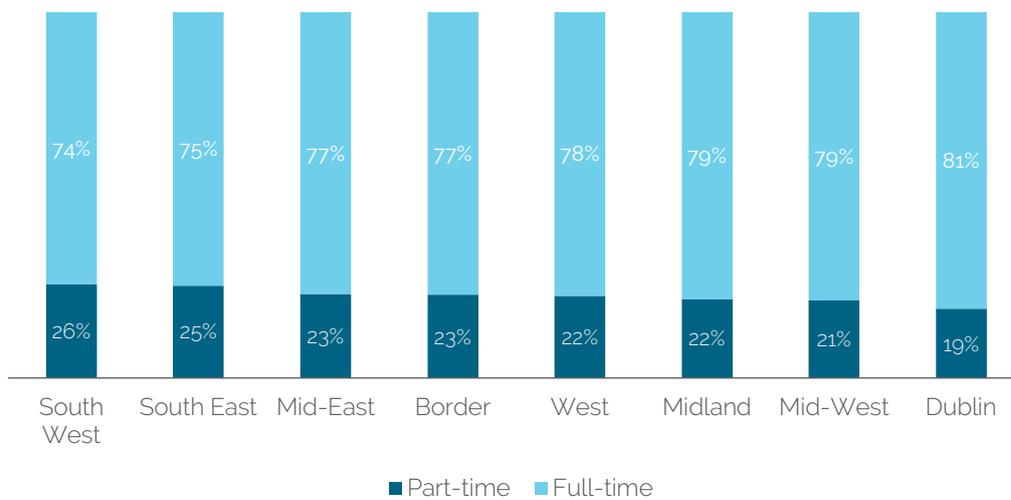
*Excludes those who were assisting relatives

5.8 Employment by full-time/part-time status

Regional employment by full-time/part-time status is presented in Figure 5.9. In quarter 4 2021, the share of persons employed full-time was highest in the Dublin region (81%), above the national average of 78%. The share of part-time employment was highest in the South West and South East regions where approximately one quarter of the workforces were employed part-time.

When compared to quarter 4 2019, the overall decline in the share of full-time employed persons in the workforce (from 79% to 78%) was reflected in falls across most regions, except the Border where the share increased slightly, by almost one percentage point, and in the Mid-West and Dublin regions, where it remained largely unchanged over the two-year period.

Figure 5.9 Regional Employment by Full-Time/Part-Time Status, Quarter 4 2021



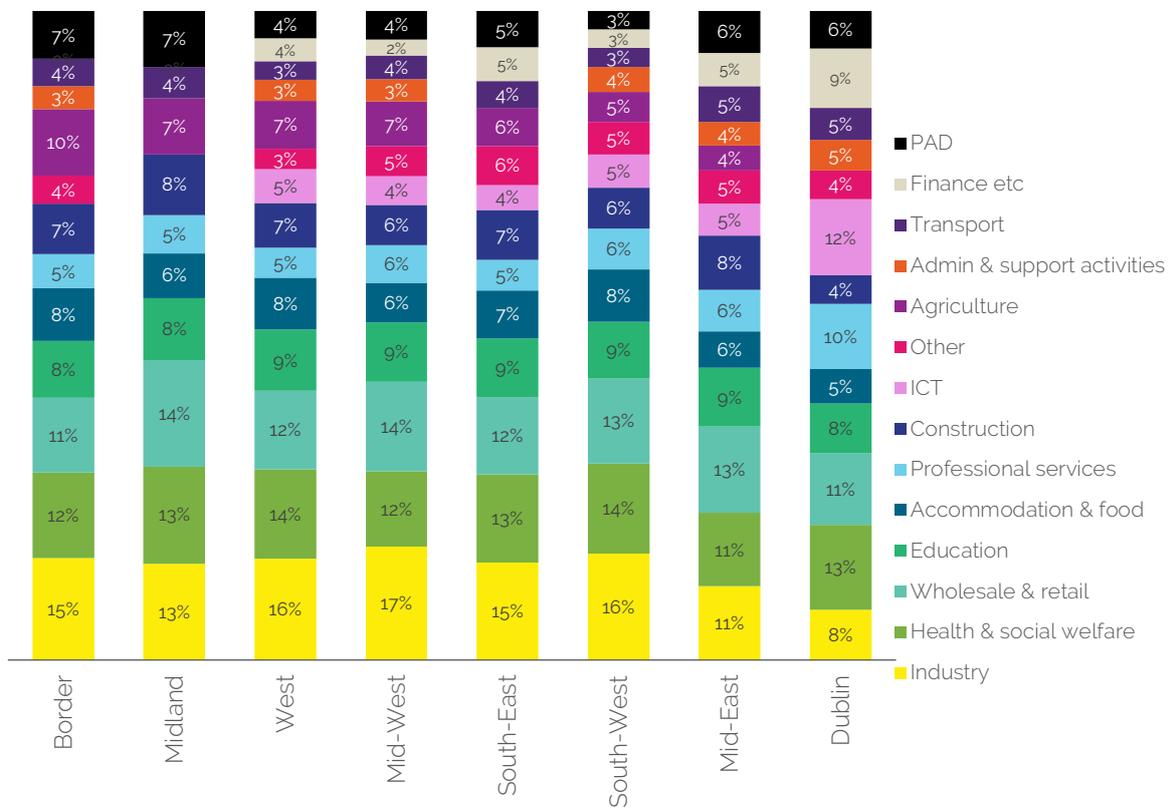
Source: SLMRU (SOLAS) analysis of CSO data

5.9 Employment by sector

Figure 5.10 presents regional employment by sector in quarter 4 2021. For all regions except Dublin, the three largest sectors of employment were industry, health, and wholesale/retail, which combined accounted for between 35% and 43% of each region's workforce; however, these three sectors made up just under a third of Dublin's workforce. Combined, the ICT and financial sectors made up over a fifth of Dublin's workforce, a negligible share of that of the Border and Midlands (numbers were too small to report and therefore do not figure in the following graph), and between 6% and 12% for all other regions.

When compared to quarter 4 2019, the largest percentage point declines occurred for the Border and South West regions, where the share of workers in the wholesale and retail sector fell by three percentage points; on the other hand there were three percentage-point gains in the share of the Mid-West's workforce in industry and the share of the Midland region in the education sector.

Figure 5.10 Regional employment by sector*, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

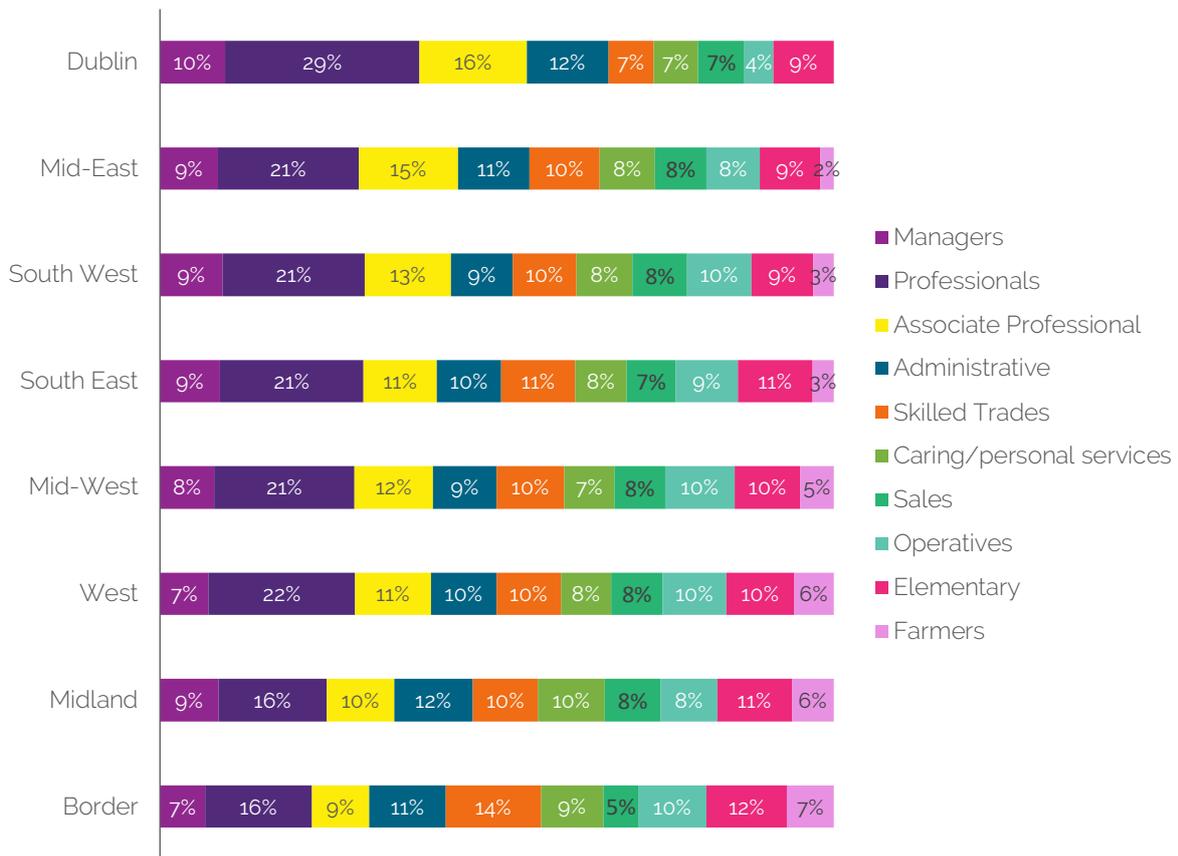
*Excludes Finance and ICT in the Midland and Border regions, agriculture in the Dublin region, 'Other' sectors in the Midland region, and admin/support activities in the Midland and South East regions as numbers were too small to report.

5.10 Employment by occupation

Regional employment by broad occupational group in quarter 4 2021 is presented in Figure 5.11. Combined, managers, professionals and associate professionals made up more than a half (54%) of the Dublin region's workforce, approximately a third of the workforce in the Border and Midland regions, and approximately two fifths of the workforces in the remaining regions. While farmers made up just 3% of total national employment, they accounted for 6% of the workforce in the West and Midlands regions and 7% of the Border region; in contrast, farmers made up 2% of the workforce in the Mid-East and a negligible share of Dublin workers.

When compared to quarter 4 2019, the share of managers, professionals and associate professionals grew within the workforce of almost all regions; the exceptions were the Border region, where the share of professionals in the workforce remained unchanged; the West region where the share of managers declined (by four percentage points); and Dublin, where the share of associate professionals remained the same. Conversely, at the other end of the skills scale, the share of elementary workers declined for each region, except the Border and the West region, with the strongest declines (of three and two percentage points respectively) in the South East and Dublin.

Figure 5.11 Regional Employment by Occupation, Quarter 4 2021



Source: SLMRU (SOLAS) analysis of CSO data

Note: the number of farmers in the Dublin region is too small to report.

5.11 Employment by occupation skill levels and broad sector

The Standard Occupational Classification (SOC)²⁴ categorises occupations according to one of four skill levels, each of which is based on the length of time required for a person to become competent in performing the tasks associated with a job, through formal education and/or work experience. Occupations at skill levels 1 and 2 include elementary, operative, sales, personal/caring and administrative occupations; occupations at skill levels 3 and 4 include skilled trades, associate professionals, professionals and managers.

Figure 5.12 shows the distribution of each region's employment by broad sectoral group, namely, agriculture, construction/industry, knowledge intensive services (KIS) and less knowledge intensive services (Less KIS)²⁵. In each region, the highest share of employment was in occupations requiring higher skill levels (i.e. occupation skill levels 3 & 4) in the KIS sector; however, the share was particularly high in the Dublin region (43%), followed by the Mid-East and South East at 31% and 30%, respectively.

The occupational skills profile in the combined construction and industry sector differed across regions: in the South East regions, employment in this sector was evenly spread between occupational skills levels 1 & 2 and occupational skill levels 3 & 4, each making up 11% of total employment in the region. In Dublin, in contrast, while 9% of total employment was for occupations at skill levels 3 & 4 in the construction/industry sector, just 3% was for occupations at skill levels 1 & 2 in the same sector.

²⁴ SOC2010 Volume 1 (ONS 2020, p2-3). Further details are available at <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2010/so c2010volume1structureanddescriptionsofunitgroups#the-soc2010-manual>

²⁵ Sectors included in these sectoral groups are described in Section 3

Figure 5.12 Regional employment by occupational skill level and sectoral group, quarter 4 2021



Source: SLMRU analysis of CSO (LFS) data. Data does not sum to 100% as some numbers were too small to report (e.g. Agriculture in Dublin) or sector/occupation were not stated.

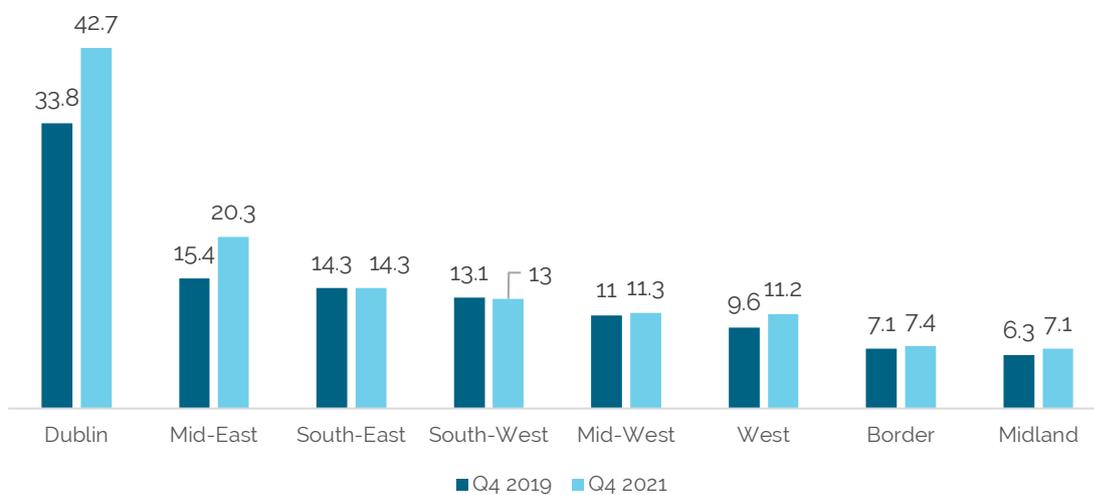
5.12 Regional unemployment levels and rates

Unemployment levels

Figure 5.13 shows the number of persons unemployed in quarter 4 2019 and quarter 4 2021 by region. Nearly one half of all unemployed persons (aged 15 years and over) were in Dublin or the Mid-East, which combined accounted for 63,000 persons. The Border and the Midland regions had the smallest numbers of unemployed persons at over 7,000 persons each.

When compared to quarter 4 2019, the number of unemployed persons increased in all regions except the South East (where it remained unchanged) and the South West (where it declined slightly). While the growth in unemployment levels amounted to fewer than 1,000 persons in Midlands, Border and Mid-West regions, the increases were larger for the Dublin region (+8,900 persons), the Mid-East (+4,900 persons) and the West (+1,600).

Figure 5.13. Unemployed Persons (000s) by Region, Quarter 4 2019-Quarter 4 2021



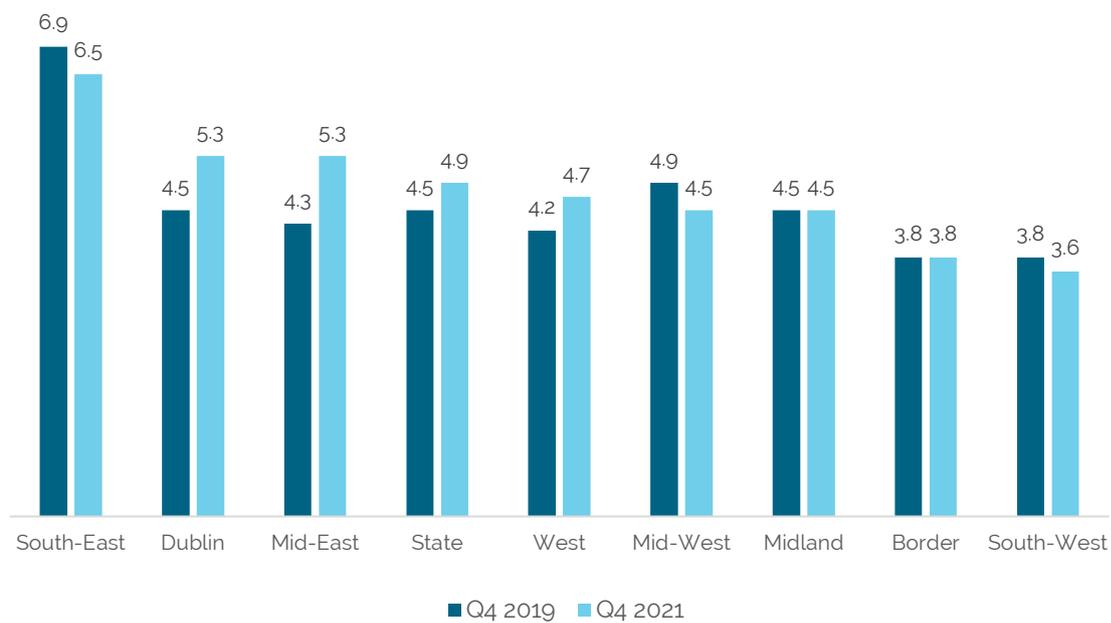
Source: CSO LFS

Unemployment rates

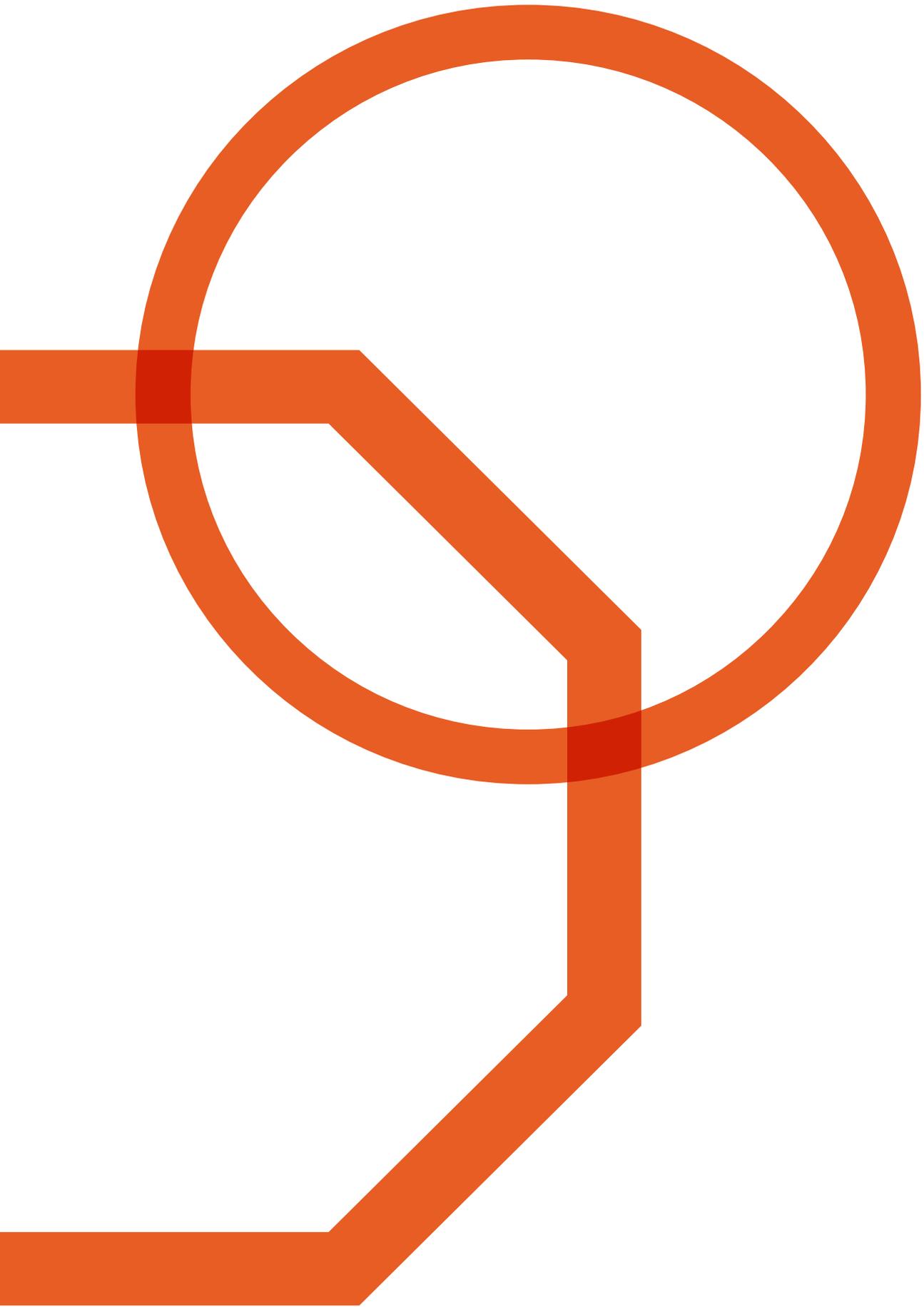
The South East, Dublin and Mid-East regions had the highest unemployment rates in quarter 4 2021, with rates above the State average of 4.9%. (Figure 5.14). The lowest unemployment rates were in the Border and South West regions, at 3.8% and 3.6%, respectively.

When compared to quarter 4 2019, the unemployment rate declined in the South East, Mid-West and South West regions, remained unchanged in the Midland and Border regions, and grew in the West, Dublin and Mid-East regions. The largest rise was in the Mid-East region where there was a one percentage point increase in the unemployment rate.

Figure 5.14. Unemployment Rate (%) by Region, Quarter 4 2019 & Quarter 4 2021



Source: CSO LFS



Section 6

Unemployment

6.1 Introduction

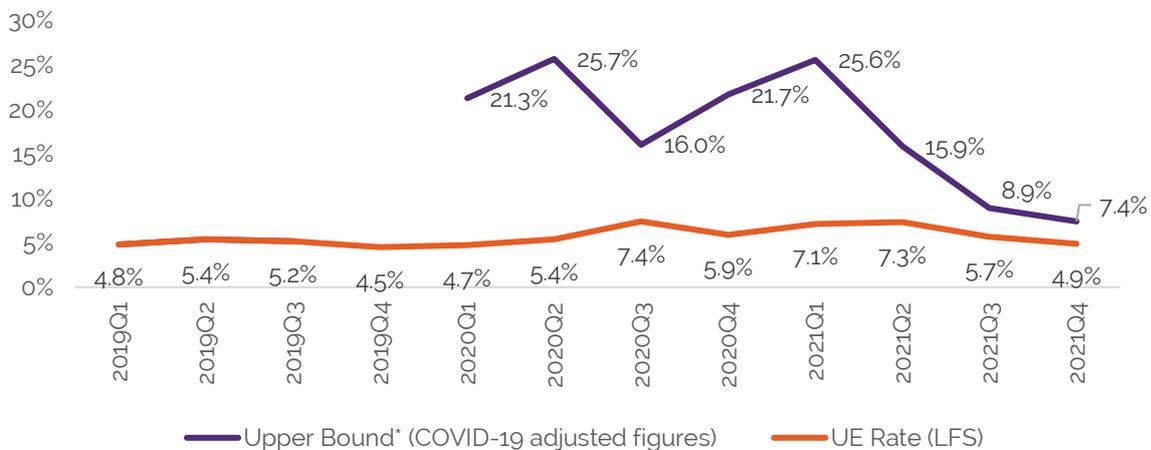
This section provides a profile of the persons who were unemployed over the period 2019–2021. The analysis by age, gender, sector and occupation of previous employment (where relevant), citizenship and education is based on annual average data from the CSO’s Labour Force Survey. However, as the CSO is obliged to follow international (ILO) standard definitions and methodology when reporting on official unemployment, not all those persons who were without work during the pandemic were captured in the traditional unemployment figures. For this reason, this section begins with an overview of unemployment that includes COVID-19 adjusted measures (as calculated by the CSO), to show the impact of the pandemic on Ireland’s labour market.

6.2 Unemployment and Unemployment Rate

In quarter 4 2021, unemployment in Ireland had fallen to 127,400 persons from 170,500 persons in quarter 1 2021 (based on LFS traditional measure). However, the COVID-19 adjusted number of unemployed persons was 618,600 in quarter 1 2021 and sharply declined to 195,300 in quarter 4 2021 (this compares with 509,800 persons in quarter 1 2020). Unemployment for 2021 (annual average) stood at 157,800 persons, compared to 139,200 persons in 2020 and 121,000 persons in 2019.

Figure 6.1 presents quarterly unemployment rates using lower bound (traditional methods of calculations) and upper bound (COVID-19 adjusted) rates. Observing the lower bound rates, unemployment increased from 4.7% in quarter 1 2020 to 7.4% in quarter 3 2020 and then declined to 5.9% in quarter 4 2020. However, in quarter 1 2021, the unemployment rate increased to 7.1% and remained at a similar rate in quarter 2 2021, but subsequently declined to 4.9% in quarter 4 2021. In terms of the COVID-19 adjusted estimates (upper bound), particularly high unemployment rates were observed in the quarters spanning quarter 1 2020 to quarter 1 2021 (at 25% in both quarter 2 2020 and quarter 1 2021). The unemployment rate declined considerably throughout the remaining quarters of 2021, to 7.4% in quarter 4 of that year, reflecting the easing of COVID-19 health restriction measures.

Figure 6.1 Unemployment Rates (%), (Lower Bound and Upper Bound) (LFS), Quarterly 2019 – 2021



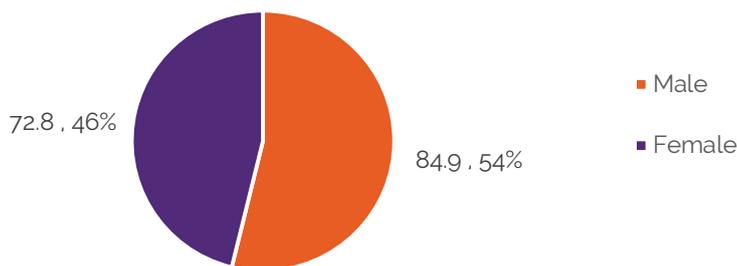
Source: SLMRU analysis of CSO data

*Upper Bound refers to the last month in each quarter in 2020 and 2021

6.3 Unemployment by Gender

Figure 6.2 presents the number of unemployed persons by gender. At 54%, males accounted for the largest share of unemployed persons in 2021. This is a similar distribution to that of 2020, with the numbers unemployed increasing for both genders over this time period. Between quarter 1 2021 and quarter 4 2021, the unemployment numbers fell for both males and females, although the fall was greater for males at 27% (compared to 23% for females).

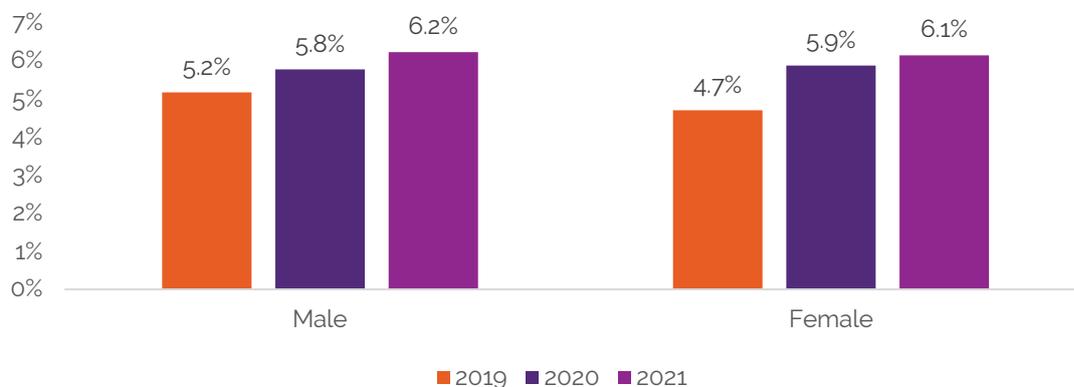
Figure 6.2 Unemployment by Gender (000s, %), 2021 (Annual Average)



Source: SLMRU analysis of CSO data

Figure 6.3 presents unemployment rates by gender. In 2021, the unemployment rates for males and females were broadly similar at 6.2% and 6.1% respectively. The unemployment rate increased each year between 2019 and 2021 for both genders although the gap between the rates by gender has narrowed from 0.5 percentage points in 2019 to 0.1 percentage points in 2020 and 2021. The annual average rate, however, masks the fact that by quarter 4 2021, the unemployment rate had fallen to 4.9% for males and 4.8% for females.

Figure 6.3 Unemployment Rate (Persons Aged 15-74) by Gender (%), 2019, 2020 & 2021, (Annual Average)



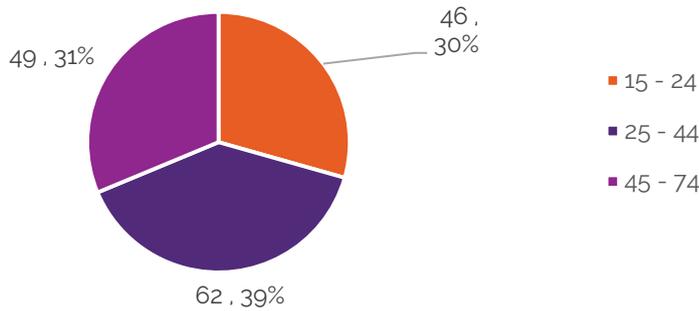
Source: SLMRU (SOLAS) analysis of CSO data

6.4 Unemployment by Age

Figure 6.4 presents the number of unemployed persons by age group. In 2021, persons aged 25-44 years accounted for the greatest share of unemployed persons, at 39%. Those aged 15-24 years and 45-74 years had similar shares, at 30% and 31% respectively.

Between 2020 and 2021, the numbers unemployed increased across all age cohorts, with the largest absolute increase for those aged 45-74 years; however, the annual averages mask a high level of volatility across quarters since the beginning of the pandemic, with numbers declining in 2021 across all age cohorts between quarter 1 and quarter 4.

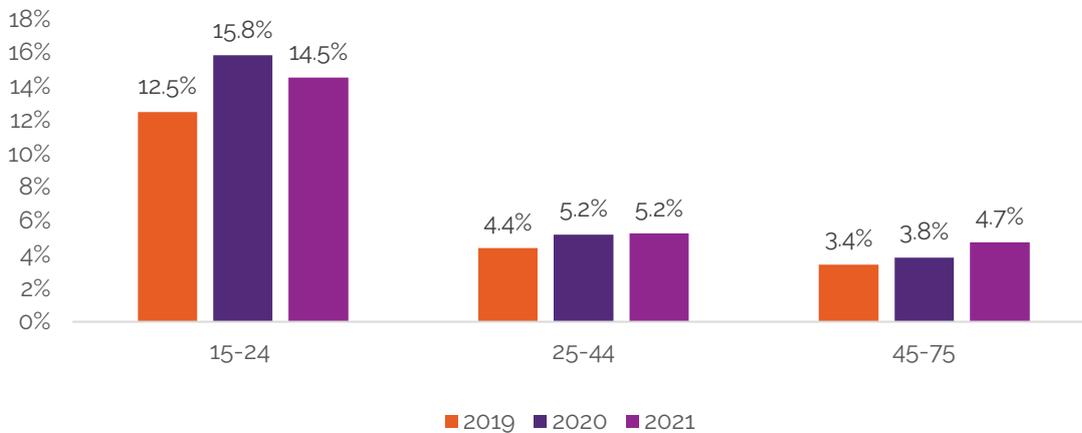
Figure 6.4 Unemployment by Age (000s, %), 2021 (Annual Average)



Source: SLMRU analysis of CSO data

Figure 6.5 presents unemployment rates by age. Across all years, the unemployment rate for persons younger than 25 years was far higher than the other age cohorts; the unemployment rate for those aged 15-24 years declined between 2020 and 2021, although it remained above the rate observed in 2019. At 4.7% in 2021, persons aged 45-75 years had the smallest unemployment rate across the period examined, although the rate increased by 0.9 percentage points between 2020 and 2021.

Figure 6.5 Unemployment Rate (Persons Aged 15-74) by Age (%), 2019, 2020 & 2021, (Annual Average)

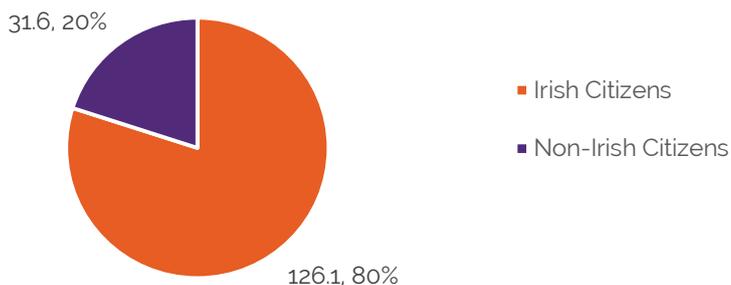


Source: SLMRU (SOLAS) analysis of CSO data

6.5 Unemployment by Citizenship

Figure 6.6 presents the distribution of unemployment by citizenship. In 2021, there were 31,600 unemployed non-Irish citizens, accounting for 20% of all unemployed persons. Between 2020 and 2021, the increase in the number of unemployed Irish citizens was much greater (17,000 persons, or 15.6%) than the increase in the number of unemployed non-Irish citizens (1,600 persons, 5.3%). Compared to 2019, there were 28,400 more (or 29.1%) unemployed Irish citizens, while there were 8,300 more (or 35.8%) unemployed non-Irish citizens.

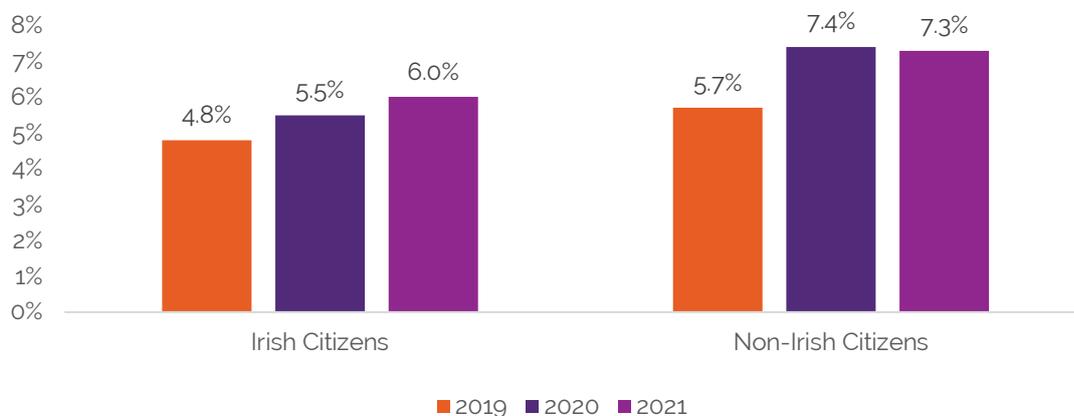
Figure 6.6 Unemployment by Citizenship (000s, %), 2021 (Annual Average)



Source: SLMRU analysis of CSO data

Figure 6.7 presents unemployment rates for Irish and non-Irish citizens over the period 2019-2021. In 2021, non-Irish citizens had a higher unemployment rate than Irish citizens (7.3% compared to 6.0%). Between 2020 and 2021, the unemployment rate remained relatively unchanged for non-Irish citizens, while there was a 0.5 percentage point increase for Irish citizens. The unemployment rate for non-Irish citizens increased by 1.6 percentage points compared to 2019 (at 5.7%), while the rate for Irish citizens increased by 1.2 percentage points (at 4.8%).

Figure 6.7 Unemployment Rate (Persons Aged 15-74) by Citizenship (%), 2019, 2020 & 2021, (Annual Average)



Source: SLMRU (SOLAS) analysis of CSO data

6.6 Unemployment by Sector

Table 6.1 presents the annual average unemployment levels and rates for the sectors with the largest unemployment numbers. In 2021, the highest number of unemployed persons had previously worked in accommodation/food, followed by the wholesale/retail sector. The highest unemployment rate was observed in accommodation/food (at 12.9%) and other NACE activities (at 7.7%). In contrast, the health sector had the lowest unemployment rate among the selected sectors (at 2.3%).

Between 2020 and 2021, unemployment rates for most sectors did not change significantly. The accommodation/food sector had the greatest increase in the unemployment rate (almost 4 percentage points). Compared to 2019, the greatest increase in the unemployment rate was observed for accommodation/food (8 percentage points) followed by other NACE activities (3.3 percentage points) and transportation (almost 3 percentage points).

Table 6.1 Unemployment (Persons Aged 15-74) by Selected Sector, 2021 (Annual Average)

	Unemployed (000s)	Unemployment Rate
Accommodation/food	20.6	12.9%
Wholesale/retail	19.1	5.9%
Industry	[10.1]	3.2%
Other NACE activities	[8.6]	7.7%
Construction	[7.5]	5.1%
Health	[7.3]	2.3%
Transportation	[6.8]	6.3%
Admin. & support services	[6.8]	6.8%
Education	[6.3]	2.9%

Source: SLMRU analysis of CSO data

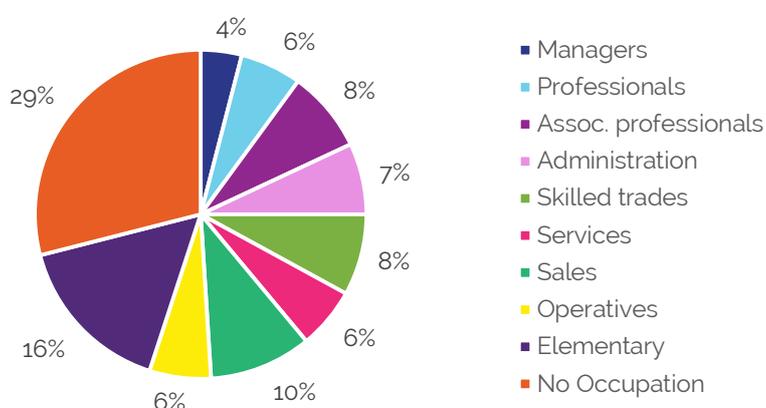
Note: Numbers in square brackets are small and should be treated with caution.

6.7 Unemployment by Occupation

Figure 6.8 presents the distribution of unemployment by broad occupational groups. In 2021, the greatest share of unemployed persons who had stated a previous occupation had previously worked in elementary occupations (16%), sales occupations (10%), associate professionals and skilled trades (at 8% each). Managers had the lowest share of unemployment (at 4%). Unemployed persons who did not state their previous occupation (e.g. looking for work for the first time, entering employment from inactivity) accounted for 29% of all unemployed persons.

Between 2020 and 2021, the number of unemployed persons increased for all occupations, except professionals (for which the number remained unchanged). However, the numbers involved are too small to allow for detailed analysis.

Figure 6.8 Unemployment by Previous Occupation (%), 2021 (Annual Average)



Source: SLMRU analysis of CSO data

The unemployment rate by broad occupation is presented in Figure 6.9. In 2021, the highest unemployment rates were observed for elementary occupations (9.8%), sales occupations (7.6%), operatives and caring etc. services occupations (at 4.8% each). In contrast, the lowest unemployment rates were observed for professionals (1.7%), managers (3.2%) and associate professionals (3.7%).

Between 2020 and 2021, unemployment rates did not change significantly across all occupations, with the greatest change observed for elementary occupations (a 1.6 percentage point increase), sales (a 1.3 percentage point increase) and skilled trades (a one percentage point increase). However, compared to 2019, the unemployment rate increased across all occupations (except professionals), with the greatest increases observed for elementary (4.3 percentage points), sales occupations (2.8 percentage points) and skilled trades (1.5 percentage points), highlighting the significant impact that restrictions imposed as a response to COVID-19 had on lower skilled occupations.

Figure 6.9 Unemployment Rate by Previous Occupation (%), 2019, 2020 and 2021 (Annual Average)



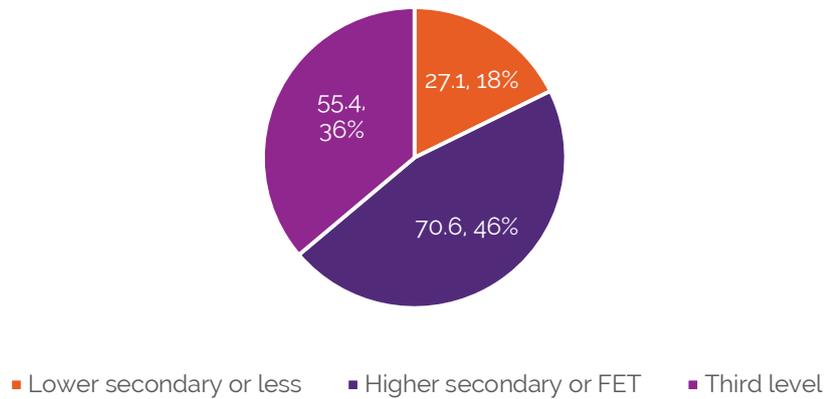
Source: SLMRU analysis of CSO data

Note: Excludes persons who did not state or have a previous occupation. Numbers for managers in 2019 were too small to report.

6.8 Unemployment by Education

Unemployment by education is presented in Figure 6.10. In 2021, 46% of all persons unemployed had a higher secondary education/FET qualification or less, while 36% had a third level qualification. Between 2020 and 2021, the number of unemployed persons increased across all levels of education, with the greatest absolute increase observed for those with a higher secondary education/FET qualification (8,400), with an increase also observed for those with a lower secondary education or less qualification or a third level qualification (4,500 and 4,700 respectively). The number of unemployed persons with a higher secondary education/FET or third level qualification was well above pre-pandemic levels in 2019 (at 15,600 and 18,500 respectively), while the number with a lower secondary education/FET qualification remained almost unchanged.

Figure 6.10 Unemployment by Education* (000s & %), 2021 (Annual Average)

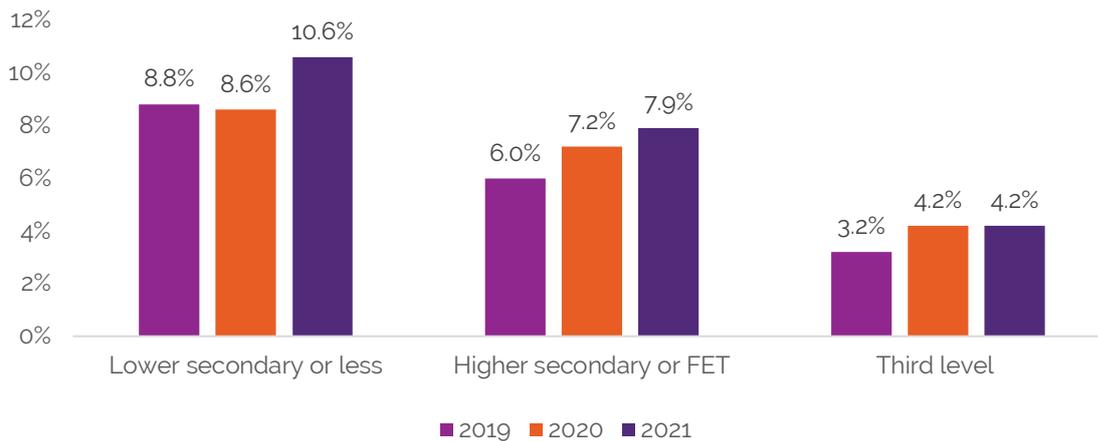


Source: SLMRU analysis of CSO data

*Excludes not stated.

Unemployment rates by education are presented in Figure 6.11. In 2021, persons who had attained at most a lower secondary level of education or less had the highest unemployment rate (at 10.6%). Persons with a third level education had the lowest unemployment rate (at 4.2%). Between 2020 and 2021, the unemployment rate for those with lower secondary education or less increased (by 2 percentage points), while the unemployment rate for those with higher secondary education or FET remained relatively unchanged, and there was no change in the rate for those with third level education. Compared to 2019, regardless of education level, unemployment rates in 2021 were higher,

Figure 6.11 Unemployment Rate by Education, 2019, 2020 & 2021 (Annual Average)



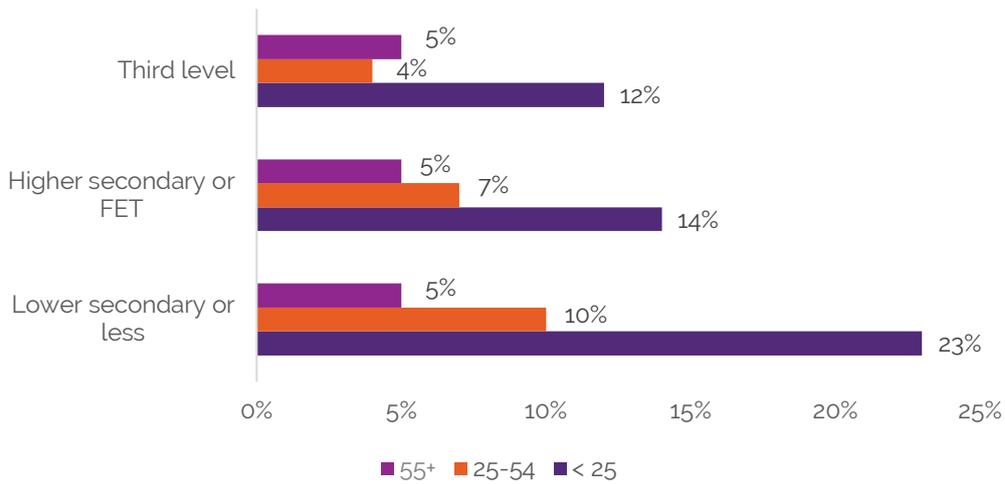
Source: SLMRU analysis of CSO data

Note: Excludes not stated.

Unemployment rates by education and age are presented in Figure 6.12. In 2021, persons aged under 25 years had the highest unemployment rates across all levels of education. Those aged under 25 years with lower secondary education or less had the highest unemployment rate (at 23%).

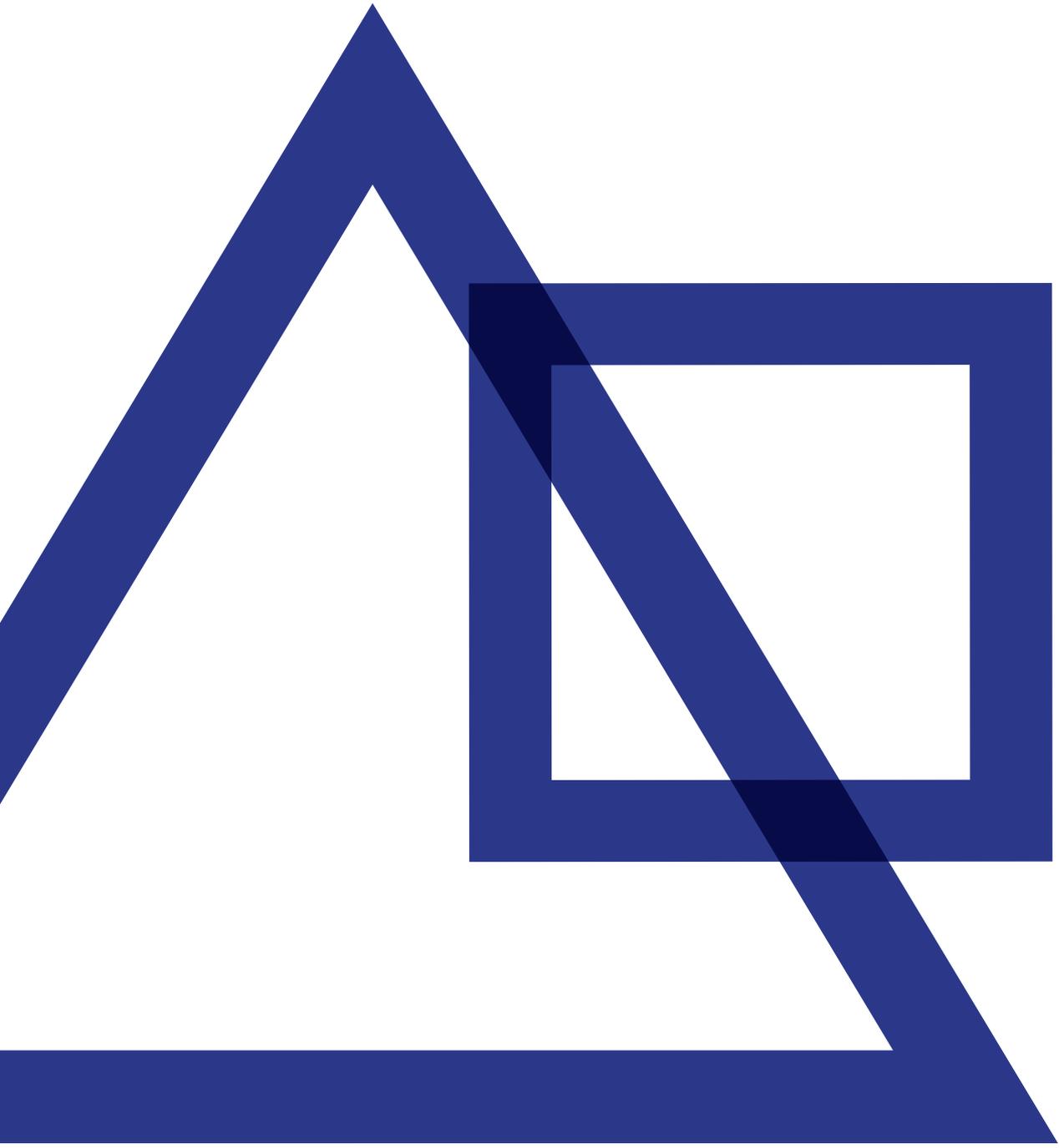
Between 2020 and 2021, the unemployment rate did not change significantly by age and education category. The unemployment rate for persons aged under 25 with lower secondary education or less observed the greatest decline (2 percentage points), while the unemployment rate for those aged 25-54 with lower secondary education or less observed the greatest increase (2 percentage points).

Figure 6.12 Unemployment Rate by Education and Age, 2021 (Annual Average)



Source: SLMRU analysis of CSO data

Note: Excludes not stated.



Section 7

Labour Market Transitions and Recent Job Hires

7.1 Transitions

The change in the labour market status of individuals – employment, unemployment and economic inactivity – between two points in time is referred to as a 'labour market transition'. The analysis of labour market transitions is based on the CSO Labour Force Survey (LFS) which allows for the examination of survey participants who remain on the survey panel in two subsequent quarters.

Average quarterly labour market transitions for 2021 are presented in Table 7.1. As observed in preceding years, most individuals do not change their labour market status between successive quarters. In 2021, on average, 95% of individuals who were in employment remained employed; 85% of those economically inactive continued to be outside the labour force and 41% of those unemployed remained unemployed. Nonetheless, some individuals changed their labour market status between quarters: 5% of individuals transitioned out of employment, 3% to inactivity and 2% to unemployment; 59% of individuals transitioned out of unemployment, 37% to employment and 22% to inactivity; 15% of individuals transitioned out of inactivity, 10% to employment and 5% to unemployment.

Compared to 2020, there were some notable changes in the distribution of transitions. There was an increase in the share of persons moving from unemployment to employment (from 24% in 2020 to 37% in 2021), and a decrease in the share of persons moving from unemployment to inactivity (32% in 2020 to 22% in 2021). Over the same period, the share of persons remaining unemployed or inactive decreased (3 percentage points each).

Table 7.1 Labour Market Transitions by ILO Status (Persons Aged 15-74²⁶), 2021

ILO start quarter	ILO end quarter		
	Employed	Unemployed	Inactive
Employed	95%	2%	3%
Unemployed	37%	41%	22%
Inactive	10%	5%	85%

Source: SLMRU (SOLAS) analysis of CSO data

Figure 7.1 shows estimated annual transitions in the labour market in 2021. It is estimated that 2.02 million transitions occurred in the labour market in 2021, compared to 1.67 million in 2020.

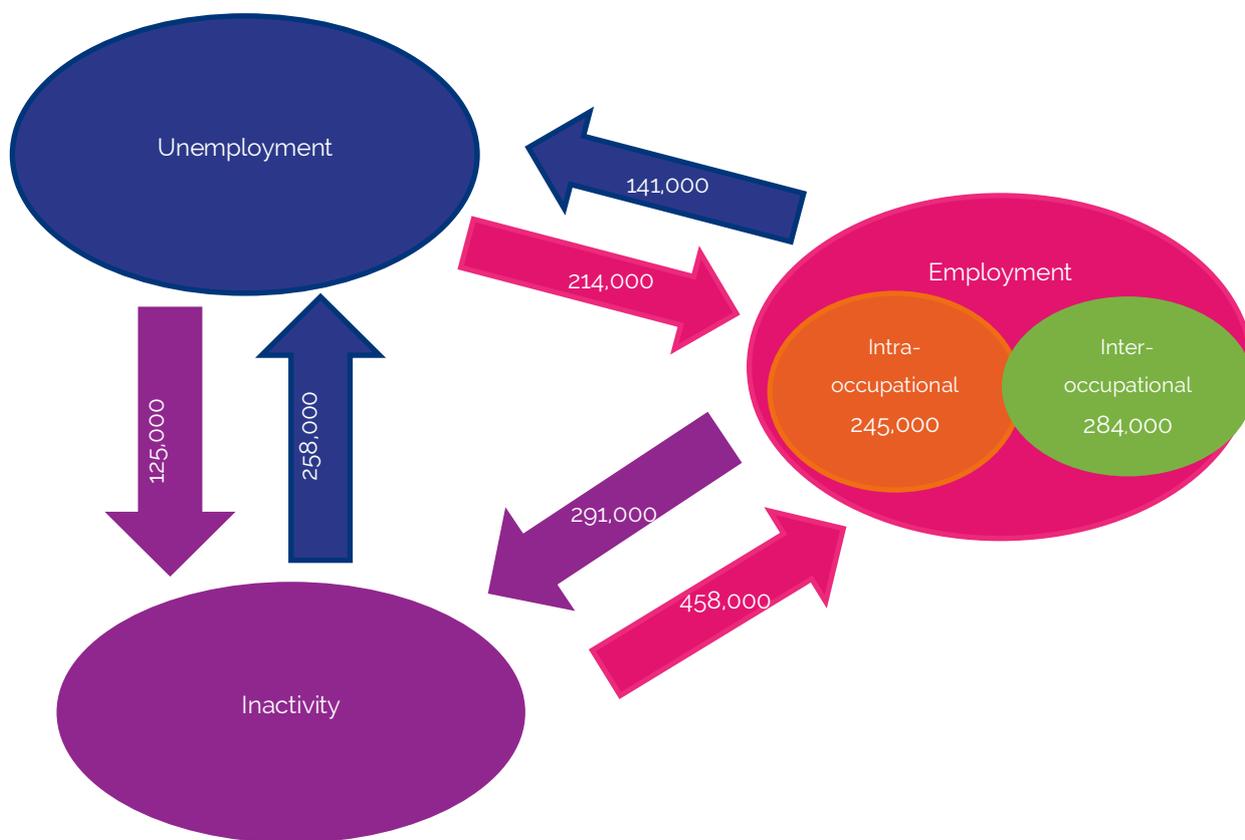
There were approximately 355,000 transitions between employment and unemployment, 749,000 between employment and inactivity and 383,000 between unemployment and inactivity. In addition, there were 529,000 transitions which occurred within employment, either due to a change of employer (intra-occupational transitions) or change of occupation (inter-occupational transitions), which was double that observed in 2020 (particularly due to inter-occupational movements).

²⁶ Sum of transitions between quarter 4 2020 to quarter 1 2021, quarter 1 2021 to quarter 2 2021, quarter 2 2021 to quarter 3 2021, and quarter 3 2021 to quarter 4 2021.

At 672,000, the number of transitions into employment from both unemployment and inactivity was considerably more than the number of transitions out of employment (433,000). The number of transitions from unemployment to employment was 214,000 compared to 141,000 in the opposite direction, while the number from inactivity to employment was 458,000 compared to 291,000 in the opposite direction.

Compared to 2020, there was a considerable increase in the volume of transitions from unemployment to employment (approximately 100,000) and from inactivity to employment (67,000). In contrast, the most pronounced decrease in flows was observed for transitions from employment to inactivity (a fall of approximately 145,000). There has been a significant change in movement for those already in employment, with significant increases observed for both the number of intra-occupational transitions (approximately 81,000) and inter-occupational transitions (approximately 198,000).

Figure 7.1 Labour Market Transitions, 2021 (Sum of four quarters)



Source: CSO, LFS

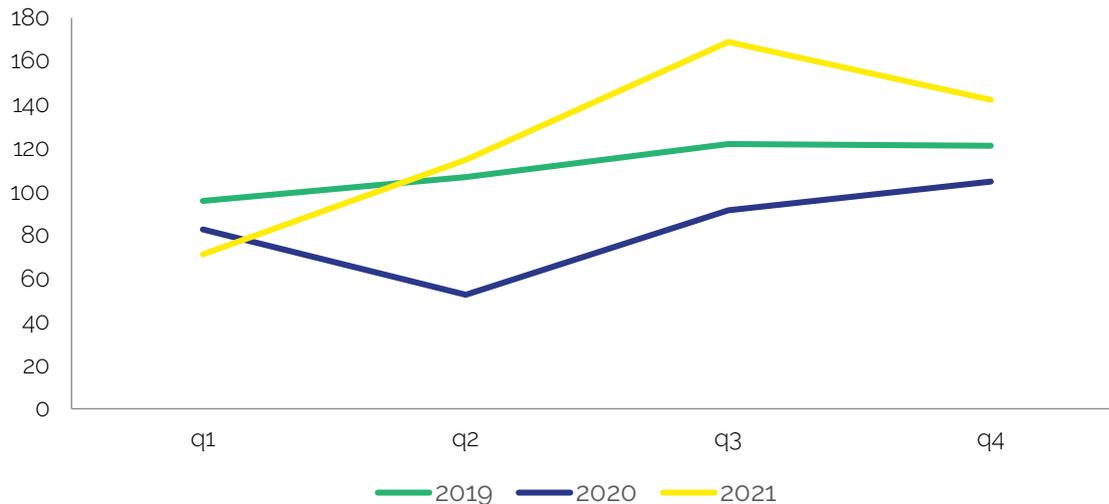
Of total transitions from employment into inactivity, 30% was to study, 18% to retirements, 8% to home duties, 8% to unable to work due to ill health, while the remaining 36% was due to other reasons. In terms of transitions from inactivity to employment, 47% was from study, 9% from retirements, 9% from home duties while the remainder was from other forms of inactivity.

Compared with 2020, the sharp fall in the number of transitions from employment to inactivity relates primarily to transitions for persons who characterised themselves as employed but were nonetheless classified, according to ILO definitions, as inactive, most likely related to those in receipt of income support payments due to COVID-19. In terms of transitions in the other direction (i.e. from inactivity to employment), those classified as students accounted for the largest increase in transitions from inactivity to employment, a reflection, in part, of the sharp increase in the number of 15–24-year-olds entering part-time employment.

7.2 Recent Job Hires

Recent job hires data refers to those who commenced employment in the previous three months. The impact of COVID-19 on hirings in 2020 and the subsequent recovery in 2021 is evident; following a sharp decline in 2020, for the most part, hirings in 2021 were above that of pre-COVID-19 levels (Figure 7.2). Indeed, when the four quarters of 2021 are summed, there were almost half a million recent job hires, an increase of 50% on 2020 and 12% on 2019.

Figure 7.2: Recent job hires in Ireland 2019-2021 by quarter (000s)



Source: Eurostat

Key Findings:

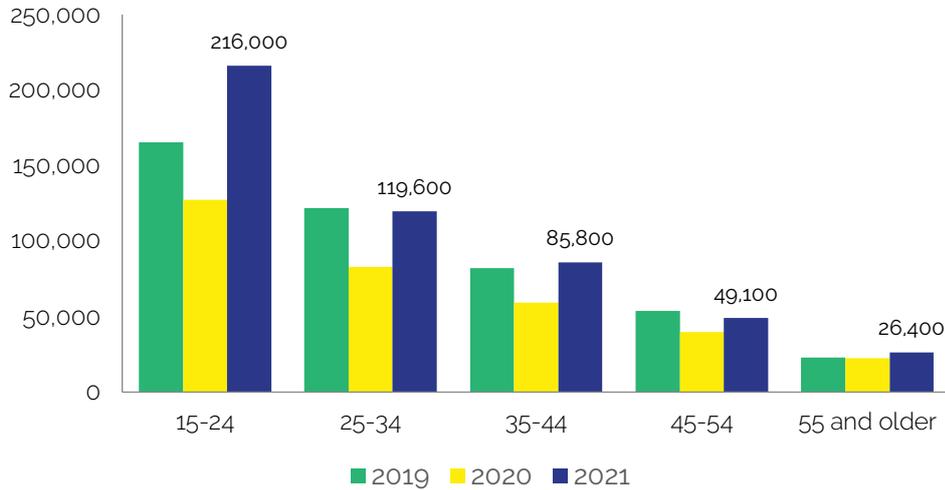
Of those recently hired in 2021²⁷

- in terms of gender, recent hires were divided almost equally
- 64% were hired for full-time positions
- over two-thirds (68%) were for those aged less than 35 years; this was particularly driven by those aged 15-24 years (Figure 7.3)
- in terms of education level:
 - o 44% were for those with higher secondary education or less
 - o 13% held further education or training (FET) qualifications
 - o 41% held third level qualifications
 - o since 2020, there were increases across all education levels with the largest increases for those with higher secondary education (Figure 7.4)
- the wholesale & retail and accommodation & food sectors accounted for the highest number of recent job hires in 2021; both sectors saw a significant recovery in the number of hires since 2020 (Figure 7.5)
- elementary occupations accounted for 22% of all recent job hires in 2021, followed by professional (15%) and sales (14%); elementary occupations accounted for the largest increase in hires between 2020 and 2021 with an additional 53,000 hires (Figure 7.6)
- the most frequently occurring occupations in 2021 included

²⁷ Based on analysis by the SLMRU of CSO LFS data for the four quarters in 2021.

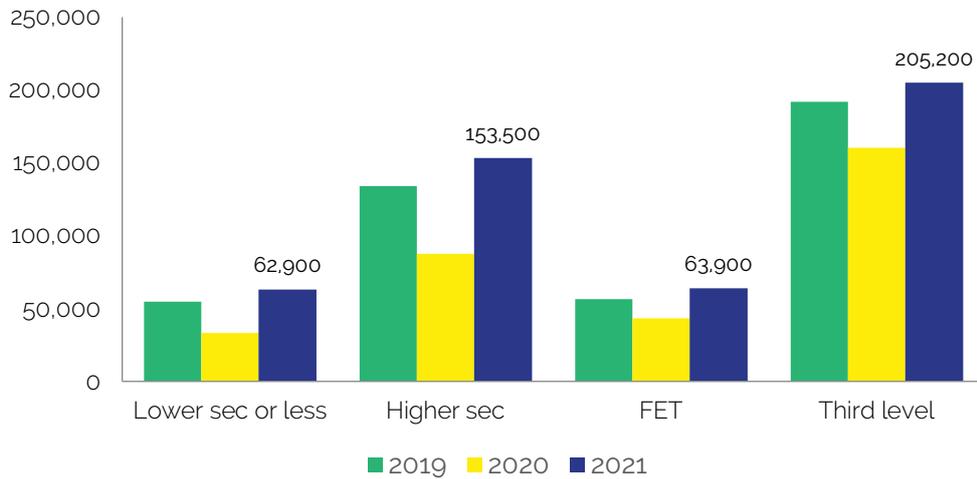
- elementary service occupations (e.g. catering assistants, waiters and bar staff), (13% of total)
- sales assistants (11% of total)
- caring personal services (e.g. care workers, healthcare assistants), at 4%
- administrative occupations, at 3%
- business, research and administrative professionals, at 3%.

Figure 7.3 Recent job hires by age, 2019 - 2021



Source: SLMRU (SOLAS) analysis of CSO LFS data

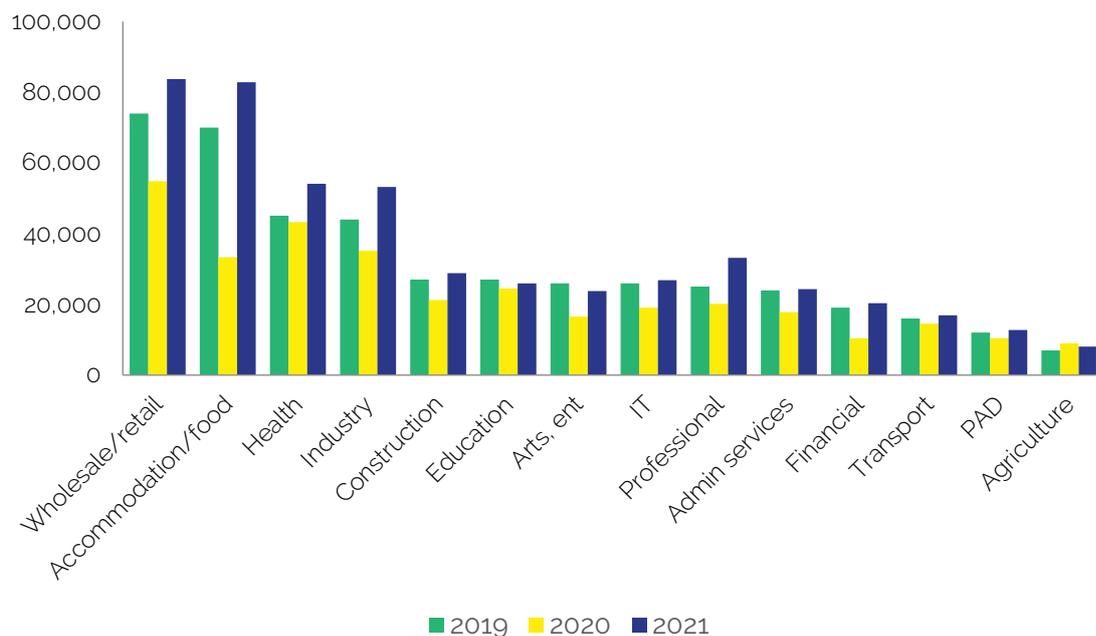
Figure 7.4 Recent job hires by education, 2019 - 2021*



Source: SLMRU (SOLAS) analysis of CSO LFS data

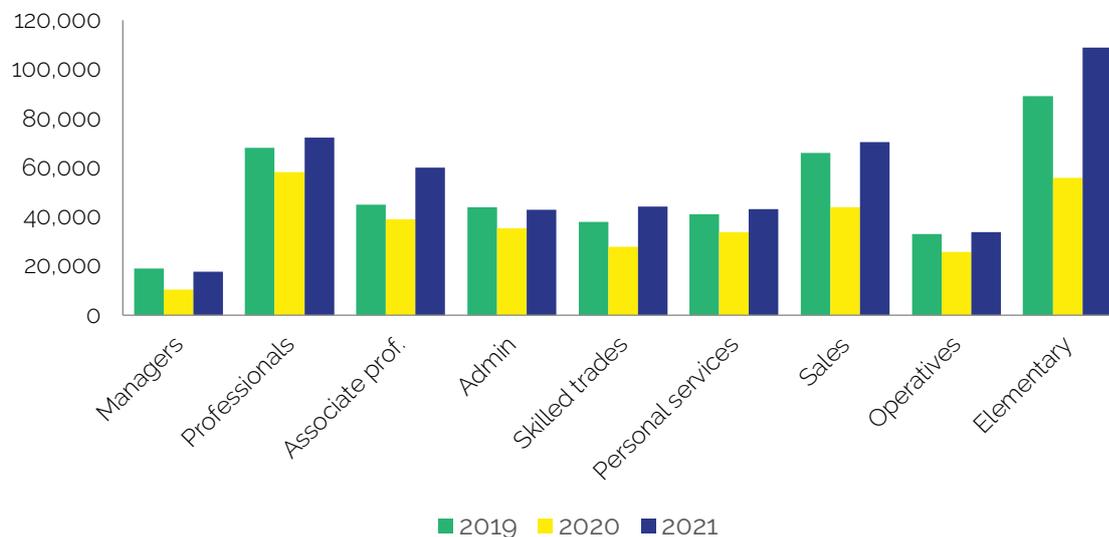
*Excludes not stated.

Figure 7.5 Recent job hires by sector, 2019 - 2021



Source: SLMRU (SOLAS) analysis of CSO LFS data

Figure 7.6 Recent job hires by occupation, 2019 - 2021



Source: SLMRU (SOLAS) analysis of CSO LFS data

Managers (18,000 recent job hires in 2021):

- accounted for a 4% share of total recent job hires in 2021
- 62% of new hires held a third level qualification
- at 88%, this occupational group had the highest share of new hires for full-time roles
- 52% of recent hires were male
- 69% of new hires for managers were aged 25-44 years
- the number of recent job hires in 2021 recovered, although still below the 2019 level.

Professionals (72,000 recent job hires in 2021):

- at 15%, this occupational group accounted for the second highest share of recent hires in 2021
- professionals had the highest share of new hires that held a third level qualification, at 85%
- 61% were aged between 25 and 44 years, compared to 41% for all recent hires
- 85% of recent hires were for full-time positions
- 47% of recent hires were female
- in terms of sectors, the health, education and professional activities sectors combined accounted for almost 60% of new hires, with ICT and industry also featuring
- following a decline in 2020, the number of recent job hires for professionals grew in 2021, 6% higher than in 2019.

Associate professionals (60,000 recent job hires in 2021):

- associate professionals accounted for 12% of total recent hires in 2021
- over two thirds (70%) held a third level qualification
- over a third were aged 15-24 years (34%) with a further 51% aged between 25 and 44 years
- 79% of new hires were for full-time roles
- males accounted for the highest share of recent job hires at 57%
- in terms of sectors, professional activities, ICT and the arts, entertainment and other services sectors were the largest employers
- the number of recent job hires for associate professionals in 2021 was 34% higher than in 2019, the largest relative growth across all occupations.

Administrative (43,000 recent job hires in 2021):

- 9% of total recent hires were for administrative roles in 2021
- over a half (59%) held a third level qualification
- 76% were aged under 45 years, compared to 85% for all recent job hires
- almost three quarters (71%) of hires were for full-time roles
- 76% of recent hires were female
- the number of recent job hires for administrative occupations in 2021 was 3% below hires in 2019.

Skilled trades (44,000 recent job hires in 2021):

- skilled trades occupations accounted for 9% of recent job hires in 2021
- over half (56%) had attained higher secondary education or a FET qualification
- over a half were aged 25-44 years (52%) with a further 30% aged 15-24 years
- 84% of recent hires were for full-time roles
- 86% of all hires were male, the highest share of males across all occupations
- the construction sector accounted for 31% of recent hires, followed by industry and the accommodation and food sector
- the number of recent job hires for skilled trades recovered in 2021, 17% higher than in 2019.

Personal services (43,000 recent job hires in 2021):

- personal services accounted for 9% of recent job hires in 2021
- 56% had attained a higher secondary/FET education, while a further 34% held a third level qualification
- a third were aged 15-24 years, with a further 46% aged 25-44 years
- 53% of new hires were for part-time roles
- 80% were female, the highest share of females across all occupations
- the health sector accounted for over half of recent job hires, with arts, entertainment and other services (e.g. hairdressers) and the education sector combined accounting for a further quarter
- the number of recent job hires for personal services occupations in 2021 was 5% higher than in 2019.

Sales and customer services (70,000 recent job hires in 2021):

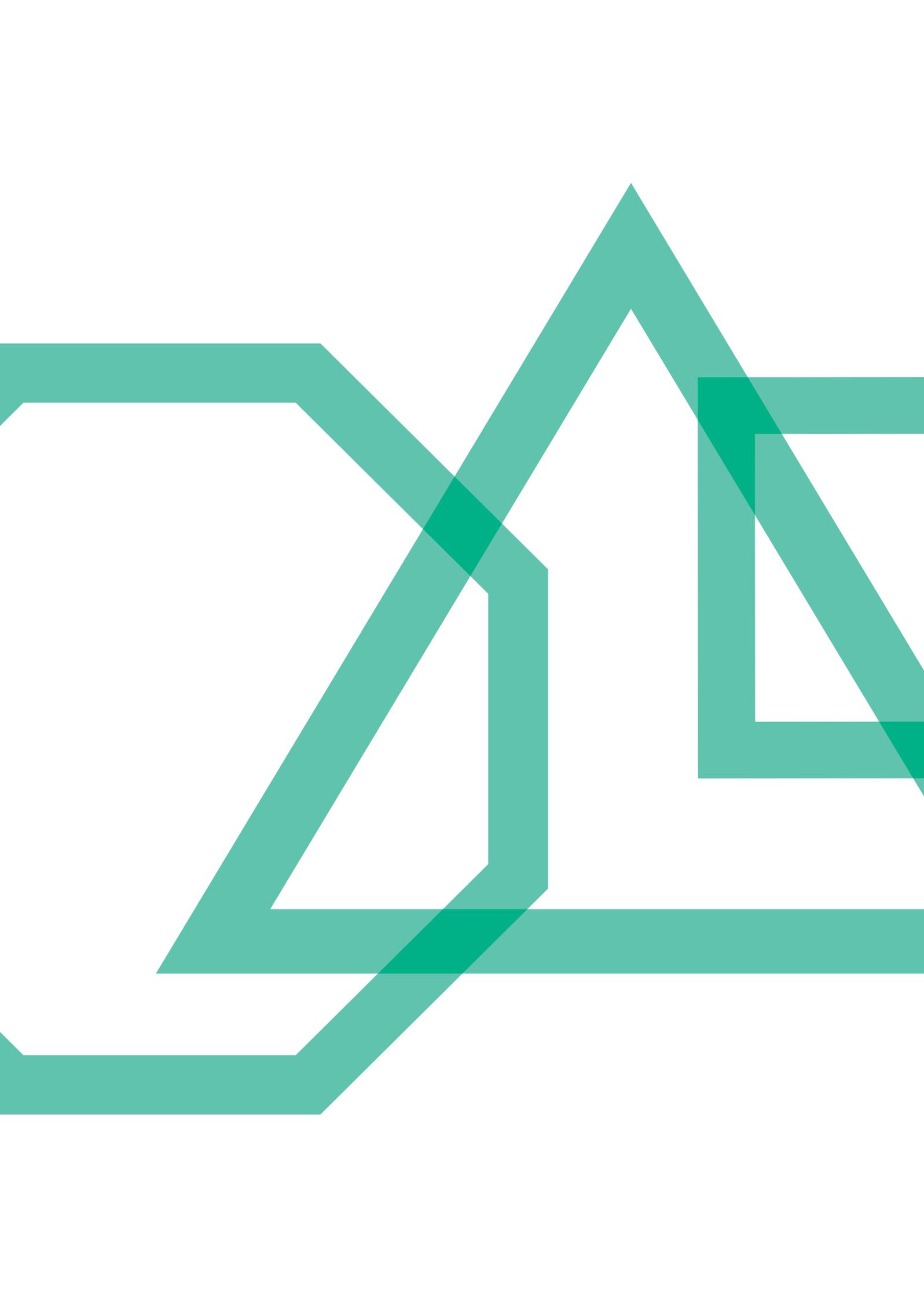
- this occupational group accounted for 14% of recent hires in 2021
- 51% of those hired in these occupations held a higher secondary education; 19% had attained lower secondary education or less and a further 21% held a third level qualification
- this group had the second youngest age profile after elementary occupations, with two thirds aged under 25 years, compared to 43% for total recent hires
- 41% of hires were for full-time roles, the lowest share across all occupational groups
- 60% of new hires were female
- four fifths of recent hires were for roles in the wholesale and retail sector (e.g. retail sales assistants)
- the number of recent job hires in 2021 for sales occupations grew by 7% when compared to 2019.

Operatives (34,000 recent job hires in 2021):

- this occupational group accounted for 7% of recent job hires in 2021
- 42% of those recently hired held a higher secondary education
- 30% of recent hires were for those aged 15-24 years; the numbers in the remaining age cohorts were too small to report
- 74% of recent hires were for full-time roles
- 75% were male, the second highest share of males after skilled trades occupations
- over a half of recent job hires for this occupation were in industry
- the number of recent job hires for operative roles in 2021 was on a par with levels in 2019.

Elementary (109,000 recent job hires in 2021):

- elementary occupations accounted for 22% of recent job hires in 2021
- 47% held a higher secondary while a further 27% had attained lower secondary education or less; this occupational group had the lowest share of new hires who held third level qualifications (at 13%)
- new hires in these occupations had the youngest age profile with 67% aged 15-24 years; a further 23% were aged 25-44 years
- 43% of recent hires were for full-time roles, the second lowest share across all occupations
- 52% of hires were male
- the accommodation and food services sector accounted for by far the highest share of recent hires, at 58% (e.g. waiters, bar staff, kitchen assistants); administrative services, construction and wholesale and retail sectors combined accounted for a further 23%
- elementary occupations saw the largest increase in absolute number of recent job hires in 2021 compared to 2019, with an increase of 20,000 new hires.



Section 8

Employment Permits

8.1 Introduction

An employment permit is a requirement for all non-EEA nationals who wish to take up employment in Ireland (unless an exemption applies). An analysis of the occupations for which employment permits are issued allows policymakers to ascertain the areas where employers are having difficulty in sourcing suitably qualified candidates from the Irish and EU labour market.

In order to attain an employment permit, an individual must have a valid job offer from a prospective Irish employer who has proved there were no Irish or EEA nationals available to fill the post.

The Employment Permit Act in 2014 introduced nine classes of employment permits. The three most common employment permits issued in Ireland include

- **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 for senior management and key personnel applicants must be at least €40,000, personnel undergoing training programmes must have a minimum salary of €30,000.

** some exceptions apply*

The details of the other six permit types are available on the DETE website.²⁸

Applications for General Employment Permits and Contract for Services Employment Permits are subject to a Labour Markets Needs Test, subject to some limited exceptions. Employers are also required to advertise the position with the Department of Social Protection Employment Services/EURES employment network for at least 28 days (4 weeks); this is an increase from the previous two-week requirement.

Approximately 14,000 new employment permits were issued in 2021, a similar number to the previous year as employers continued to source skills from abroad. Figure 8.1 shows that new permits issued in 2021 peaked in December. The number of new permits issued fell below 2020 levels from January to June 2021, but by July 2021 a steady recovery was established for the latter half of the year. The fall in the number of permits issued for the first half of the year may be due in part to the fact that a number of employment permit quotas were filled for some occupations by the end of 2020. The COVID-19 restrictions at the beginning of 2021 and the cautious reopening in the subsequent months are likely to have driven down demand for employment permits in certain sectors such as accommodation, food, arts and entertainment.

²⁸ <https://enterprise.gov.ie/en/What-We-Do/Workplace-and-Skills/Employment-Permits/Permit-Types/>

Figure 8.1 New Employment Permits Issued Monthly, 2020 – 2021

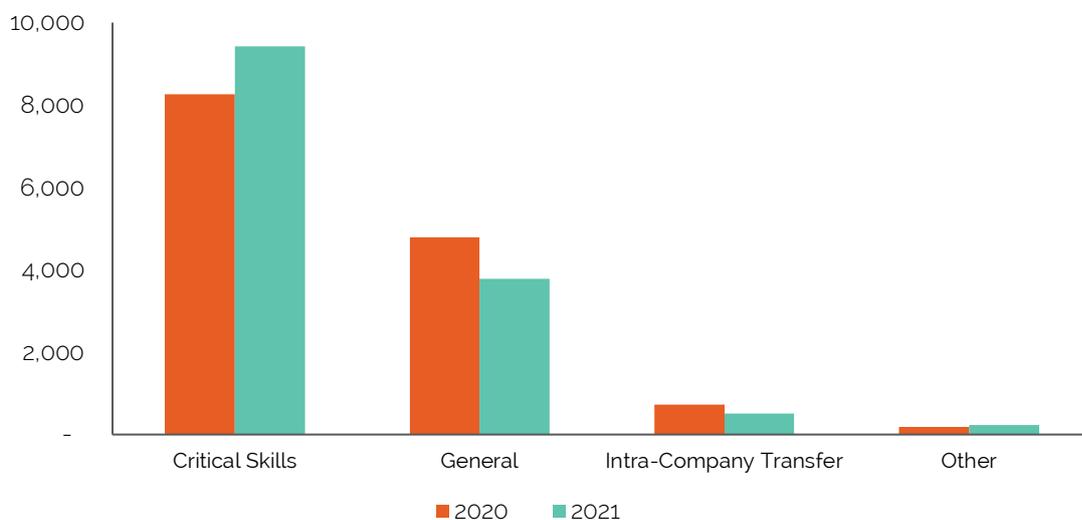


Source: DETE

8.2 Overall Trends

Critical skills permits accounted for over two thirds (67%) of all new employment permits issued in 2021, with a further 27% for general permits and 4% for intra-company transfers. At 14%, critical skills permits saw the largest growth in new permits issued between 2020 and 2021. The number of new general employment permits issued declined by 21% for the same period. New permits for elementary and operative occupations, which were predominantly general employment permits, decreased significantly in 2021; this may be due to the fact that employment permit quotas were filled for the majority of these permits by the end of 2020. In October 2021, changes to the employment permit system in Ireland were announced, including the introduction of a number of new general employment permit quotas for elementary, operative and service occupations.

Figure 8.2 New Employment Permits by Type, 2020-2021



Source: DETE

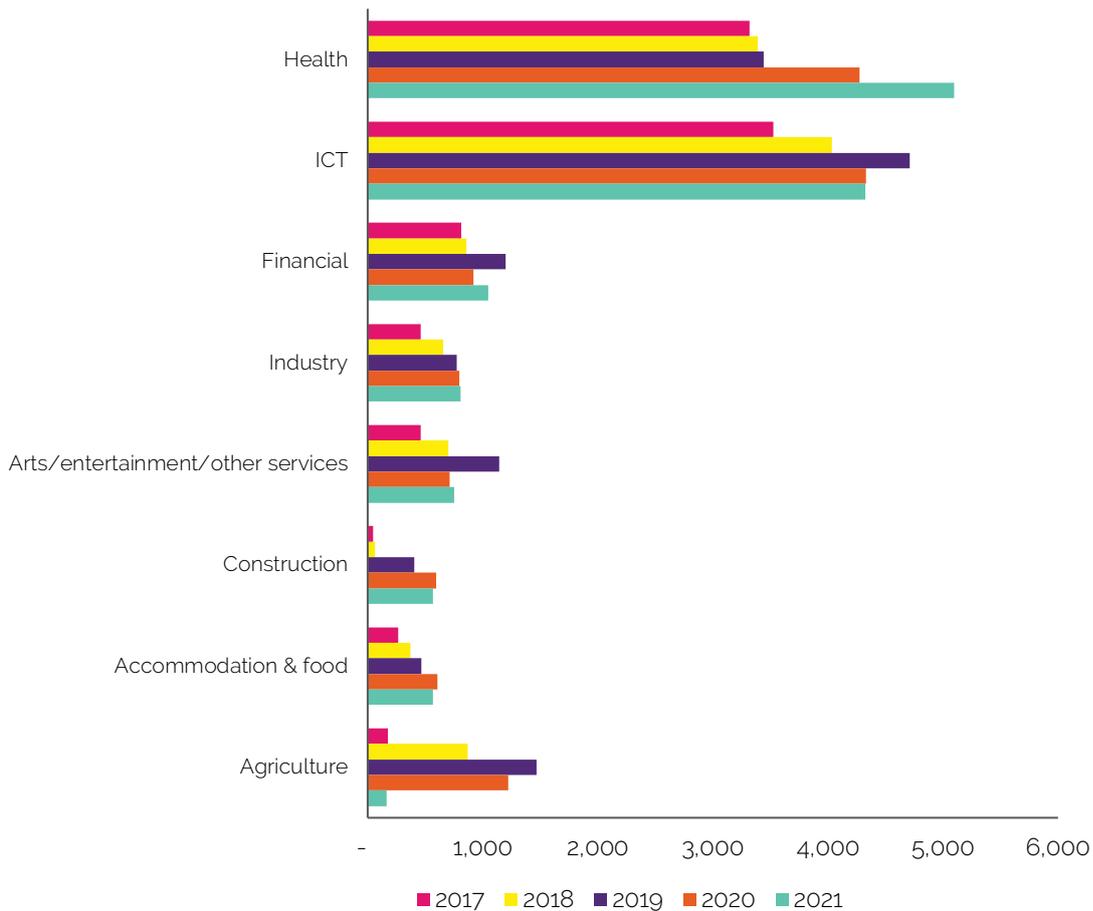
8.3 Employment Permits by Sector

Figure 8.3 illustrates a breakdown of new employment permits issued by sector. The number of permits issued was increasing for most sectors up to 2019, particularly in the ICT sectors. When COVID-19 restrictions were introduced in early 2020, many sectors saw a fall in the number of permits issued, with the exception of those in the health sector.

The health sector accounted for 36% and the ICT sector for 31% of all new permits issued in 2021. The number of permits issued in 2021 grew in three sectors since 2020; the health sector, which grew by 19%, the financial sector, which grew by 14% and the arts, entertainment and other sector which grew by 5%. The health sector also saw the largest growth in the number of new permits issued between 2017 and 2021.

The restrictions imposed as a result of COVID-19 had a significant negative impact on the Irish economy which is likely to have driven down demand for employment permits in the accommodation and food sector. New general employment permit quotas for 1,000 horticulture operatives and 100 dairy farm assistants were announced in October 2021, with a strategic review of labour attraction and retention in the agriculture sector to follow.

Figure 8.3: New Employment Permits for Selected Sectors*, 2017-2021



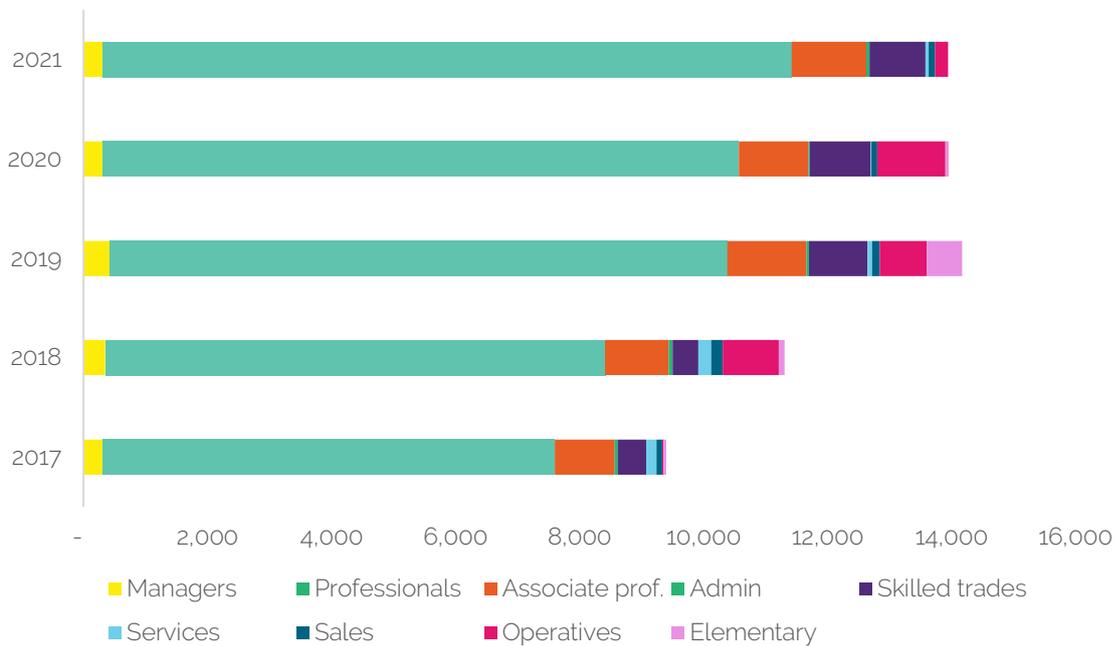
Source: DETE

*In 2021, these 8 selected sectors account for 95% of all new permits issued.

8.4 Employment Permits by Occupation

Professional occupations accounted for the majority of new permits issued in each year between 2017 and 2021 (Figure 8.4). They also accounted for over three quarters (84%) of the growth in the number of new permits issued over this time period. The increase in the number of new permits for operative roles between 2019 and 2020 relates primarily to meat processing operatives. New permits for operative occupations, which were predominantly general employment permits, decreased significantly between 2020 and 2021; this may be due to the fact that employment permit quotas were filled for the majority of these permits by the end of 2020. New permit quotas announced in 2021 included 1,000 for horticulture operatives, 100 for dairy farm assistants, 100 for work riders, 500 for meat deboners and 1,500 for meat processing operatives. Within skilled trade occupations, most construction sector jobs were made eligible for a general employment permit and the quota was also removed for HGV driver work permits. In addition, 350 permits were introduced for hospitality managers in the services sector.

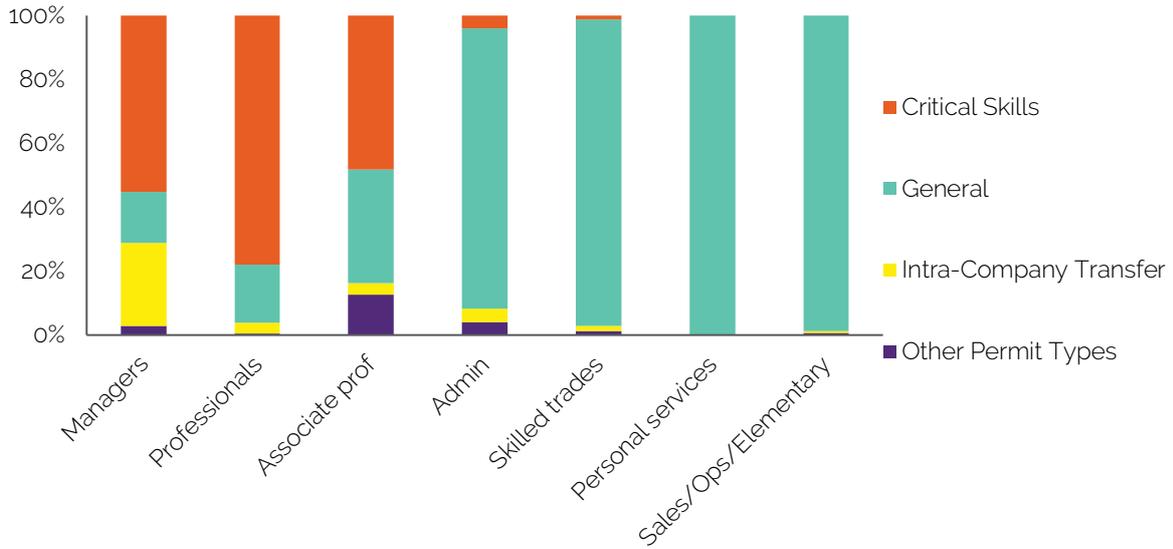
Figure 8.4 New Employment Permits by Broad Occupation, 2017-2021



Source: DETE

The type of employment permit issued varied across occupational group in 2021 (Figure 8.5). Over half (55%) of new permits issued for managers and over three quarters (78%) of new permits issued for professionals were for critical skills permits while the majority of new permits issued for administrative, skilled trades, sales, operatives and elementary occupations and all of personal services permits were general permits.

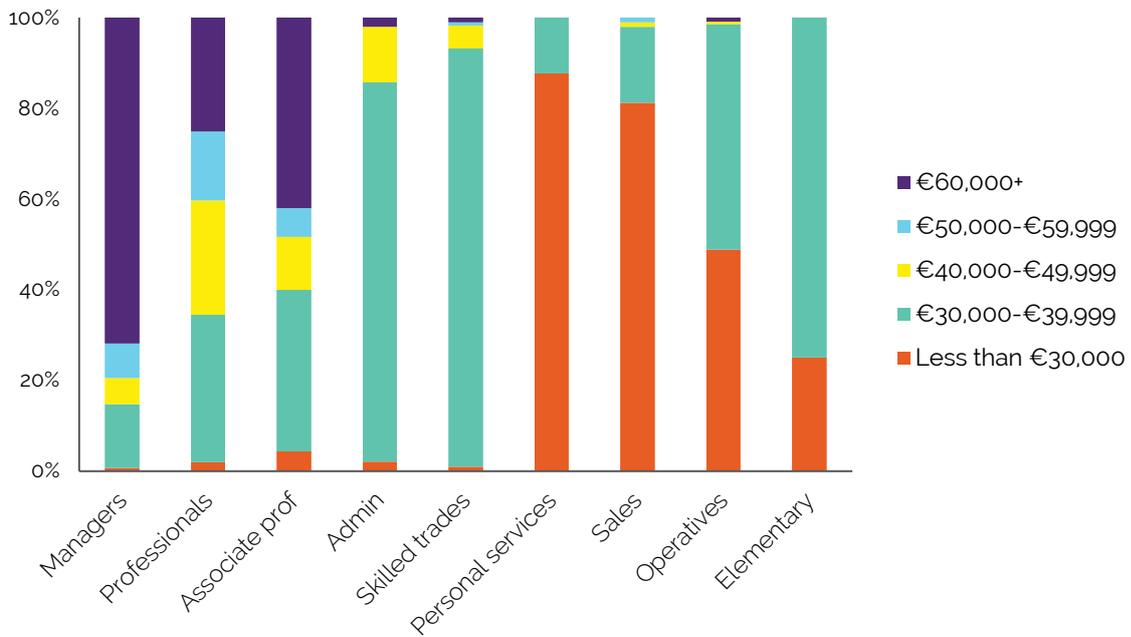
Figure 8.5 New Employment Permits by Occupation and Permit Type, 2021



Source: DETE

Of those new permits issued for managers, 72% were for roles which offered a salary of €60,000 or above; 40% of permits issued for professionals were for a salary of €50,000 or above (Figure 8.6). The majority of new permits issued in personal services and sales had a salary of less than €30,000. The majority of new permits issued for operatives and skilled trades were for a salary of less than €40,000.

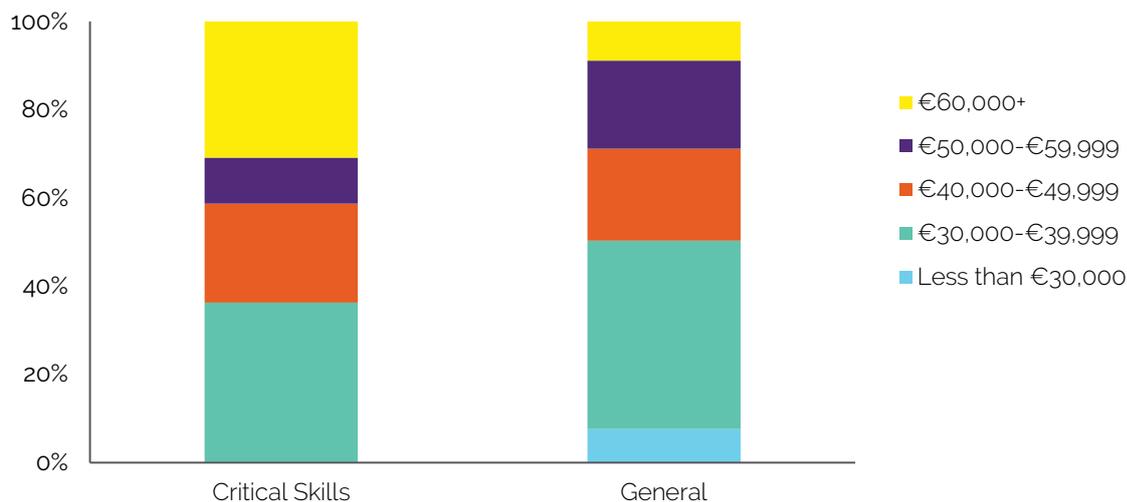
Figure 8.6 New Employment Permits by Occupation and Salary, 2021



Source: DETE

Of the new critical skills permits issued in 2021, over a third (36%) were for salaries of €30,000–€39,999 with a further 31% for salaries of €60,000 or above (Figure 8.7). Of the general permits issued, (7%) were for salaries of less than €30,000²⁹ with a further 43% were for salaries of €30,000–€39,999. From the 1st of January 2020, as advised by the Department of Enterprise Trade and Employment, the salary on the critical skills occupations list increased from €30,000 to €32,000 per annum and from €60,000 to €64,000 for all other occupations that are not on the critical skill list but are eligible for an employment permit.

Figure 8.7 New Employment Permits Type by Salary, 2021



Source: DETE

Managers

- **Overall:** new employment permits for managerial positions accounted for 2% of all permits issued in 2021
- **Type:** critical skills accounted for over a half (55%) of the new permits issued for this occupation, with a further 26% for intra-company transfers
- **Salary:** 79% 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 (29%), industry (27%) and financial services (9%)
- **Nationality:** over a quarter (27%) of all permits issued for managers were for those originating from the USA with a further 17% of permits issued for those originating from India
- **Region:** over two thirds (67%) of all permits issued for managers were for positions in Dublin
- **Occupations:** new employment permits were most frequently issued for
 - vice presidents/CEOs, directors and managers in financial services and IT but also procurement, HR and sales.

²⁹ While €30,000 is the stated minimum annual remuneration for general permits, exceptions apply as detailed at: <https://enterprise.gov.ie/en/what-we-do/workplace-and-skills/employment-permits/permit-types/general-employment-permit/>

Professionals

- **Overall:** new employment permits for professionals accounted for over three quarters (80%) of total permits issued in 2021
- **Type:** over three quarters (78%) were related to critical skills and a further 18% to general permits
- **Salary:** over half (58%) of new permits issued were for a salary of between €30,000 and €49,999 with a further 40% with a salary of €50,000 or more
- **Sector:** new permits were mainly issued for positions in the health (45%), IT (31%), and financial services sectors (9%)
- **Nationality:** two thirds (66%) of all new permits for professionals were issued to persons from India, Pakistan, the Philippines and Sudan
- **Region:** over half (57%) of all new permits issued for professionals were for positions in Dublin
- **Occupations:** new employment permits were most frequently issued for
 - health: the majority of permits were issued for nurses (primarily staff nurses), registrars and senior house officers (general and emergency medicine), but also for medical specialists such as paediatrics, anaesthesiology, orthopaedics, obstetrics & gynaecology, and radiographers/sonographers
 - IT: software engineers/developers, IT business analysts/project managers, analysts/engineers (network, security, systems, test), architects (software, systems, technical, solutions), data analysts/scientists, consultants (in SAP, cyber-security, CRM), UX designers
 - financial: analysts (financial, risk, business, tax, data), accountants (in auditing)
 - industry: engineers (e.g. design, process, automation, mechanical, electrical, validation, electronics), scientists (including analytical chemists), quality assurance/quality control and regulatory professionals, business analysts
 - construction: project managers, civil engineers and other engineers (architectural, design and mechanical), quantity surveyors.

Associate Professionals & Technical

- **Overall:** new employment permits for associate professionals accounted for 9% of total permits issued in 2021
- **Type:** critical skills accounted for almost a half (48%) and general employment permits for 35% of new permits issued
- **Salary:** 40% of new permits issued had a salary of less than €40,000 with a further 48% with a salary of €50,000 or more
- **Sector:** over half (56%) of new permits issued were for the ICT sector, with a further 23% for arts, entertainment and other sector and 5% in financial services
- **Nationality:** persons from India, the USA and Brazil accounted for (46%) of all new permits issued for this occupational group
- **Region:** the majority (81%) of all new permits issued for associate professionals were for positions in Dublin
- **Occupations:** new employment permits were most frequently issued for
 - sales & marketing: primarily account manager/strategists (with languages) but also marketing specialists, business development and sales executives
 - other: technical support, film/TV/animation roles (e.g. actors, directors, production designers, visual effects supervisors), sports professionals, financial analysts, recruitment consultants and animators.

Administrative and Secretarial

- **Overall:** with 49 permits, administrative positions accounted for less than 1% of total new permits issued in 2021
- **Type:** permits for this occupational group were primarily for general employment permits (88%)
- **Salary:** over three quarters (86%) of new permits issued had a salary of less than €40,000
- **Region:** over two thirds (69%) of all new permits issued for administrative and secretarial roles were for positions in Dublin
- **Occupations:** new employment permits were most frequently issued for administrative roles in transport and distribution.

Skilled Trades

- **Overall:** new employment permits issued for those in skilled trades accounted for 6% of total new permits issued in 2021
- **Type:** the majority (96%) of new permits issued were general employment permits
- **Salary:** the majority (93%) of permits issued were for employment with a salary of less than €40,000
- **Sector:** over half (59%) of all new permits issued were for the accommodation and food services sector, with a further 25% in construction and 8% in industry sector
- **Nationality:** persons from Brazil, India and China accounted for over half (51%) of all new permits issued for this occupational group
- **Region:** over a third (35%) of all new permits issued for skilled trades were for positions in Dublin with the remainder spread across all counties
- **Occupations:** new permits were most frequently issued for
 - chefs (primarily Chef de Partie)
 - shuttering carpenters, drywall plasterers, bricklayers
 - welders/fabricators.

Personal Services

- **Overall:** personal services accounted for less than 1% of total new permits issued in 2021
- **Type:** all of the new permits issued for this occupational group were issued for general employment permits
- **Salary:** all new permits issued had a salary of less than €40,000
- **Region:** over two thirds (72%) of all new permits issued for personal services roles were for positions in Kildare and Dublin
- **Occupations:** permits were most frequently issued for healthcare assistants.

Sales and Customer Services

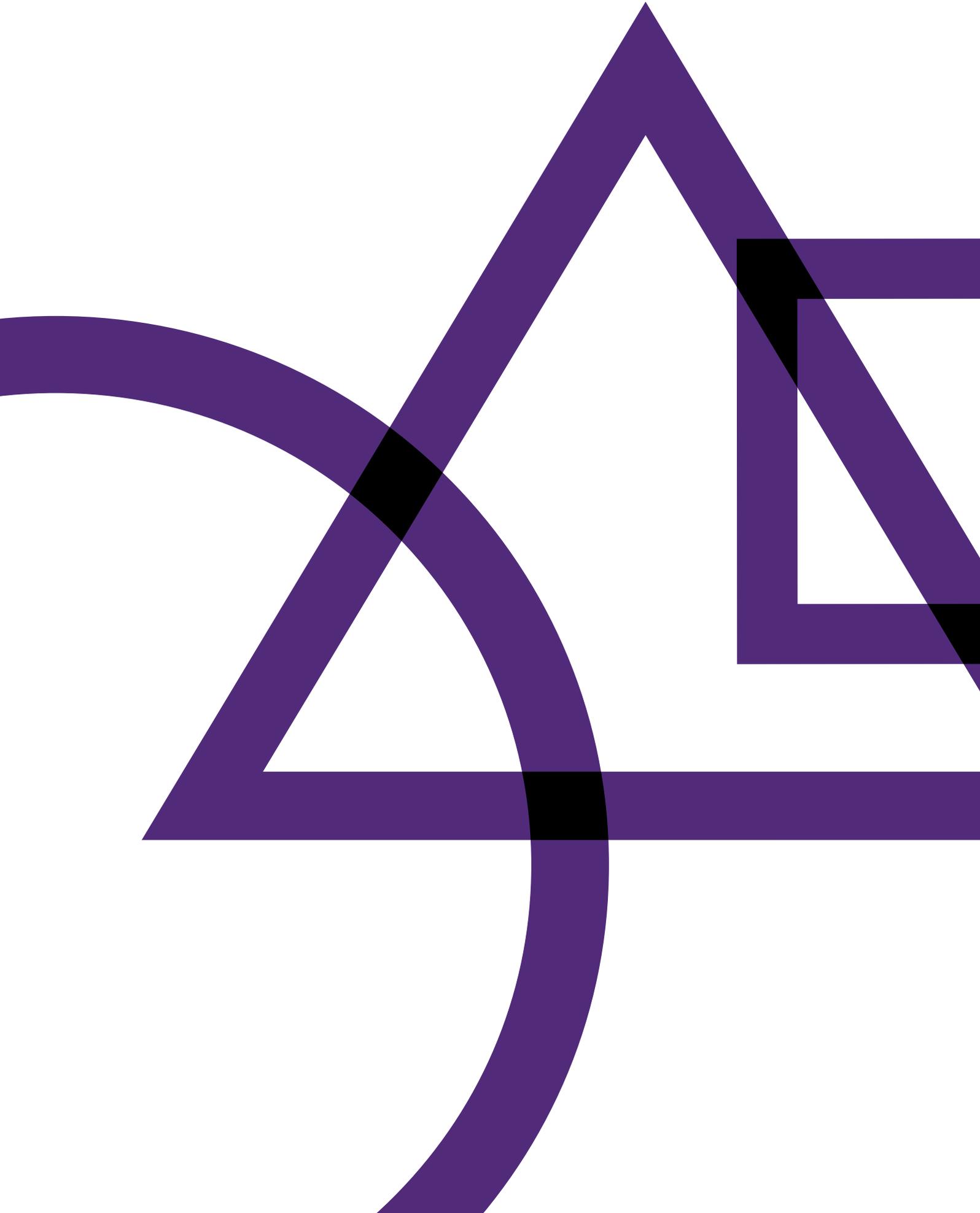
- **Overall:** new employment permits issued for those in sales related occupations accounted for just 1% of total permits issued in 2021; permits were most frequently issued for customer service and sales support occupations (with languages) within the general employment permits
- **Salary:** the majority (98%) of new permits issued had a salary of less than €40,000
- **Sector:** almost all (99%) new permits issued were for the ICT sector.

Operatives

- **Overall:** new employment permits issued for those in operative occupations accounted for just 1% of total permits issued in 2021; the majority (99%) of permits issued for this occupational group were issued for general employment permits and almost a half (49%) had a salary of less than €30,000
- **Sector:** a half of new permits issued were for the agriculture sector and a further 42% of new permits were issued for the transport and storage sector
- **Nationality:** persons from South Africa and China accounted for 53% of all new permits issued for this occupational group
- **Occupations:** new permits were most frequently issued for meat processing operatives and HGV drivers.

Elementary Occupations

- **Overall:** with 4 permits, elementary positions accounted for less than 1% of total new permits issued in 2021; the majority (99%) of which, were issued for general employment permits and all had a salary of less than €39,999.



Section 9

Job Vacancies

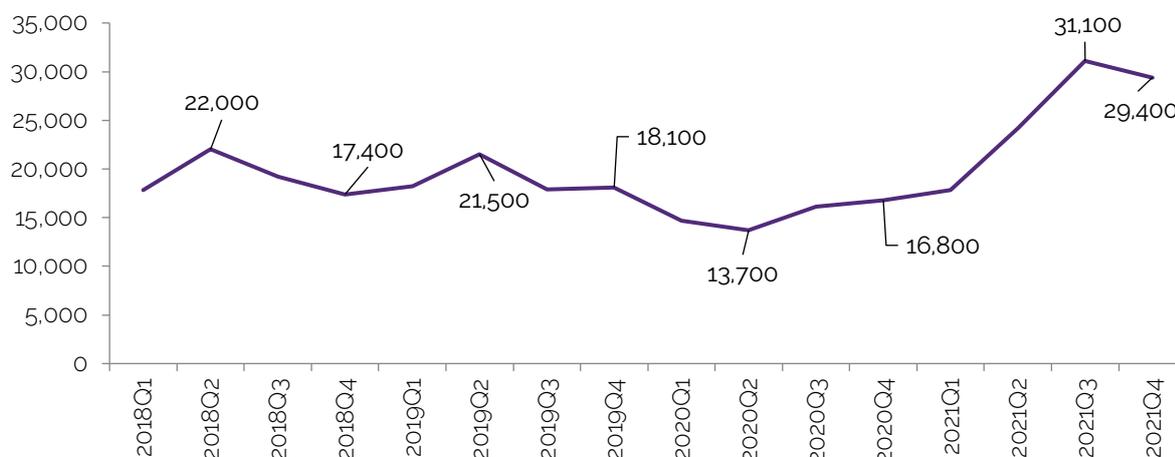
This section provides an analysis of job vacancy data in Ireland. It examines a number of indicators including

- CSO job vacancy numbers and rates by sector
- advertised job vacancies (two sources: OVATE (CEDEFOP) and JobsIreland.ie (DSP) by occupation)
- results of the SLMRU's own Recruitment Agency Survey.

9.1 CSO vacancy rates

The CSO's Earnings, Hours and Employment Costs Survey (EHECS) examines the number of open job vacancies businesses have at the end of each quarter. There were 29,400 vacancies reported in quarter 4 2021, representing a job vacancy rate³⁹ of 1.4%. The number of job vacancies reported fell significantly in 2020 as a result of the pandemic but have seen a recovery since, with numbers peaking at 31,100 in quarter 3 2021, far higher than any other year on record (Figure 9.1).

Figure 9.1 CSO Vacancies, Quarter 1 2019 - Quarter 4 2021

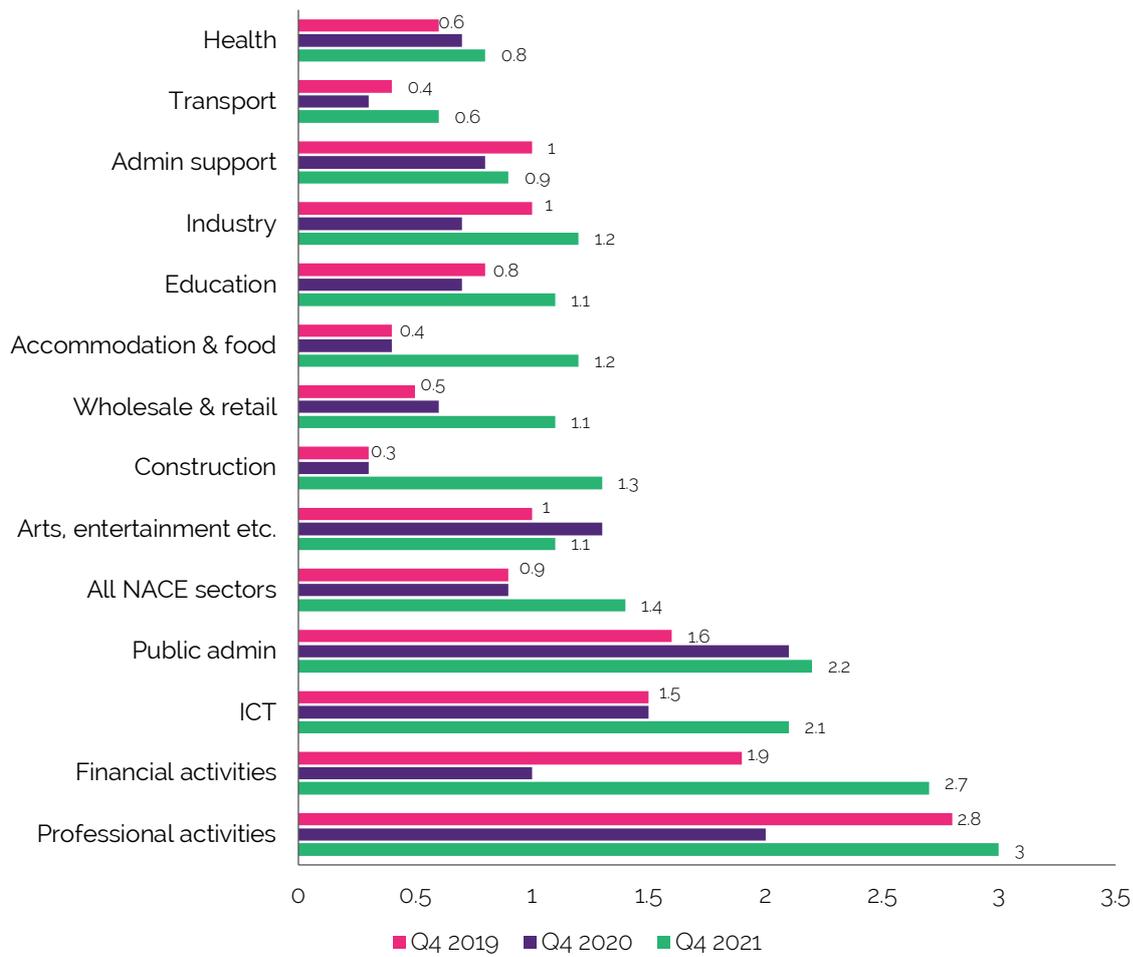


Source: CSO EHECS

Figure 9.2 presents the vacancy rates by sector for quarter 4 2019, quarter 4 2020 and quarter 4 2021. The decline and subsequent recovery in the number of vacancies over the period is reflected in the job vacancy rates, with increases occurring across most sectors. Many sectors experienced a surge in their job vacancy rate in quarter 4 2021, particularly those sectors impacted by the restrictions imposed as a result of COVID-19, namely the wholesale/retail, accommodation/food and construction sectors. The job vacancy rate for the financial sector also saw a considerable increase since quarter 4 2020 (from 1.0% to 2.7%). Professional activities was the sector with the largest vacancy rate in quarter 4 2021 at 3%, an increase of 0.2 percentage points compared to quarter 4 2019 and one percentage point since quarter 4 2020.

³⁹ 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.

Figure 9.2 CSO Vacancy Rate (%) by Sector, Quarter 4 2019, Quarter 4 2020, and Quarter 4 2021



Source: CSO EHECS

9.2 Advertised job vacancies

While not all jobs are advertised online, an analysis of online job vacancy adverts nonetheless provides an insight into the roles for which employers are currently seeking to fill, examining a range of variables, depending on the source, including occupation, job title, and skills. In this section, we look first at the online job vacancies available through CEDEFOP’s Skills OVATE portal; this is followed by an analysis of one subset of this data, namely the job vacancy adverts posted on jobsireland.ie.

In recent years, CEDEFOP has developed an online vacancy analysis tool for Europe (OVATE), a pan-European system for the analysis of online job vacancy advertisements.³¹ It collects data relating to vacancies advertised across a range of public (e.g. jobsireland.ie) and private (e.g. irishjobs.ie) online recruitment portals as well as job search engines (e.g. Monster). To minimise the occurrence of duplication,

³¹CEDEFOP’s skills intelligence based on online job vacancy adverts is being continuously improved. While the data undergo extensive cleaning and processing, sound analysis and contextualisation help avoid interpretation errors and biases. An analysis of Skills-OVATE data is best used as a complement to other data, including employment levels. Further information on using online job vacancy adverts for skills intelligence is available from CEDEFOP: *Online job vacancies and skills analysis* | Cedefop (europa.eu) or *Perspectives on policy and practice* | Cedefop (europa.eu).

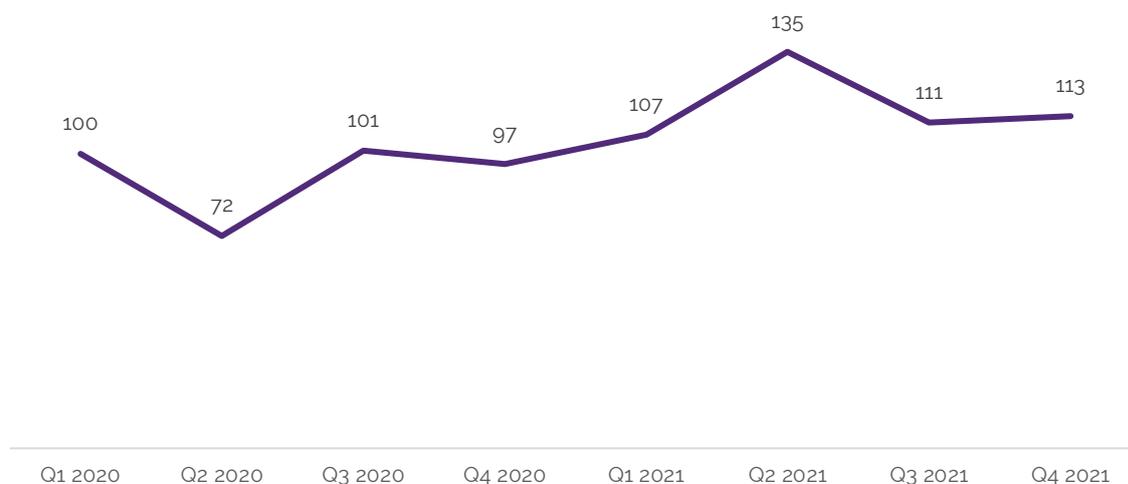
where the same job vacancy may be advertised on more than one portal, the vacancy data undergoes a de-duplication process.

The Skills OVATE data presented here (and on the CEDEFOP dashboards) do not contain all the job advertisements collected. Many online job advert portals do not provide a stable data feed over time, and as a result job advertisements from some portals are excluded from Skills OVATE data. The list of stable job advertisements portals was updated in 2021; therefore, while the data reported here is comparable over time, it is not directly comparable with that reported in earlier SLMRU reports (e.g. National Skills Bulletin 2021; Spring Skills Bulletin 2021).

In 2021, the OVATE database held more than half a million job vacancy adverts for posts in Ireland, 26% more than the total number observed in 2020. Most of the increases occurred at the end of quarter 1 and throughout quarter 2 of 2021, coinciding with the re-opening of schools in March and the lifting of level 5 restrictions in April 2021.

Figure 9.3 shows an index highlighting the relative changes in the number of online job vacancy adverts between quarter 1 2020 and quarter 4 2021 (base = quarter 1 2020). The index shows that while the number of job vacancy adverts dipped sharply in quarter 2 2020 (coinciding with the onset of the COVID-19 pandemic), the subsequent recovery was strong, and by quarter 2 2021, the number of posts was more than a third greater than that observed immediately prior to the pandemic.

Figure 9.3 Online job vacancy adverts index, (Base: Quarter 1 2020 = 100), Quarter 1 2020 – Quarter 4 2021



Source: CEDEFOP

Figure 9.4 shows the OVATE online job vacancies for Ireland, by broad occupational group.³² Where numbers are sufficiently large, occupational sub-groups are also shown. In 2021, online job vacancies captured through OVATE were concentrated in professional and associate professional occupations, which combined, accounted for 57% of the total. In contrast, elementary and operative occupations combined made up just 10% of the total.

Figure 9.4 OVATE online job vacancy adverts by broad occupational group, 2021



Source: CEDEFOP

Figure 9.5 shows the percentage change in the number of job vacancy adverts by occupational sub-groups (based on SOC 2-digit categories³³) between 2020 and 2021. The strongest growth, in relative terms, was for hospitality managers and food preparation trades (e.g. chefs, cooks), although these occupations, at 2.5%, made up a small share of the total online job vacancy adverts in 2021. The largest absolute increase in the number of job vacancy postings was for science, engineering and technical professionals (including ICT), although due to the large size of this occupation in the OVATE data, this translated into a rise of just 14%.

The number of online job vacancy adverts for health professionals, health associate professionals and caring occupations declined, although this follows strong increases observed in the preceding year associated with increased demand for these occupations during the pandemic.

³² Based on a map created by the Office of National Statistics (UK), the SLMRU has mapped OVATE data, which is categorised according to ISCO (International Standard Classification of Occupations) to SOC (Standard Occupation Classification) and is therefore compatible with other datasets used in the analysis of skills demand in the National Skills Bulletin.

³³ Most sub-group occupations in Figure 9.5 are SOC 2010 two-digit groups, with the following exceptions: 'Other associate professionals' comprise protective services and culture media and sports occupations. Administrative occupations comprise administrative occupations and secretarial and related occupations. The 'other skilled trades' category includes construction trades (SOC53), agriculture trades (SOC 51), and textile, printing and other skilled trades (SOC 54), minus food preparation trades. (SOC 543). Food preparation trades (e.g. butchers, bakers, chefs, cooks etc) are presented separately.

Figure 9.5 Percentage change in job vacancy adverts by occupational sub-groups, 2020-2021



Source: CEDEFOP

Skills in online job vacancy adverts

In OVATE, skills are classified according to ESCO, the classification of European skills/competencies, qualifications and occupations. The skills and competencies can be categorised into subclassifications at different levels of detail. In this next section, we present skills at the most detailed classification available. However, to help identify different types of skill (e.g. ICT, or communication skills), broader categories (ESCO Skill levels 1-3) are also used.

Figure 9.6 shows the most frequently mentioned detailed skills in online job vacancy adverts in 2021. Combined, the skills shown in Figure 9.6 account for approximately two thirds of all skill mentions. The most frequently occurring skills were

- adapt to change (4% of all skill mentions)
- work in teams (also 4%) and teamworking skills (3%)
- use a computer or use Microsoft Office (3% each)
- communication (2%)

Figure 9.6: Most frequently mentioned detailed skills in online job vacancy adverts, 2021



Source: CEDEFOP

Focus on ICT Skills

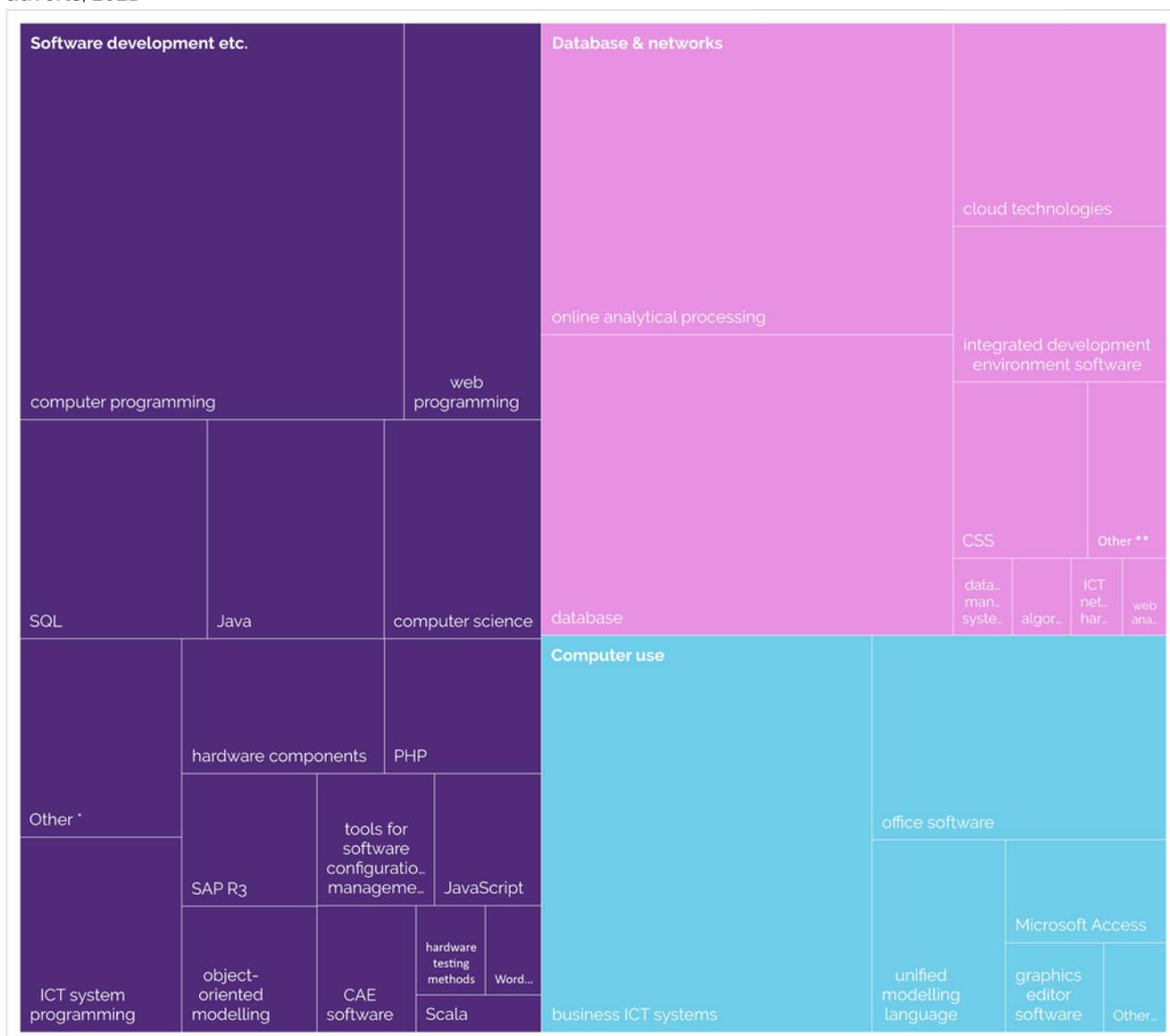
In ESCO, skill level 1 categories distinguish between skills in information & communications technologies and the skills required to work with computers.

Figure 9.7 shows the most frequently mentioned ICT skills in online job vacancy adverts in 2021, categorised according to one of three groups: software development and analysis, computer use, and database/network design & administration.

- **Software development and analysis**³⁴ was the most frequently mentioned ICT skill in 2021, accounting for more than two fifths of all ICT skill mentions, particularly in the areas of computer programming (13% of all ICT skill mentions), web programming (4% of all ICT skill mentions), SQL (3%) and Java (3%).
- **Computer use** made up 29% of all ICT skill mentions, where skills in demand included office software skills (13% of all ICT mentions) and business ICT systems (11%).
- **Database and network design and administration** skills comprised 28% of all ICT skill mentions, with mentions occurring for online analytical processing skills, database skills, and cloud technologies skills; combined these three skills made up 22% of total ICT skill mentions.

³⁴ Software development related skills were also identified as the most in-demand ICT skills in the recent *Shifting Sands* report by EMSI Burning Glass and SOLAS (2021).

Figure 9.7: Most frequently mentioned ICT skills (ESCO skill level 3 and detailed skills) in online job vacancy adverts, 2021



Source: CEDEFOP

*Other software development skills include among others Oracle Application Development Framework, mobile operating systems, mobile device software frameworks, World Wide Web Consortium standards, Apache Tomcat, ABAP, Ansible, C#, and Hadoop; each of these skills made up between 0.1% and 0.3% of all ICT skill mentions in 2021.

** Other database and networks skills include, among others, JavaScript Framework, data extraction, transformation and loading tools, Oracle Relational Database, ICT network simulation, service-oriented modelling, and NoSQL

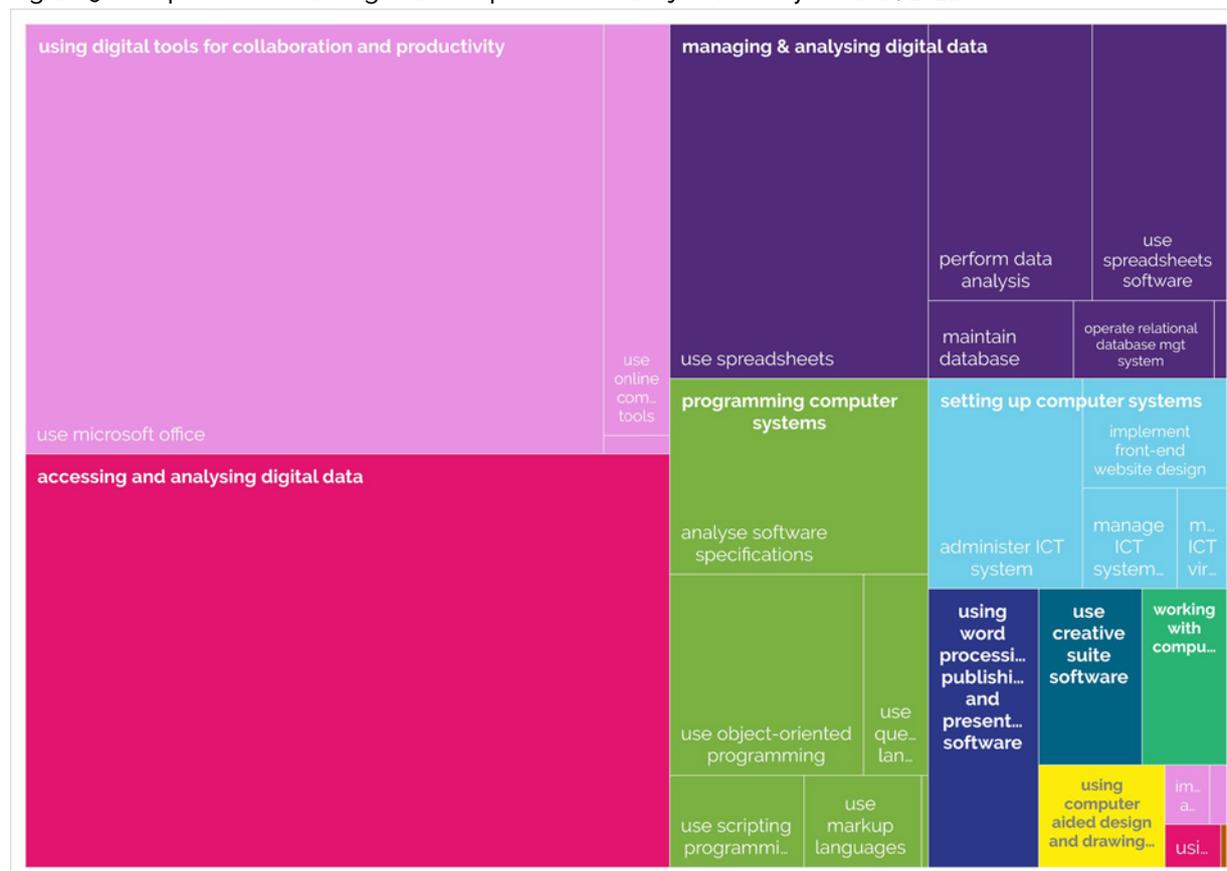
***Other computer use skills comprised, computational fluid dynamics, e-commerce systems, Adobe Photoshop, and web application security threats.

Focus on skills for working with computers

Figure 9.8 shows the skills for working with computers mentioned in online job vacancy adverts in 2021. Almost 11% of all skill mentions were skills related to working with computers. The most frequently mentioned skills in this category included

- using digital tools for collaboration and productivity (e.g. using MS Office);
- accessing and analysing digital data,
- managing & analysing digital data

Figure 9.8. Top skills for working with computers in online job vacancy adverts, 2021



Source: CEDEFOP

Focus on engineering related skills

Engineering related skills comprised approximately 2% of all skills mentioned in online job vacancy adverts in 2021. The main skills mentioned included:

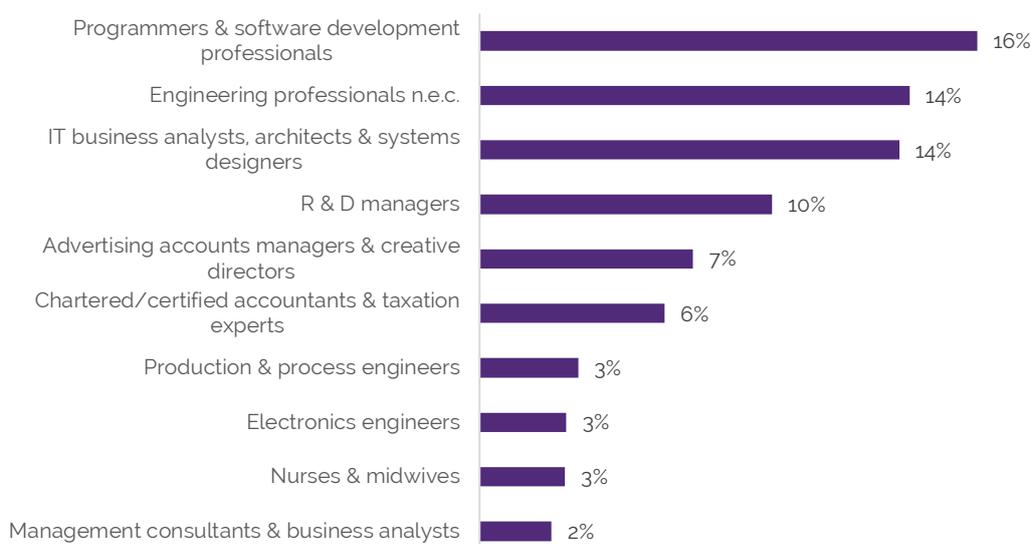
- **engineering principles** (more than a quarter of all engineering-related skills)
- **electronics & automation** (25% of engineering skill mentions), including automation technology, computer technology, quality control systems, control engineering
- **electricity and energy** (20% of all engineering-related skill mentions), including energy market, energy sector policies, electrical wiring plans, and energy efficiency
- **production processes** (7%)

Online job vacancy adverts - occupations

Professional occupations

Professional occupations made up 38% of all vacancy adverts in 2021. Approximately two thirds of professional vacancy adverts were for ICT, engineering or science roles. Figure 9.9 shows the ten most frequently occurring professional occupations in 2021; combined these ten occupations made up more than three quarters of all vacancy adverts for professional occupations.

Figure 9.9 Top 10 professional occupations in job vacancy adverts (% of all professional occupation adverts), 2021



Source: CEDEFOP

Skills: the top skills/competences mentioned in posts for professional occupations included

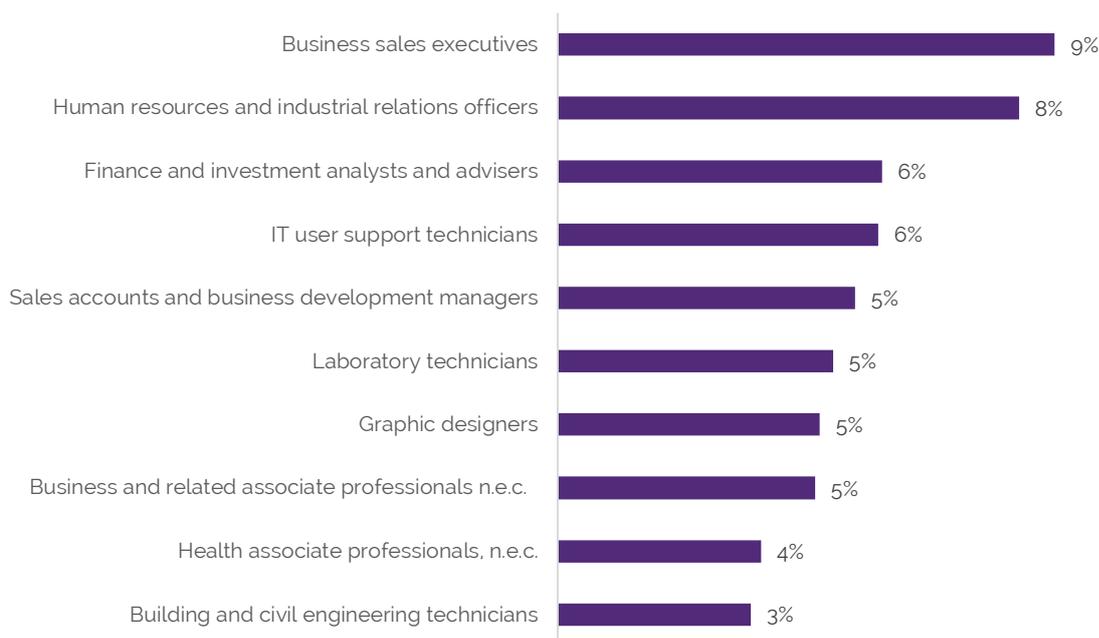
- software and applications development and analysis (computer/web programming, SQL, Java)
- personal skills and development (teamworking/team building, communication and assertiveness)
- planning and scheduling events and activities (prioritise tasks, adjust priorities, plan teamwork, manage time)
- database and network design and administration (online analytical processing, cloud technologies, integrated development environment software, CSS)
- management and administration (project management, cost management, customer relationship management, business processes).

Compared to 2020 the number of vacancy adverts for professionals grew by 12%. The largest absolute growth was for research and development managers, followed by advertising/marketing professionals, and programmers/software developers. In relative terms, online job vacancy adverts for these occupations grew by 31%, 42% and 14% respectively.

Associate professional occupations

Associate professional occupations made up almost a fifth (19%) of all job vacancy adverts in 2021. Of these, the highest numbers were for business related roles, which made up more than one half of all associate professional occupation adverts. This was followed by posts for science, engineering & ICT roles which made up more than a quarter. Figure 9.10 shows the ten most frequently mentioned occupations amongst adverts for associate professionals in 2021; combined these occupations made up more than one half of all associate professional online job adverts.

Figure 9.10 Top 10 occupations mentioned in online job vacancy adverts for associate professionals (%), 2021



Source: CEDEFOP

Skills: the top skills/competences mentioned in posts for associate professional occupations included

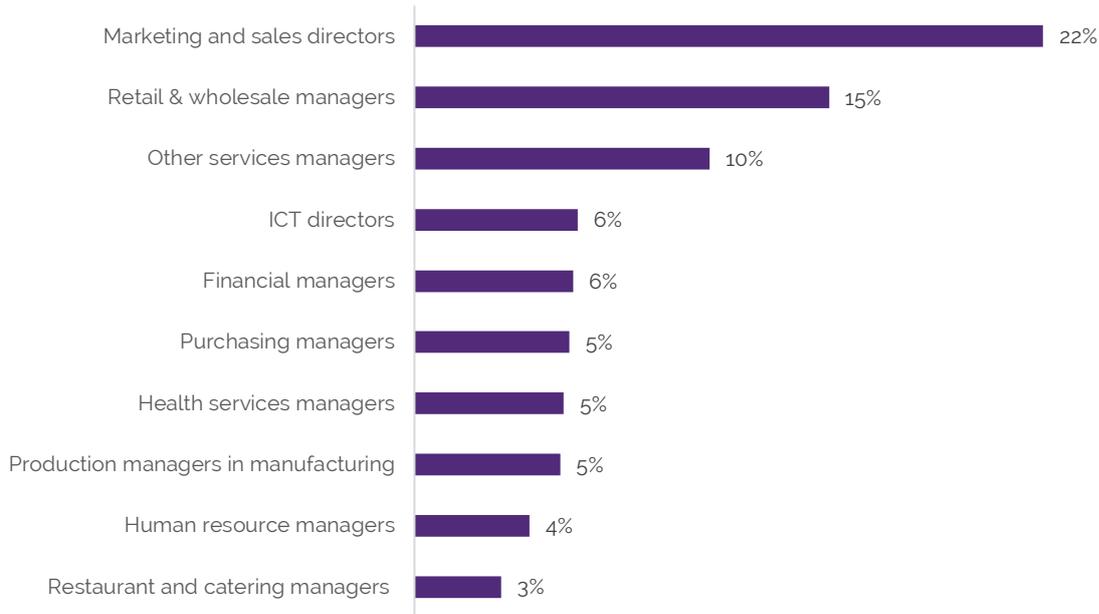
- personal skills development (communication, teamwork principles, team building)
- planning and scheduling events/activities (manage time, adjust priorities, priorities tasks)
- working in teams
- adapt to change
- management and administration (customer relationship management, business processes, project management)

Compared to 2020, the number of posts for associate professional jobs grew by 26%; the largest growth, in absolute terms, was for HR & industrial relations officers and business sales executives, which in relative terms, grew by 70% and 42% respectively.

Managers

Manager occupations comprised approximately 12% of job vacancy adverts in 2021. Of these, nearly a quarter were for positions in marketing and advertising (e.g. marketing & sales directors and advertising/PR managers); a further 6% were for hospitality related managerial positions (i.e. restaurant managers or hotel managers). Figure 9.11 shows the ten most frequently mentioned occupations for managerial posts in 2021; combined, these occupations made up more than four fifths of all managerial online job vacancies.

Figure 9.11 Top 10 occupations mentioned in online job vacancy adverts for managers (%), 2021



Source: CEDEFOP

Skills: the top skills/competences mentioned in posts for managerial occupations included

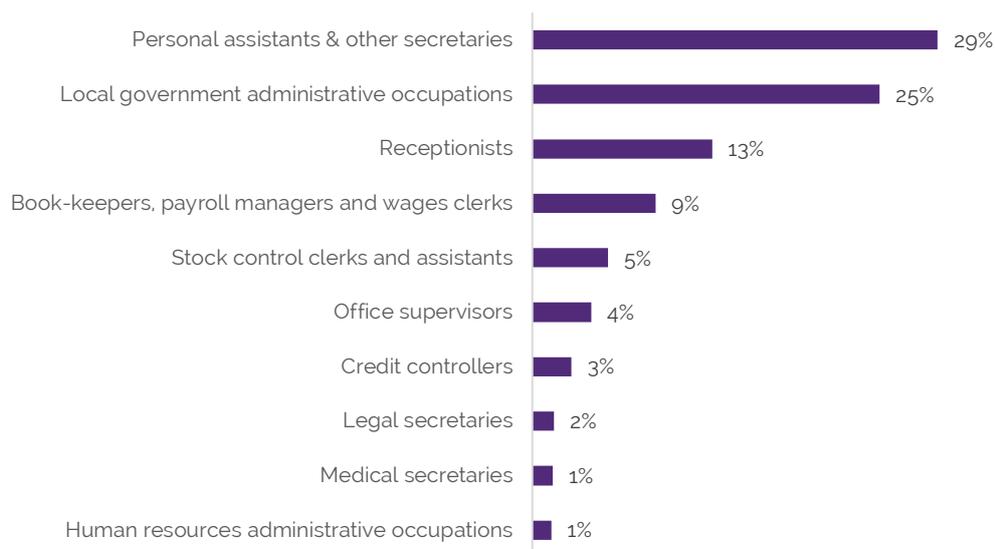
- personal skills & development (e.g. team work, communication)
- planning and scheduling events/activities (e.g. time management, prioritising tasks, and adjusting priorities)
- management & admin (e.g. project management, customer relationship management, HR management)
- marketing & advertising (e.g. sales strategies, customer segmentation, merchandising techniques)
- adapt to change

When compared to 2020, posts for managerial occupations grew by nearly a third (32%). The strongest growth, in absolute terms was for marketing/sales directors and retail/wholesale managers, the relative growth for which was well above average, at 57% and 47% respectively. Relative growth was also particularly strong for restaurant managers (+148%) and hotel/accommodation managers (+76%), reflecting the recovery in these occupations following sharp declines during the pandemic.

Secretarial and administrative occupations

Administrative occupations made up approximately 8% of job vacancy adverts in 2021. The highest number of administrative vacancy adverts were for personal assistants/secretaries and local government administrative occupations, which combined accounted for more than half of all adverts for administrative occupations. Figure 9.12 shows the top ten administrative occupations advertised online in 2021; combined these occupations made up more than 90% of all administrative job vacancy adverts.

Figure 9.12 Top 10 occupations mentioned in online job vacancy adverts for managers (%), 2021



Source: CEDEFOP

Skills: the top skills mentioned in posts for administrative occupations included

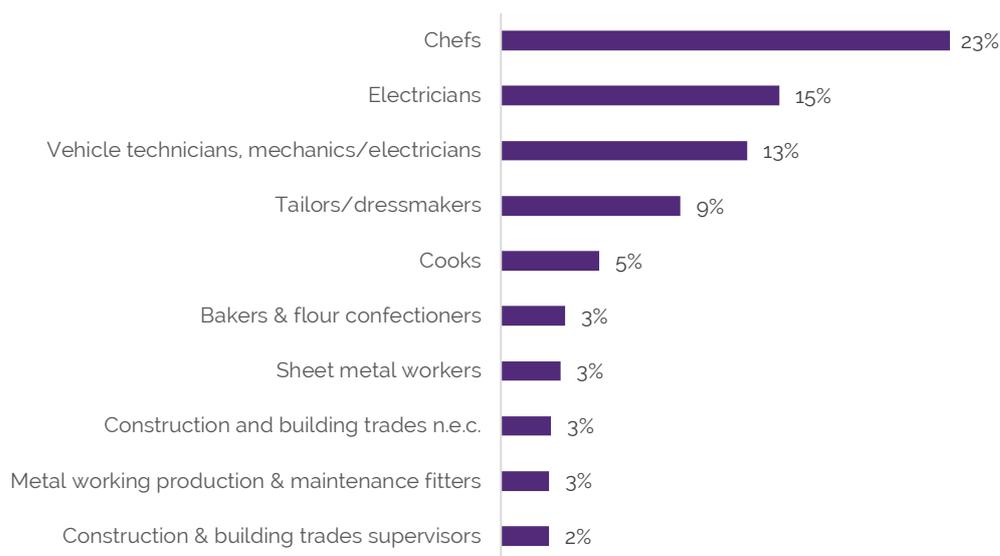
- planning and scheduling events and activities (e.g. adjust priorities, prioritise tasks, manage time, administer appointments, plan schedule)
- adapt to change
- working in teams
- performing general clerical and administrative tasks (e.g. use office systems)
- using digital tools for collaboration and productivity (e.g. MS Office)

When compared to 2020, vacancy adverts for administrative roles grew by more than a half, possibly due to recruitment of Census enumerators in 2021 as well as a temporary clerical officer campaign for the Civil Service.

Skilled trades

Skilled trades occupations accounted for approximately 5% of the total online job vacancy adverts in 2021. Food preparation trades, comprising chefs, cooks, bakers and butchers, accounted for approximately one third of all skilled trades vacancies. Figure 9.13 shows the ten most frequently mentioned occupations in 2021; combined, these occupations made up nearly four fifths of all skilled trades online job vacancy adverts.

Figure 9.13 Top 10 occupations mentioned in online job vacancy adverts for skilled trades occupations (%), 2021



Source: CEDEFOP

Skills: the top skills/competences mentioned in posts for skilled trades occupations included

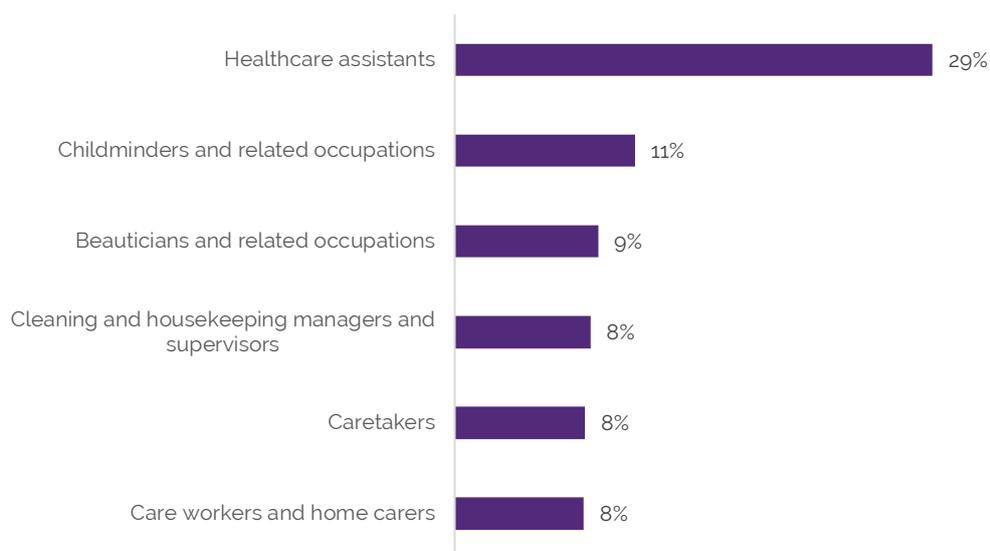
- planning and scheduling events and activities (adjust priorities, prioritise tasks, and manage time)
- working in teams
- adapt to change
- wholesale and retail sales (apply quality standards)
- personal skills and development (teamwork, communication)

When compared to 2020, the number of adverts for skilled trades occupations rose by 46%. The strongest absolute growth was for chefs and cooks; combined these two occupations made up nearly one half of the total growth observed in skilled trade occupation adverts.

Personal and caring services occupations

Personal and caring services occupations accounted for less than 3% of all job vacancy adverts in 2021. Of these, the largest numbers were for health and caring related occupations (e.g. nursing auxiliaries, childcare workers and care workers), which combined made up approximately one half of occupations in this category. Figure 9.14 shows the six most frequently occurring personal and caring occupations advertised in 2021; combined, these six occupations accounted for nearly three quarters of all personal/caring job vacancy adverts.

Figure 9.14 Most frequent occupations mentioned in online job vacancy adverts for personal and caring occupations (%), 2021



Source: CEDEFOP

Skills: the top skills mentioned in posts for personal and caring services occupations included

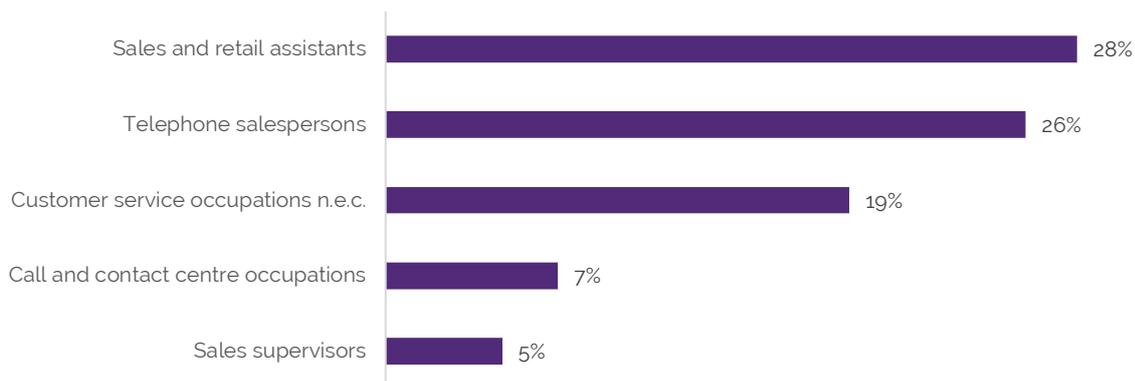
- planning and scheduling events and activities (manage time, adjust priorities, prioritise tasks)
- adapt to change
- working in teams
- personal skills and development (communication, assertiveness, teamwork principles)
- nursing and midwifery (persons centred care, nursing principles).

Compared to 2020, the number of caring/personal service vacancy adverts was 7% higher in 2021. The largest absolute growth was for cleaning managers and beauticians, where growth was above the average for this group, at 103% and 71% respectively. This occupation represents a small share of the total number of online job vacancies and should be interpreted with caution.

Sales occupations

Sales occupations accounted for 4% of all job vacancies advertised online in 2021. Figure 9.15 shows the five most frequently mentioned occupations for sales-related job advertisements; combined, these five occupations made up more than four fifths of all sales occupations job vacancy postings.

Figure 9.15 Most frequent occupations mentioned in online job vacancy adverts for sales occupations (%), 2021



Source: CEDEFOP

Skills: the top skills mentioned in relation to sales vacancy adverts were

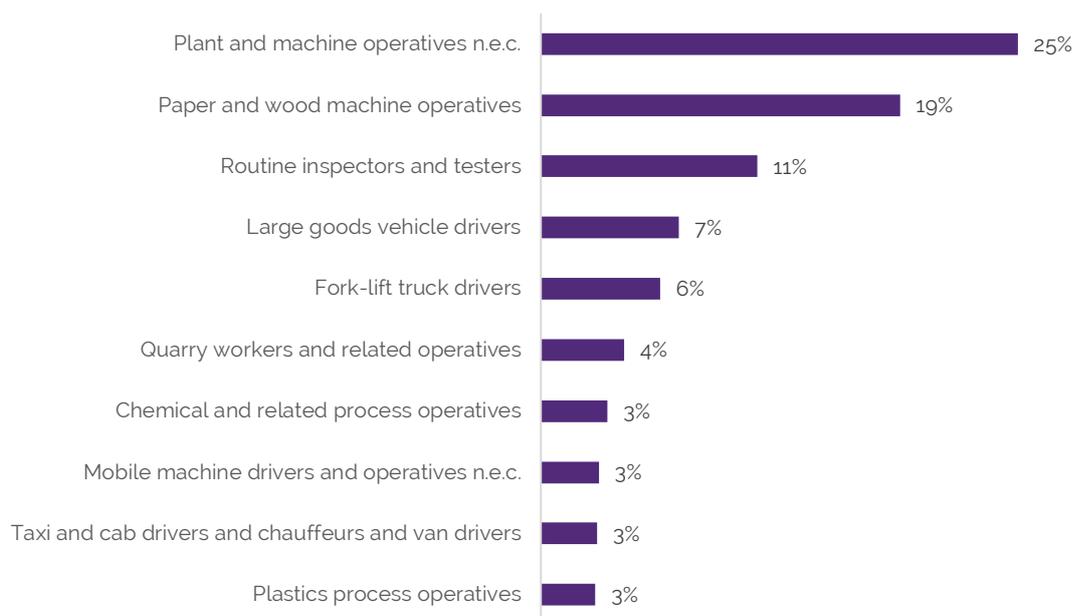
- wholesale and retail sales (sales and sales promotion techniques, sales argumentation)
- selling products or services
- working in teams
- personal skills and development (communication, assertiveness)
- adapt to change

When compared to 2020, vacancy adverts for sales roles rose by more than a half (54%). Nearly two thirds of the total growth in sales jobs vacancy postings was attributable to increases in the number of adverts for sales assistants and customer service occupations, which grew by 70% and 77% respectively year-on-year.

Operative occupations

Operative occupations made up 6% of job vacancy adverts in 2021. Of these, one quarter was for process, plant and machine operatives. Figure 9.16 shows the most frequently mentioned occupations for operatives; combined these ten occupations made up more than four fifths of all operative job vacancy postings.

Figure 9.16 Most frequent occupations mentioned in online job vacancy adverts for operative occupations (%), 2021



Source: CEDEFOP

Skills: the top skills mentioned in association with operative occupations include

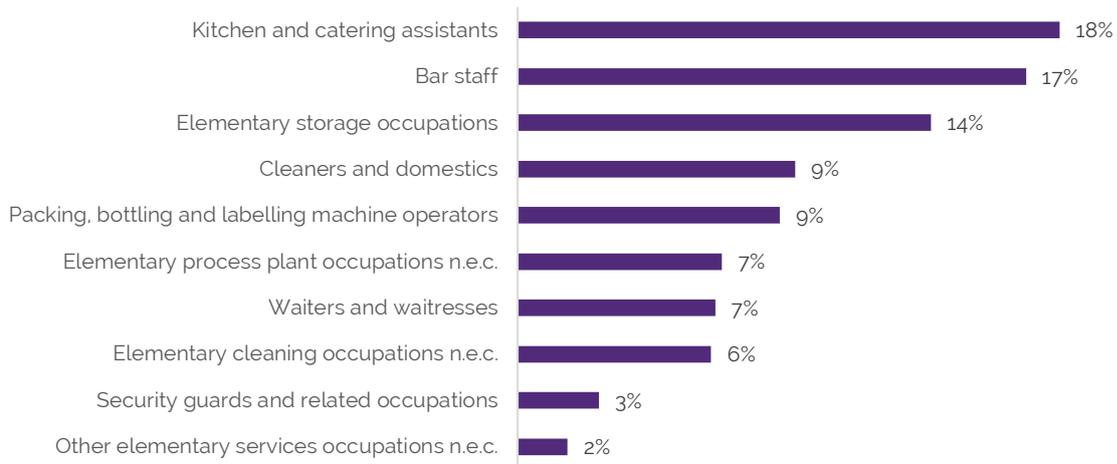
- working in teams
- planning and scheduling events and activities (priorities tasks, adjust priorities, time management)
- adapt to change
- wholesale and retail sales (quality standards, warehouse operations)
- apply quality standards

When compared to 2020 adverts for operative vacancies rose by nearly a third; the largest absolute increases were for paper and wood machine operatives, plant/machine operatives and routine inspectors and testers; combined these occupations accounted for more than 60% of the total growth in the number of job vacancy adverts for this occupational group.

Elementary occupations

Elementary occupations accounted for 4% of job vacancy adverts in 2021. More than two fifths of all elementary job vacancy adverts were for catering related roles (e.g. bar/waiting staff and kitchen/catering assistants). Figure 9.17 shows the top ten occupations mentioned in online job adverts for elementary posts; combined, these occupations represented approximately 90% of all elementary online job vacancy adverts in 2021.

Figure 9.17 Most frequent occupations mentioned in online job vacancy adverts for sales occupations (%), 2021



Source: CEDEFOP

Skills: the top skills/competences mentioned in relation to elementary occupations included

- working in teams
- adapt to change
- planning and scheduling events and activities (adjust priorities, prioritise tasks)
- demonstrate enthusiasm
- cope with pressure

When compared to 2020, job vacancy adverts for elementary occupations rose by more than three quarters; the largest absolute increases were for bar staff, followed by kitchen/catering assistants and waiting staff; combined these occupations made up more than half of the total growth that occurred for elementary occupations.

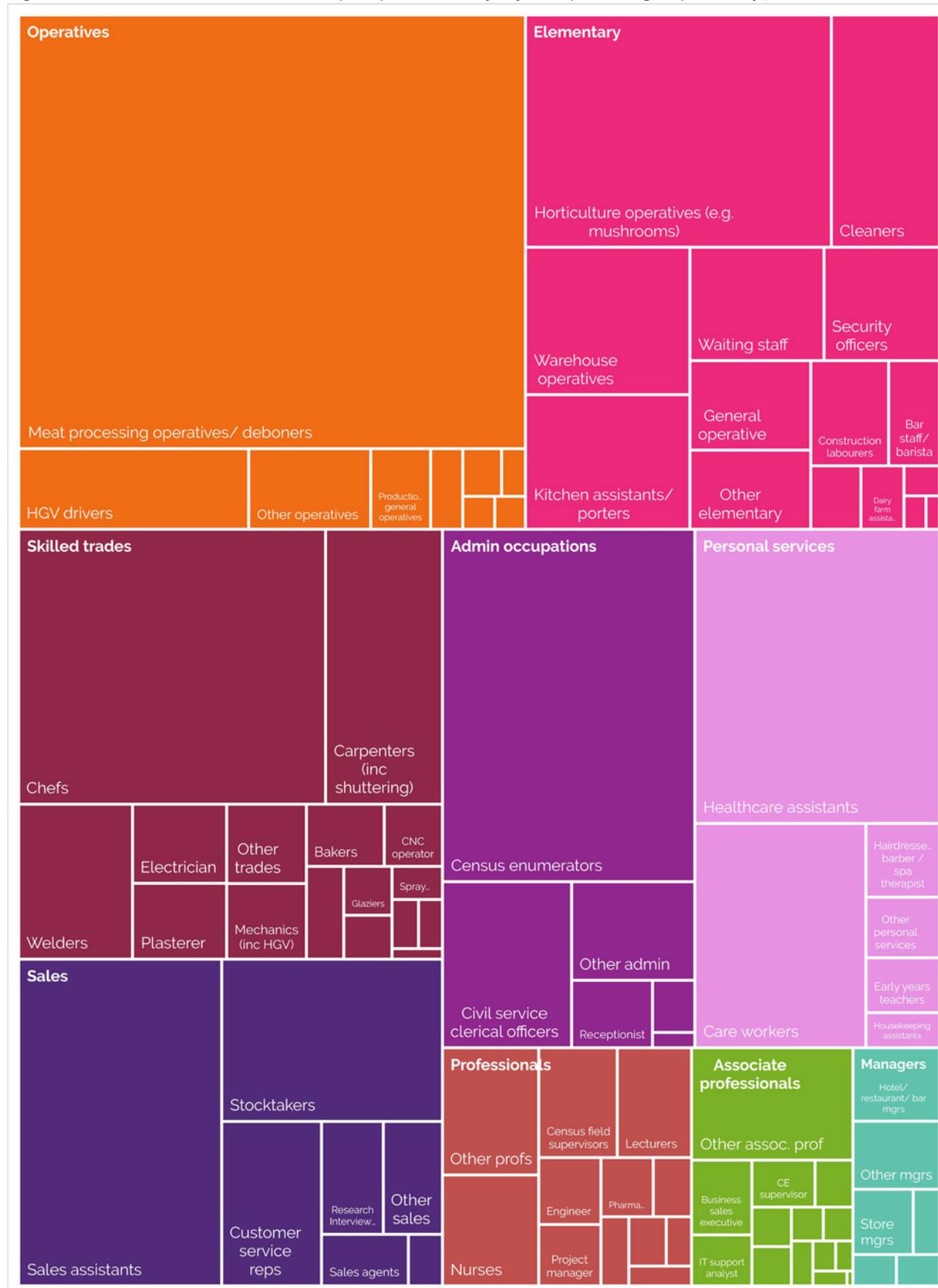
DSP JobsIreland.ie vacancy adverts

The SLMRU receive DSP JobsIreland.ie vacancy data but they are also a subset of the OVATE data examined above. The direct data feed contains additional detail in terms of job title that offers useful insights into the type or roles employers are recruiting through this portal. The vacancies detailed in Figure 9.18 relate to paid positions only from this dataset.

In 2021,

- **Managers** accounted for 2% of vacancies with job titles relating primarily to managers in hospitality and retail
- **Professionals** accounted for 5% of vacancies with job titles including nurses, lecturers, engineers, pharmacists, project managers, along with census field supervisors
- **Associate professional** vacancies (3% of total) included business sales executives, IT support analysts, Community Employment (CE) supervisors, marketing specialists, and bookkeepers/accounting technicians
- **Administrative** vacancies (4% of total) saw a considerable jump in the number of administrative vacancies advertised in 2021 due to the inclusion of 5,000 Census enumerators; civil services clerical officers also accounted for a considerable share, followed by receptionists, transport/logistics assistants and secretaries
- **Skilled trades** vacancies (15% of total) were primarily for chefs but also for carpenters (including shuttering), welders, electricians, plasterers, mechanics (including HGV), bakers, CNC operators, bricklayers, glaziers, plumbers, pipe fitters and painters (including spray)
- **Personal services** vacancies (11% of total) were mainly for healthcare assistants and care workers, with a smaller share for early years teachers along with hairdressers, barbers and spa therapists
- **Sales** roles accounted for 19% of vacancies; primarily related to roles such as sales assistants, stocktakers and customer service agents, with a smaller share relating to research interviewers and merchandisers
- **Operative** roles accounted for 22% of all vacancies advertised, with the majority relating to meat processing operatives; there was also vacancies for HGV drivers along with other drivers (e.g., van, delivery, forklift, bus, machine), scaffolders and production operatives
- **Elementary occupations** (18% of total) were primarily for agricultural roles (horticultural/dairy), but also for cleaners, warehouse operatives, hospitality roles (kitchen assistants, waiters, bar staff/baristas), security officers, construction labourers, car valeters and general operatives.

Figure 9.18 DSP Jobs Ireland vacancies (paid positions only) by occupational group and key job titles, 2021



Source: DSP Jobs Ireland

9.3 Recruitment Agency Survey (October 2021)

The SLMRU in SOLAS conducts a survey of recruitment agencies to gather their views on vacancies which in their experience are proving difficult-to-fill. Table 9.1 refers to the roles that were most frequently identified as difficult-to-fill when agencies were surveyed in October 2021.

Table 9.1 Summary of main job titles identified as difficult-to-fill, October 2021

Managers	– Production managers (MedTech/biopharma)
	– Project/site managers in construction
	– Transport managers, freight forward managers (mid management), procurement managers
	– Financial managers
Professionals	– Software developers: mobile, C++, cloud (AZURE/AWS), UX, JavaScript, Python, PHP, angular JS, .Net, full stack, front end, back end, Ruby on Rails, Scala, android, web
	– IT engineers (DevOps, test, security, design, site reliability, virtualization)
	– Other IT: data architects, big data analysts (e.g. Hadoop, Pig, Cassandra, SQL), data scientists, IT project managers, solutions architects
	– Engineering: quality control/quality assurance (including standards, compliance & regulatory affairs), electrical, EHS (environmental health & safety), automation (including RPA), validation, manufacturing, process, R&D, design, maintenance, precision, shift charge, field service, chemical, mechanical, electronic, robotics, transport
	– Scientists: analytical & process
	– Business & finance: financial/practice/revenue accountants (senior and contract roles), tax specialists, financial controllers
	– Quantity surveyors, site/civil engineers
Associate professionals	– Nurses (intensive care/theatre, staff, oncology, cardiac, cath lab, mental health, paediatrics, general), clinical nurse managers, medical consultant and registrars, medical practitioners (GPs)
	– Buyers/procurement analyst, supply chain analysts, customs co-ordinators
	– BIM coordinators, health & safety officers, construction planners
	– IT technicians: tech support (with language skills, especially German, Nordic and French)
	– Analysts (data, financial)
	– Other technicians: maintenance/quality technician
Administrative	– HR recruitment consultants (with specialist knowledge)
	– Accounts/financial/office administrative roles (temp), credit control administrators, fund accountants
Skilled trades	– Supply chain/logistics administrative roles, freight forwarders
	– Welders: TIG, ARC
	– Construction: steel erectors/fixers, curtain wallers, carpenters (niche – shuttering), electricians, fitters & glaziers, maintenance technicians, mechanics, plumbers
Personal services	– Chefs
	– Carers and healthcare assistants
Sales & customer service	– Customer service representatives, (insurance, banking)
Operatives and Elementary	– Drivers: artic, HGV (E+, C1 license), forklift drivers, reach, crane, site dump, teleporters operator
	– Operatives (supply chain, packaging, warehouse)
	– Waiting staff, porters, bar tenders
	– Construction: scaffolders, pipe layers, ground workers, banksman

Source: Recruitment Agency Survey, October 2021



Section 10

Occupational Employment Profiles

This section provides a statistical analysis of employment at occupational level. Employment profiles are provided for over 95 occupations.³⁵ 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 were associated with the same sector of employment or occupations with similar duties were grouped together. The occupational groups were 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) n.e.c.

For each of the occupations, an analysis was conducted using the following indicators (detailed in Appendix A):

- **Employment:** an annual average of employment figures over the four quarters in 2021
- **Employment growth:** the annualised rate of employment growth for the period 2016–2021
- **Females:** the percentage of females employed in an occupation (based on quarter 4 2021 data from the LFS)
- **Full-time:** the percentage of persons who work full-time in an occupation (based on quarter 4 2021 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 2021 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 2021 data from the LFS)
- **Third level qualifications:** the percentage of persons who have attained a third level qualification (based on quarter 4 2021 data from the LFS)
- **Employment permits:** issued to non-EEA nationals in 2021. This is an indicator of the demand for skills that could not be met from domestic or EEA sources. (Based on 2021 data from the Department of Enterprise, Trade and Employment)
- **Recruitment Agency Survey:** presents the results of the SLMRU (SOLAS) Recruitment Agency Survey conducted in October 2021. The occupations with mentions of difficult-to-fill vacancies reported by recruitment agencies are indicated by an 'X'.

³⁵ Appendix B details the list of occupations included in each category

In addition, the outlooks for each of the occupations were determined using the above data and a number of additional sources including

- The **Skills for Growth** data, where employers, working directly with Regional Skills Fora managers (DFHERIS) and/or employer engagement officers (DSP) throughout 2021, identified job vacancies which in their experience were proving difficult-to-fill
- Data on employers' skills needs gathered from Enterprise Ireland's **Spotlight on Skills** workshops
- The recent SOLAS/Emsi Burning Glass **Shifting Sands** report which analysed online job vacancy advertisements in Ireland and included an identification of the top growing occupations in terms of volume of job adverts³⁶
- **Income support payments:** the Pandemic Unemployment Payments (PUP) and the Employment Wage Subsidy Scheme (EWSS) ceased in May 2022 but were significant supports for some sectors of the economy throughout 2021
- **Recent job hires** data (from the LFS) refers to those who commenced employment in the previous three months and is examined in detail in Section 7.2; for the outlooks by occupation, a high volume of recent job hires often signals job churn, particularly when there is little evidence of employment growth
- **Vacancy data** from both OVATE and DSP Jobs Ireland (as detailed in Section 9)
- **Risk of automation:** consideration is given to the SLMRU report on the future of work and the occupations expected to be most at risk of automation³⁷
- **Supply of skills** was approximated using the expected output from the formal education and training system, bearing in mind that education/training provision is not always directly linked to a specific occupation and that for many occupations there are no mandatory qualification requirements
- Reference is also made to any relevant **sectoral and Government reports** which directly impact on skills.

From analysing these numerous data sources, an indication of the outlook for each of the occupations was derived and any shortage or potential shortage was 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. Where possible, a distinction is made between skill or labour shortages. 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. 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.

³⁶ <https://www.solas.ie/f/70398/x/376c4b5fb4/shifting-sands.pdf>

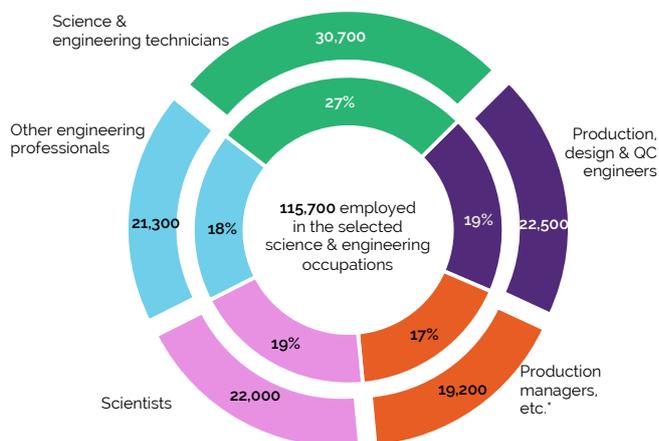
³⁷ https://www.solas.ie/f/70398/x/56f07c3f44/future-of-jobs-in-ireland_report.pdf

10.1 Science & Engineering Occupations

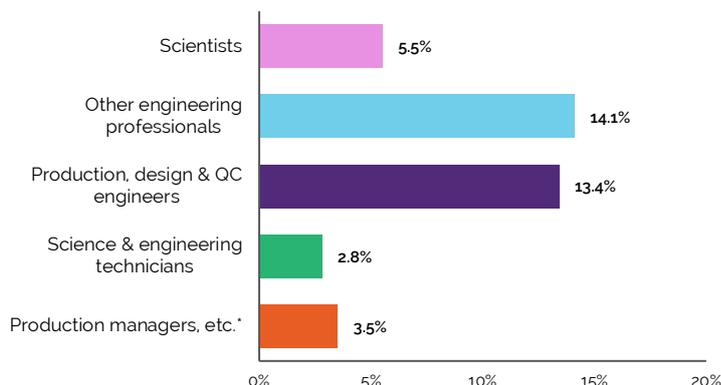
Overall employment: approximately 115,700 persons (67% male) were employed in the selected science and engineering occupations, representing 4.8% of the national workforce.

- **Sector:** 47% of overall employment was concentrated in industry, followed by 21% in professional service activities and 8% for ICT
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 33,000 (6.9% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for other engineering professionals (14.1%) during the period
- **Age:** the 25-54 age group accounted for the majority of those employed in these occupations, at 83%. The share of persons employed aged 55 years and over was 12%, below the national average of 19%
- **Education:** the share who had attained third level qualifications (86%) was significantly above the national average share (53%), while a further 11% had attained a higher secondary/FET qualification
- **Full-time/part-time:** 95% of those employed in science and engineering occupations were in full-time employment
- **Nationality:** the share of Irish national workers was 82%, slightly below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 33,000 (6.9% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below.

Overall Outlook for these Occupations

Employment grew strongly in this occupational group over the five-year period, particularly in the year since 2020 with an additional 16,000 persons employed. This has been driven primarily by growth in employment in high tech manufacturing. Although the volume of pharma exports slowed in 2021, they remain the largest goods exporting sector according to the Spring Economic Insights series, which also reported a surge in exports of semiconductors and medical devices in 2021³⁸. Provision from the third level education system for science and engineering graduates remains strong. However, the strong employment growth for these occupations and the demand for the skillsets associated with scientists and engineers (e.g. critical analysis, problem solving) across a range of other occupations (e.g. public administration professionals, teachers, among others), will ensure continued demand and job opportunities for these roles. Furthermore, the shift towards a low carbon economy is expected to result in a demand for additional skills amongst scientists (e.g. ecology, environmental, conservation), electrical engineers (e.g. renewable and high voltage) and technicians (e.g. solar/wind).

Future demand for these occupations is anticipated to be strong, with shortages likely to persist. The shortages are expected to be small in number and for some will relate to those with experience in niche areas.

Occupation	Economic summary
Scientists Shortage: Analytical, process, and medical scientists	<p>The employment growth rate over the five-year period was above average although employment remained relatively stable between 2020 and 2021. Employment permits issued in 2021 were primarily for medical, process, and analytical scientists and chemists. In June 2022, medical scientists were moved to the Critical Skills Employment Permit List due to issues with sourcing suitable candidates. Medical scientists were also identified in the Shifting Sands report as one of the top growing occupations in terms of advertised job vacancies; the top skills sought in job vacancy adverts included pathology, biochemistry, microbiology and quality assurance/control. Vacancies for analytical and process scientists were also identified as difficult to fill in the Recruitment Agency Survey. Both the Skills for Growth and Spotlight on Skills data pointed to issues in sourcing skills for food science and food manufacturing. Education provision for scientists continued to increase strongly with 5,300 graduates at NFQ levels 8-10 in 2020, an additional 500 graduates when compared to 2016.</p> <p>Demand for these skills in the life sciences is likely to continue to grow, with shortages occurring for roles that require a high level of experience and/or in niche areas.</p>
Production, design & QC engineers Shortage: Quality control/assurance, process, and design engineer	<p>Employment in this occupation has seen strong annual growth since 2018, resulting in a 13% annual average growth rate over the five-year period. Over 600 new employment permits were issued in 2021 in roles including quality, design, and process engineers. This occupation group had the highest number of mentions of vacancies that were difficult to fill in the Recruitment Agency Survey, especially for quality, compliance and process engineering roles. Mentions in the Skills for Growth data related to quality (in food, pharma and medical devices), process (across packaging, medical devices and electrical) and design (e.g. equipment manufacturing) engineers. The volume of advertised vacancies in the OVATE data increased in 2021 on the previous year and were mostly for production and process engineers. Almost 3,900 engineering awards at NFQ levels 8-10 were awarded in 2020, an increase of over 800 since 2016.</p> <p>Demand appears to be particularly strong for this occupation and with employment levels increasing, issues in attracting candidates with relevant experience are likely to persist.</p>

³⁸ <https://www.gov.ie/en/publication/daaa2-economic-insights-spring-2022/>

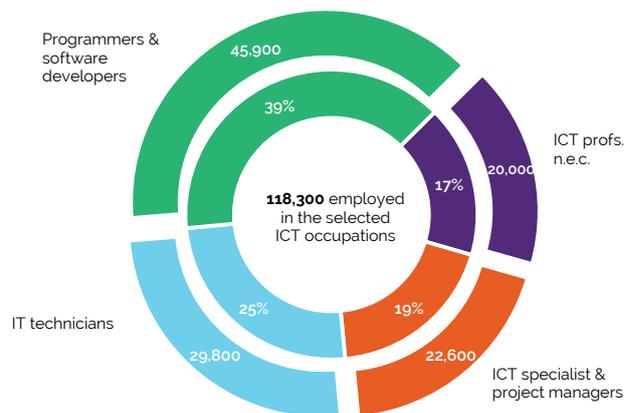
<p>Other engineering professionals (e.g. mechanical, electrical and electronic engineers)</p> <p>Shortage: Engineers (mechanical, electrical, automation, validation)</p>	<p>The strong employment growth for this occupation is partly due to changes to the Labour Force Survey methodology in 2017; however, there was also strong employment growth between 2020 and 2021. Employment permits issued in 2021 included automation, electrical, mechanical and validation engineers. There is evidence of difficulties in filling vacancies for this occupation from the Skills for Growth data and Recruitment Agency Survey; roles in electrical, validation, automation, mechanical, and environmental health & safety (EHS) engineers are in particular demand, especially for, although not confined to, those with skills and experience in specific industries (e.g. high voltage electricity, manufacturing engineering). Strong demand for these engineering roles is expected to persist particularly for those with industry-specific experience.</p>
<p>Science & engineering technicians</p> <p>Shortage: Maintenance/lab technicians</p>	<p>Employment growth over the five-year period was marginally above the national average although growth was strong in the year to 2021. The Recruitment Agency Survey identified vacancies for maintenance technicians in manufacturing with electrical/mechanical skills as difficult-to-fill; Skills for Growth data also highlighted issues with maintenance technicians (in food manufacturing) along with laboratory technicians (also in food), and technicians in bio-pharma and injection moulding. Advertised vacancies in the DSP and OVATE data referred to various technician roles including maintenance, manufacturing and lab. Demand for these high-skilled technicians is likely to persist, although new manufacturing engineering apprentices at level 6 and 7 for the medical devices sector may assist with alleviating some shortages.</p>
<p>Production managers in manufacturing</p>	<p>Employment growth was above the national average, with strong growth occurring between 2020 and 2021 for this occupation. Employment permits issued in 2021 mainly related to engineering directors. There was one mention of a difficult-to-fill vacancy in the Recruitment Agency Survey for a production manager. There was a large increase in the volume of advertised vacancies in the OVATE data, albeit from a relatively small base.</p> <p>Demand for these roles will be dependent on the strength of the manufacturing sector across all technology levels, although supply chain issues and rising inflation may temper demand for some manufacturing sub-sectors, particularly those outside the high-tech segment.</p>

10.2 ICT Occupations

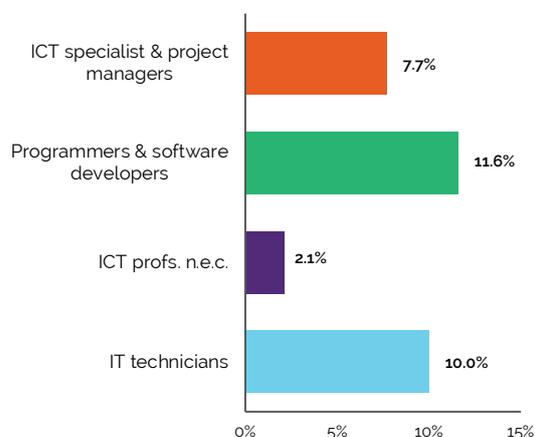
Overall employment: approximately 118,300 persons (76% male) were employed in the selected ICT occupations, representing 5.0% of the national workforce.

- **Sector:** 65% of overall employment was concentrated in the ICT sector, with a further 11% in financial activities and 10% employed in industry
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 39,700 (8.5% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for programmers & software developers (11.6%) during the period
- **Age:** the 25-54 year age group accounted for the majority of persons employed, at 84%. The share of workers aged 55 and over was 8%, well below the national average of 19%
- **Education:** the share who had attained third level qualifications (85%) was significantly above the national average share (53%), while a further 13% had attained a higher secondary/FET qualification
- **Full-time/part-time:** of those employed in ICT occupations, 96% were in full-time positions
- **Nationality:** the share of Irish national workers was 66%, well below that of the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 39,700 (8.5% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Overall Outlook for these Occupations

ICT occupations had both the highest annual average growth over the five-year period compared to all other occupational groups and the highest absolute growth since 2020. The growth in 2021 was driven primarily by those employed as programmers and software developers and IT technicians. This occupational group had the second highest share of new employment permits issued in 2021, after healthcare occupations, at almost 3,600. Supply from the education/training system continued to grow steadily with almost 8,000 graduates emerging from the third level system in 2020, primarily at NFAQ levels 8-10.

The COVID-19 pandemic does not appear to have negatively impacted employment for those in ICT occupations. The significant take-up of working from home amongst those in ICT occupations³⁹ may have alleviated some of the issues in sourcing suitably qualified staff for these roles through accessing skills from outside Ireland without the requirement to be located here. If employment continues to grow at the rate seen in recent years, however, significant shortages for those with the specific skills in demand may intensify.

Occupation	Economic summary
ICT specialist & project managers Shortage: IT project managers	<p>Over the five-year period, employment growth was above the national average for this occupational group, with relatively strong growth between 2020 and 2021. New employment permits issued in 2021 related to a variety of roles including program and project managers with one mention in the Recruitment Agency Survey of difficulties in filling vacancies for IT project managers. Although shortages continue to arise for this occupation, the volume is likely to be relatively small compared with the other IT professional roles.</p>
Programmers & software developers Shortage: Software developers/engineers	<p>Employment for programmers and developers has grown particularly strongly since 2019. Over 1,600 new employment permits were issued for software engineers and developers and there were frequent mentions in the Recruitment Agency Survey of difficult-to-fill vacancies (see Table 9.1 for details of skills). These roles were also frequently cited as difficult-to-fill by employers in the Skills for Growth and Spotlight on Skills data across a range of sectors (e.g. parcel distribution, E-commerce, fintech). There was a high volume of advertised vacancies in the OVATE data, with a 14% increase since 2020.</p> <p>The sustained employment growth, not only in the ICT sector, but across the economy, along with the rapid pace of change in this occupation, are likely to lead to a continued issue in sourcing suitably qualified and experienced candidates for these roles.</p>
ICT profs. n.e.c. Shortage: IT analysts/engineers	<p>The below average annual employment growth over the five-year period for this occupation is partly related to changes in the LFS in 2017; however, employment declined slightly in 2021, the only occupation in this group to experience a fall since 2020. Despite this, a large volume of employment permits were issued in 2021 for IT business analysts, data analysts, IT engineers (data, network, systems, security, support, cloud) and IT architects (solutions, technical). Difficulty in filling vacancies for developers in web, test, security, mobile develop, front-end were mentioned in the Recruitment Agency Survey. The volume of advertised vacancies in the OVATE data grew by 19% since 2020, for vacancies including IT business analysts. While issues are occurring in recruiting for certain roles (e.g. IT business analysts and IT engineers in security/testing), the low employment growth since 2020 may signal that the high volume of vacancies relates to both job opportunities and some level of job churn.</p>
IT technicians Shortage: IT technicians with foreign languages	<p>The above average employment growth over the five-year period relates primarily to strong growth between 2020 and 2021, particularly driven by growth for IT operations technicians (e.g. database/network administrator) rather than those engaged in user support. Employment permits issued for this occupation in 2021 were for roles including community operations analysts, technical support engineers and customer support. Both the Recruitment Agency Survey and data from Skills for Growth point to issues in sourcing candidates in IT support (with and without language skills) and for those providing support in manufacturing and fintech (with German skills). Data engineers were cited in the Shifting Sands report as roles with a growing volume of vacancies with skills in SQL, Python, extraction transformation and loading (ETL), and data engineering. Furthermore, vacancies advertised for these occupations in the OVATE data increased by 17% since 2020. While shortage issues currently relate to roles with foreign language skills, if employment continues to increase at levels seen in 2021, shortages may occur across a broader range of roles.</p>

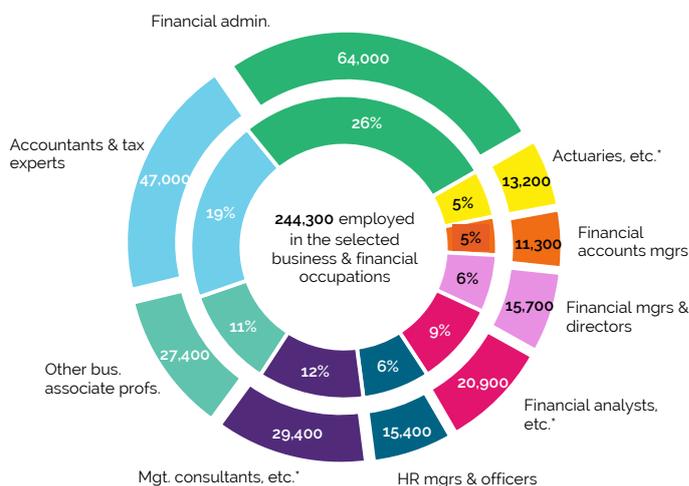
³⁹ <https://www.solas.ie/f/70398/x/0313655eeb/summer-skills-bulletin-2021.pdf>

10.3 Business & Financial Occupations

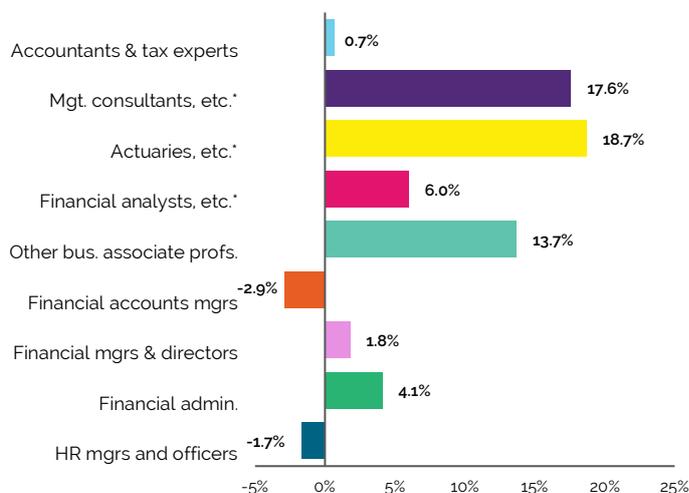
Overall employment: approximately 244,300 persons (57% female) were employed in the selected business and financial occupations, representing 10.2% of the national workforce.

- **Sector:** these occupations were employed across all sectors, with 36% of overall employment concentrated in the financial sector and a further 21% in professional services and 10% in industry
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 54,100 (5.1% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for actuaries, economists, statisticians & other business professionals (18.7%) during the period
- **Age:** the 25-54 age group accounted for the majority of persons employed, at 78%. The share aged 55 and over was 16%, below the national average of 19%
- **Education:** the share with third level qualifications (81%) was significantly above the national average share (53%), while a further 16% had attained a higher secondary/FET qualification
- **Full-time/part-time:** of those employed in business and financial occupations, 88% were in full-time employment
- **Nationality:** the share of Irish national workers was 86%, slightly above the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 54,100 (5.1% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data
*See detailed occupation description in table below

Overall Outlook for these Occupations

Employment has grown strongly in this occupational group, particularly since 2019. Just over a third employed in these occupations were in the financial sector with the remainder spread across a range of sectors. In 2021, there were 1,400 new employment permits issued for various roles within this group.

A recent report on the financial services in Ireland indicates that demand is being driven by advances in digital technology (particularly distributed ledger technology/blockchain, AI etc).⁴⁰ Skills gaps in financial services include data analytics, digital transformation, risk and compliance, leadership, and GDPR/cybersecurity. Enterprise Ireland's Spotlight on Skills data highlights a demand for financial skills, including relationship management, critical thinking, negotiation, commercial acumen, business analysis, financial forecasting, and communication.

According to the BPFi Future of Retail Banking in Ireland 2021 report, approximately 22,000 persons were employed in retail banking.⁴¹ The imminent closure of Ulster Bank and KBC, along with restructuring within the remaining banks, will impact on future demand for skills in these areas. Many roles within this group have been identified as being at risk of automation, particularly financial administrative roles.

Occupation	Economic summary
Accountants & tax experts	Despite below average annual employment growth over the five-year period for this occupation, employment has grown strongly since 2019. Almost a half of accountants were employed in the professional activities sector (in the legal and accounting sub-sector), with a fifth in the financial sector and a further 13% in industry. When compared to quarter 4 2019, the growth in employment to quarter 4 2021 primarily relates to those employed in professional activities. With such a large occupation, demand is likely to be strong for this role, with replacement demand alone. The volume of advertised vacancies for accountants in the OVATE data increased by 9% compared to 2020. The Recruitment Agency Survey identified issues particularly in relation to senior contract accountancy roles, with financial and tax accountants also mentioned. The Skills for Growth data points to issues with accountants in manufacturing. Supply of graduates at NFQ levels 8-10 has been increasing although awards through professional accountancy bodies saw some declines in recent years. Demand for accounting skills is occurring across a variety of occupations such as technical sales, although these would not relate to qualified accountants. The skills profile of accountants is likely to be impacted by broader trends, such as climate change (carbon accounting/climate related financial disclosures skills and know-how), Brexit (changing regulations), among others.
Mgt. consultants, business analysts & project managers	The five-year annual average growth for this occupation was strong; this is in part related to changes in the LFS methodology in 2017, although employment levels have also been increasing annually since then. Over 700 new employment permits were issued in 2021 for roles including risk/business analysts and project managers. The ICT sector accounted for over a third of permits issued, although the numbers employed in this occupation in the ICT sector are small. The number of advertised vacancies in the OVATE data increased by 39%, albeit from a small base. While no shortages are evident, the skills in demand as highlighted by the Spotlight on Skills data in the introduction above (e.g. relationship management, critical thinking etc) would be of relevance for these occupations.
Actuaries, economists & statisticians; other business profs.	The strong employment growth for this occupation can be attributed in large part to changes in the LFS methodology in 2017, although small increases have been observed annually in recent years. Approximately two-fifths of employment was in the public administration and defence sector. Almost half of the employment permits issued in 2021 were for actuaries in the financial sector with the remainder in ICT and other sectors for various analyst roles. The Recruitment Agency Survey cited vacancies for data scientists as difficult-to-fill. There was an increase in the number of advertised vacancies in the OVATE data, although the overall share remained small. While demand exists for these roles, the numbers involved are likely to be small.

⁴⁰ IFS Skillnet - Financial Services in Ireland - Skills of the Future Report <https://www.ibec.ie/-/media/documents/connect-and-learn/industries/financial-services-leasing-and-professional-services/financial-services-ireland/2022/financial-services-in-ireland---skills-of-the-future.pdf>

⁴¹ <https://bpfi.ie/wp-content/uploads/2021/09/BPFI-Future-of-Retail-Banking-in-Ireland-Report.pdf>

Financial analysts and insurance underwriters	Employment growth was above the national average over the five-year period for this occupation, although employment remained unchanged between 2020 and 2021. New employment permits issued in 2021 related primarily to financial analysts. There was one mention in the Recruitment Agency Survey of difficulty in filling vacancies for financial analysts. The volume of advertised vacancies in the OVATE data increased by 30% which may signal future growth in employment for this occupation. The Shifting Sands report identified insurance underwriters as an occupation which has seen a large relative fall in the number of vacancies advertised since the onset of COVID-19.
Financial accounts managers	Employment growth over the five-year period was negative for this occupation, although employment has seen annual growth since 2019. The data provides no evidence of issues in relation to this occupation.
Other business associate profs. (e.g. accounting technicians, estimators, valuers)	The five-year annual average growth rate for this occupation was significantly above average, with strong growth observed between 2020 and 2021. Although this category includes a wide range of job titles, data analysts were the one to emerge as most in demand. Difficulty in filling vacancies for data analysts was highlighted in both the Recruitment Agency Survey and the Skills for Growth data. Employment permits were also issued for data analysts in 2021, primarily in the ICT and financial activities sector. Although it was not possible to identify data analysts from the OVATE data, the volume of advertised vacancies for the occupational category that includes data analysts grew by 33% in 2021. While demand for data analysts is evident, the data does not allow us to track employment levels rendering it difficult to determine the extent of the demand or if shortages are occurring. Data analytics skills are increasingly becoming components of the required skills set for some existing occupations which may temper the demand for specific data analysts in future years.
Financial managers & directors	Employment growth for this occupation was below the national average over the five-year period, although employment has grown since 2019. A decline in the numbers employed as financial institution managers/directors appears to be masking growth in employment for other financial managers/directors, which may relate to the closure of bank branches in recent years. A small number of employment permits were issued for this occupation and difficult-to-fill vacancies in the Recruitment Agency Survey related to financial managers in the financial sector. The volume of advertised vacancies in the OVATE data increased albeit from a low base.
Financial admin.	The five-year annual average employment growth was above the national average, with this occupation accounting for over a quarter of employment for business and financial occupations in 2021. Recent job hires in 2021 exceeded employment growth indicating that job churn is a factor for these roles. Difficult-to-fill vacancies noted in the Recruitment Agency Survey related to accounts and credit control assistants and fund accountants primarily for temporary posts. There was a relatively low volume of advertised vacancies for these jobs in the OVATE data considering the size of the occupation, although increases occurred in 2021. The impact of banking restructuring, particularly retail banking, will impact future demand and skills mix requirements for these roles, although replacement demand alone will create a high number of job opportunities.
HR managers and officers	Employment numbers for this occupation have fluctuated, resulting in a negative growth rate; employment declined between 2020 and 2021. New employment permits issued in 2021 related to recruiters, talent acquisition specialists, and HR managers, with half for the ICT sector. There was one mention of difficult-to-fill vacancies in the Recruitment Agency Survey for a HR recruiter with sector specific knowledge. Data from Spotlight on Skills points to a significant demand for skills in this area particularly for talent development and retention. The volume of advertised vacancies in the OVATE data grew very strongly. Despite the falling employment numbers, demand persists for HR skills, although the skills mix is evolving, with a greater focus on areas such as staff retention, learning and development, particularly as employers compete for talent in a tight labour market.

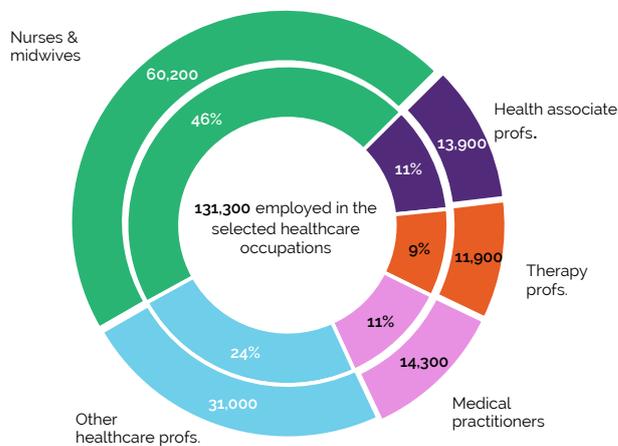
10.4 Healthcare* Occupations

Overall employment: approximately 131,300 persons (78% female) were employed in the selected healthcare occupations, representing 5.5% of the national workforce.

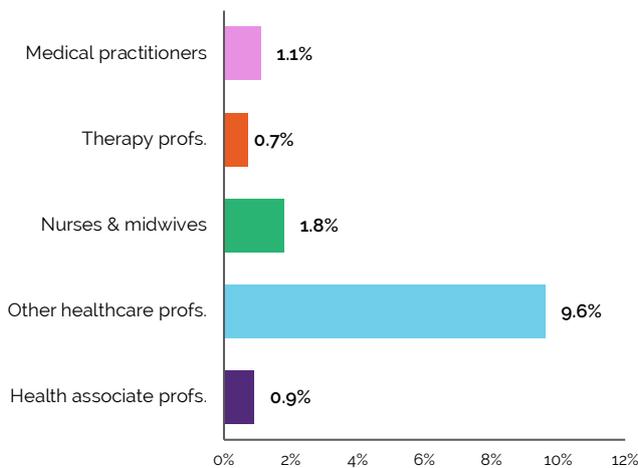
- **Sector:** 87% of overall employment was concentrated in the health sector
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 18,800 (3.1% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for other healthcare professionals (9.6%) during the period
- **Age:** the 25-54 year age group accounted for the majority of persons employed, at 78%. The share of workers aged 55 years was 16%, and below that of the national average of 19%
- **Education:** those who had attained third level qualifications (94%) was significantly above the national average share (53%)
- **Full-time/part-time:** approximately 78% of healthcare workers were in full-time employment
- **Nationality:** the share of Irish workers 81% was slightly below the national average of 83%.

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

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 18,800 (3.1% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Overall Outlook for these Occupations

Those employed in healthcare occupations have been particularly impacted by the COVID-19 pandemic in terms of both increased demands for services and exposure to infection. Overall employment levels fell in 2020 but had almost recovered to pre-COVID-19 levels by 2021, with growth particularly evident in the latter quarters of 2021. The employment permit system continues to be a main source of skills for these roles with almost 5,000 new permits in 2021, accounting for over a third of all new permits issued. In June 2022, a number of healthcare occupations including pharmacists, cardiac physiologists, occupational therapists, physiotherapists, podiatrists/chiropractors, psychologist and speech and language therapists, were added to the Critical Skills Occupations List in response to issues in sourcing suitable candidates for these roles.

Demand for healthcare services continues to be high as the system deals with the backlog as a result of the pandemic and is likely to continue to be strong for future years given Ireland's ageing demographics. A recent ESRI report⁴² estimated that in order to meet recruitment demands in acute hospitals alone arising from a number of factors (including the implementation of Sláintecare), the healthcare workforce (e.g. doctors, nurses, healthcare assistants, various therapists) will need to grow by between 1.7% and 2.1% or by between 12,400 and 15,500 whole time equivalent (WTE) posts on average annually for the forecast period to 2035. The HSE intend to recruit between 5,500 and 10,000 WTE posts in 2022 but are cognisant of the recruitment challenges in areas such as mental health services, acute specialist services and disability services. Future expansion, for the most part, will be dependent on the availability of government funding.

Occupation	Economic summary
<p>Medical practitioners</p> <p>Shortage: Medical practitioners</p>	<p>Despite evident demand for medical practitioners, with almost 2,000 employment permits issued, employment declined in 2021. Issues with recruitment and retention appear to be significant across a range of roles including registrars and senior house officers (in general and emergency medicine) and to a lesser extent, medical specialists.</p>
<p>Therapy profs.</p>	<p>Although employment growth for therapy professionals was above the five-year national average, employment numbers dipped in 2021; this relates to a fall in the first two quarters of 2021 with recovery seen in quarter 4. The restrictions in place in early 2021 may have had an impact for these roles, particularly those in private practice. A number of therapists (occupational, physiotherapists and speech and language) have recently been added to the Critical Skills Employment Permit List due to issues with recruitment for these roles in the health sector. While there is no evidence of shortages in the data, these skills will continue to be in demand particularly due to Ireland's ageing population, as highlighted in the ESRI report.</p>
<p>Nurses & midwives</p> <p>Shortage: Nurses</p>	<p>Although employment growth for nurses was below the national average, the high number of employment permits in 2021 (over 2,800) in particular indicates that issues with recruitment persist in this occupation. There was a notable increase in the share of non-Irish nurses in quarter 4 2021 compared to quarter 4 2020, increasing from 13% to 25%. Vacancies for nurses appeared frequently through the DSP, and the Skills for Growth data indicated issues in sourcing candidates for roles in nursing homes. As it is such a large occupation, with 60,000 persons employed, replacement demand alone will result in continued job openings.</p>
<p>Other healthcare profs. (e.g. pharmacists, psychologists, dentists, radiographers, vets & health services managers)</p>	<p>Employment growth for these occupations far exceeded the national average, with growth particularly evident in 2021. Employment permits issued in 2021 primarily related to radiographers, with a small number issued for physiologists and dentists. Although dieticians were recently added to the eligibility list, no permits for this occupation have been issued to date. In addition, pharmacists and psychologists have been subsequently added to the Critical Skills Employment Permit List due to recruitment challenges faced by the health service. The Recruitment Agency Survey noted issues in attracting pharmacists to retail positions due to competition with the pharmaceutical sector. Employment in this group is spread across a range of occupations as the numbers employed in the individual occupations are, for the most part, too small to report. As such, it is difficult to determine the full extent of demand for these roles.</p>
<p>Health associate profs. (e.g. pharma/medical technicians, dental nurses, paramedics, dispensing optician)</p>	<p>Employment growth for this group was below the national average. Although overall levels remained relatively unchanged between 2020 and 2021, they mask the recovery seen in the second half of 2021. Employment numbers in these occupations were too small to identify any trends at an individual level. Data sources such as vacancies and employment permits do not point to any issues in relation to supply and demand for health associate professional occupations.</p>

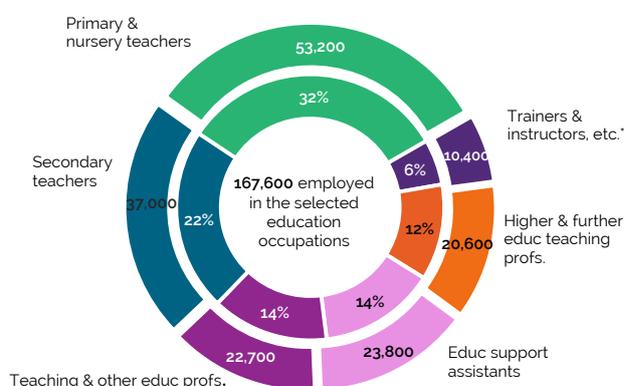
⁴² <https://www.esri.ie/system/files/publications/RS147.pdf>

10.5 Education Occupations

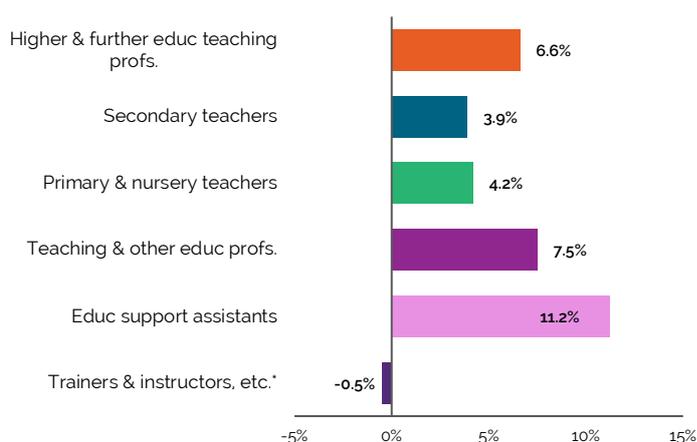
Overall employment: approximately 167,600 persons (74% female) were employed in the selected education occupations, representing 7% of the national workforce.

- **Sector:** 94% of overall employment was concentrated in the education sector
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 38,800 (5.4% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for educational support assistants (11.2%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 76%. The share of workers aged 55 years and over, was 18%, slightly below the national average of 19%
- **Education:** the share who had attained third level qualifications (86%) was significantly above the national average share (53%), while 11% had attained a higher secondary/FET qualification
- **Full-time/part-time:** of those employed in education occupations, 82% were in full-time employment
- **Nationality:** the share of Irish nationals was 93%, above the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 38,800 (5.4% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data
*See detailed occupation description in table below

Overall Outlook for these Occupations

Overall employment levels grew strongly over the five-year period with an average annual growth of approximately 7,600 persons. Future demand for these roles will be very much driven by demographic factors and the availability of government funding. Enrolments in primary schools are projected to decline annually to 2033 which is likely to have an impact on staffing requirements⁴³. In post-primary schools, enrolments are forecast to continue to grow to 2024, declining thereafter. At third level, an additional 1,000 places in a number of specific subject areas have been announced for 2022⁴⁴.

Furthermore, the war in Ukraine has had an additional impact on enrolment figures in the education and training system, as the official enrolment projections pre-date the war. At the beginning of July, almost 7,300 Ukrainian pupils were enrolled in schools across Ireland; of these, 5,000 were in primary schools and a further 2,200 were enrolled in post-primary schools⁴⁵. This will create additional demand for teachers across all levels of the education system.

Occupation	Economic summary
Higher & further education teaching profs.	Employment in this occupation grew strongly over the five-year period although this may be in part due to classification issues as a result of the revision of the Labour Force Survey in 2017. After a number of years of relatively static employment levels, employment grew by 2,000 in the year to 2021. Employment permits issued in 2021 relate to lecturers in the higher education sector and there was a relatively large volume of vacancies for lecturers through the DSP. Almost a quarter of higher and further education teaching professionals were aged 55 years and over which may result in job opportunities as a result of replacement demand in future years. Demand is also likely to grow in the short-term due to demographic factors, although this will be dependent on government funding.
Secondary teachers	Employment growth was above average for secondary teachers although numbers remained relatively unchanged between 2020 and 2021. Enrolments in post-primary education are expected to decline from 2025, although issues persist for certain subject combinations. A previous report by the Department of Education noted particular challenges in recruiting teachers of STEM, modern Irish, modern foreign languages and home economics subjects with further updates expected later in the year. ⁴⁶
Primary & nursery teachers	Employment growth over the last five years was above the national average, with an increase of 4,000 in 2021. New hires outnumbered any employment growth for primary teachers in 2021, most likely related to the recruitment of substitute teachers. Demand for primary school teachers is expected to fall in line with the decline in primary school enrolments, assuming no change in the pupil teacher ratio. However, the arrival of Ukrainian students and new policy developments in areas such as foreign language instruction may partially offset some of this decline. ⁴⁷
Teaching & other educational profs.	This occupation (which includes special needs teachers, nursery managers/owners and school principals) saw strong employment growth in the five-year period, although employment numbers in 2021 were below pre-COVID-19 levels. The high share of persons employed aged 55 years and over may see increased replacement demand in future years.
Educational support assistants	The five-year employment growth for this occupation was strong although numbers have remained relatively stable in recent years. The growth relates to demographics of the total school-going age cohort and government allocations, both of which increased over the period. However, this is unlikely to be sustained in the medium term in the absence of a change in government allocations, as primary school enrolments are declining with secondary school enrolments expected to follow from 2025 onwards. Nonetheless, with a particularly high share of persons aged 55 years and older (38%), job openings are likely in the coming years as a result of replacement demand.
Trainers & instructors, career guidance	Although employment growth was negative over the five-year period, employment has been growing in recent years. It should be noted that career guidance professionals working in the second level system are most likely captured in the secondary teaching occupations.

⁴³ Department of Education, Projections of full-time enrolments, Primary and Second Level, 2021-2040. November 2021

⁴⁴ <https://www.gov.ie/en/press-release/3dbcb-minister-harris-announces-more-than-1000-extra-college-places-and-development-of-new-apprenticeship-programmes/>

⁴⁵ <https://www.gov.ie/en/press-release/0b645-department-of-education-confirms-7285-ukrainian-pupils-currently-enrolled-in-irish-schools/>

⁴⁶ Department of Education, Developing a Teacher Demand & Supply Model for Ireland 2021-2038. May 2021

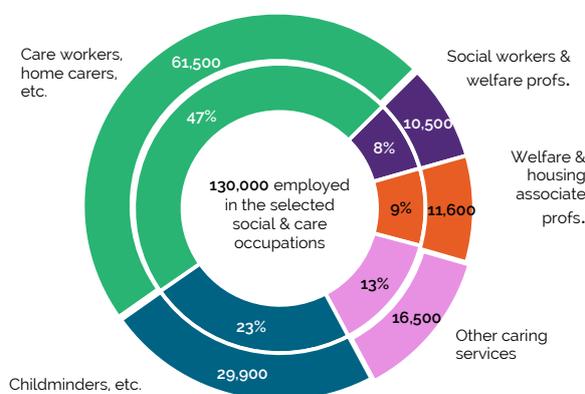
⁴⁷ <https://www.education.ie/en/Press-Events/Press-Releases/2021-press-releases/PR21-05-31.html>

10.6 Social & Care Occupations

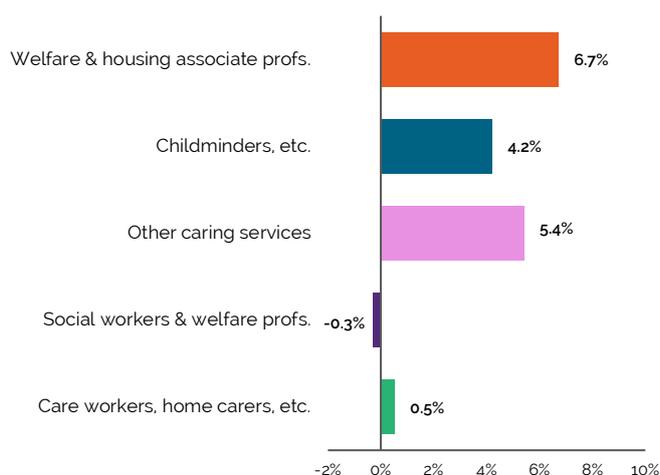
Overall employment: approximately 130,000 persons (79% female) were employed in the selected social & care occupations, representing 5.4% of the national workforce.

- **Sector:** 86% of overall employment was concentrated in the health sector
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 14,000 (on a par with that of 2.3% nationally). The strongest rate of employment growth was observed for welfare and housing associates professionals (6.7%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 66%. The share of workers aged 55 years and over was 24%, above the national average of 19%
- **Education:** the share of persons employed in the selected social & care occupations who had attained higher secondary/FET qualifications was 53%, above the national average share of 35%, while 40% held third level qualifications, below the national average share of 53%
- **Full-time/part-time:** of those employed in social and care occupations, 66% were in full-time employment
- **Nationality:** the share of Irish nationals was 86%, slightly above the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 14,000 (on a par with 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Overall Outlook for these Occupations

The majority of those employed in social & care occupations work in the health sector providing care typically for the very young and the older age cohorts. In 2021, some health sector workers continued to avail of income support payments. The number of Pandemic Unemployment Payments (PUP) recipients peaked in January (over 11,000 persons) but fell to 1,800 persons by the end of December. In contrast, the numbers on the Employment Wage Subsidy Scheme (EWSS) remained high throughout 2021, averaging c19,000 persons. Although there is no occupational breakdown on income support payment recipients, it is likely that many of the occupations included here had some share in receipt of payments. The impact on employment when the schemes ended in 2022, notably in relation to EWSS, is yet to be realised in the data.

Ireland's changing demographics (i.e. the fall in the number of 0-4-year-olds and the rising number of those aged 65 years and older) will be primary drivers of employment for these occupations in the coming years.

Occupation	Economic summary
Welfare & housing associate profs.	The strong employment growth for this occupation is primarily related to a relatively low base in the first year of the five-year period with employment remaining relatively stable in more recent years. There were relatively few vacancies for this occupation with many relating to community employment supervisors and other community workers.
Childminders, etc.	The five-year average employment growth for this occupation was above the national average although there was little growth since 2020. Recent job hires outnumbered any employment growth, indicating that turnover continued to be an issue for these roles. Females account for the majority of persons employed in these roles and 43% were employed part-time. The fall in the 0-4 years population along with an increased pattern of remote working are likely to impact on the future demand for childcare providers. A recent Government report on workforce planning for childcare workers includes measures to raise qualification levels for childcare workers and to enhance the attractiveness of the job so as to improve retention for these roles. ⁴⁸
Social workers & welfare profs.	Employment for these roles had a negative five-year average growth with employment declining in the year since 2020. Although social workers were recently added to the list of eligible occupations for employment permits, only three new permits were issued in 2021. Despite this, the ESRI ⁴⁹ projects a 1.9%-2.5% annual increase in the WTE social workers required in Ireland out to 2035, due mostly to Ireland's ageing population. In addition, despite falling employment, this occupation was one of the fastest growing in terms of online job vacancies adverts, as identified in the Shifting Sands report, with skills such as child protection, mental health and family support being in particular demand. As such, although issues may be persisting with attracting suitably qualified social workers to particular roles, the data currently does not point to a shortage.
Care workers, home carers, etc. Potential labour shortage: Care workers	Employment growth was below the national average for this occupation over the five-year period although strong growth occurred between 2020 and 2021. However, recent job hires far outweighed any employment growth in 2021, indicating that job churn continues to be a factor for this occupation. There has been a notable increase in the number of vacancies advertised for care workers, particularly those notified through the DSP. The recent Shifting Sands report identified care workers and home carers as one of the top growing occupations in terms of advertised job vacancies; the top skills sought in job vacancy adverts included senior care, meal preparation, and dementia knowledge. The share aged 55 years and older is growing and at 27% was higher than the national average. This could have implications for future demand for this role as will the ageing population. If employment continues to grow as it did in 2021, labour shortages for this occupation may emerge, particularly in relation to roles in nursing homes or certain geographical areas.
Other caring services Shortage: Healthcare assistants	Employment growth over the five-year period was strong although overall employment in 2021 declined. Healthcare assistants were recently removed from the employment permits ineligible list with 41 new permits issued in 2021. The Skills for Growth data indicates issues in attracting healthcare workers for nursing homes in particular. The Shifting Sands report identified this occupation as being amongst the top growing in terms of advertised job vacancies; skills in particular demand in these adverts included patient care and midwifery, as well as experience in mental health and dementia. Demand for healthcare assistants across the hospital and nursing home sectors are expected to continue given the ageing demographics in Ireland.

⁴⁸ Department of Children, Equality, Disability, Integration and Youth, Nurturing Skills: The Workforce Plan for Early Learning and Care (ELC) and School-Age Childcare (SAC), 2022-2028

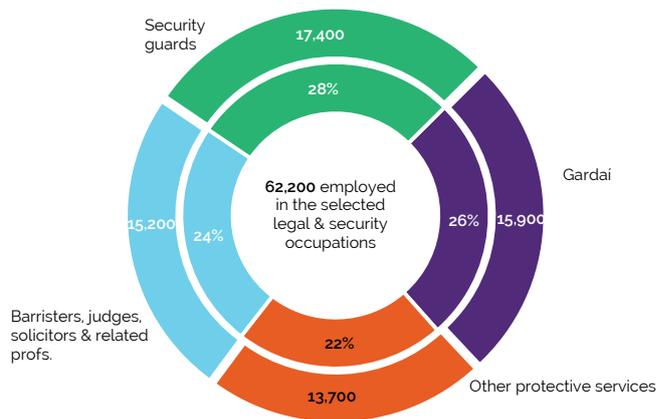
⁴⁹ <https://www.esri.ie/system/files/publications/RS147.pdf>

10.7 Legal & Security Occupations

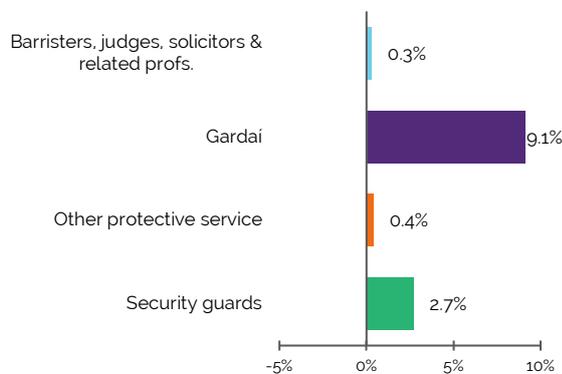
Overall employment: approximately 62,200 persons (70% male) were employed in the selected legal and security occupations, representing 2.6% of the national workforce.

- **Sector:** 46% of overall employment was concentrated in the public administration and defence (PAD) sector, while administrative services and professional activities combined accounted for a further 39%
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 8,500 (3.0% on average annually compared to 2.3% nationally); the strongest employment growth rate was observed for gardai (9.1%) over this period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 73%. The share aged 55 years and over was on a par with the national average of 19%
- **Education:** the share of persons employed in the selected legal & security occupations who had attained higher secondary/FET qualifications was 28%, below the national average share of 35%. At 64%, the share with third level qualifications was above the national average share (53%)
- **Full-time/part-time:** of those employed in legal and security occupations, 90% were in full-time employment
- **Nationality:** the share of Irish nationals was 88%, slightly above the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rate (%) 2016-2021



Between 2016 and 2021, overall employment increased by 8,500 (3.0% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Overall Outlook for these Occupations

Employment growth for the five-year period was slightly above the national average for this occupational group. Future growth for these occupations will depend on a resumption of economic activities that were impacted by COVID-19, especially in the areas of hospitality and entertainment (for security guards in particular), and on Government policies for those reliant on public sector funding.

Occupation	Economic summary
Barristers, judges, solicitors & related profs.	Employment growth for this occupation was below the five-year national annual average, with levels declining in 2021 when compared to 2020. The majority are employed in the professional, scientific and technical activities sector.
Gardaí	Employment growth was strong for this occupation, with growth particularly evident in the last two years, although Department of Justice statistics ⁵⁰ show that the growth was somewhat smaller. Responding to perceived needs to increase staffing levels to meet the demands of a growing population and changing nature of policing (e.g. cybersecurity, fraud, etc) ⁵¹ will depend on Government funding.
Other protective service occupations (e.g. army personnel, fire/prison service officers)	Employment growth was below average with little change in recent years. Those working in this occupation are primarily employed within the public sector and, as such, any employment growth will be dependent on future Government funding.
Security guards	Security guard employment was slightly above the national average; employment dipped in 2020 as a direct result of COVID-19 restrictions but recovered in 2021. Security guards are mainly employed in the administrative and support services sector; a significant share of persons in this sector availed of income support payments in 2021, with over 11,000 in receipt of EWSS at the end of 2021. Although income support data is not available at occupational level, the temporary closure of offices, retail, nightclubs, bars and concert venues is likely to have resulted in a drop in demand for security-related personnel. The share of non-Irish nationals employed as security guards, at 33%, returned to pre-COVID levels, while the share aged 55 years and older has increased over the same period. Replacement demand for these older workers will likely create job opportunities in the years to come with rehiring for those jobs lost over recent years likely to continue in 2022 and beyond.

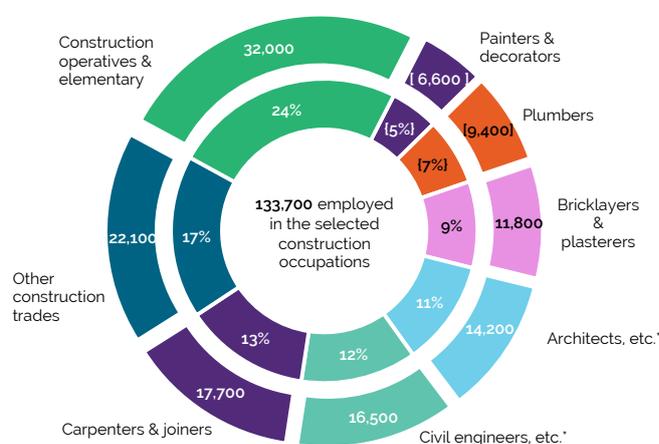
⁵⁰https://www.justice.ie/en/JELR/Pages/An_Garda_Siochana_facts_and_figures
⁵¹ <https://www.rte.ie/news/ireland/2022/0815/1315835-policing-ireland/>

10.8 Construction Occupations

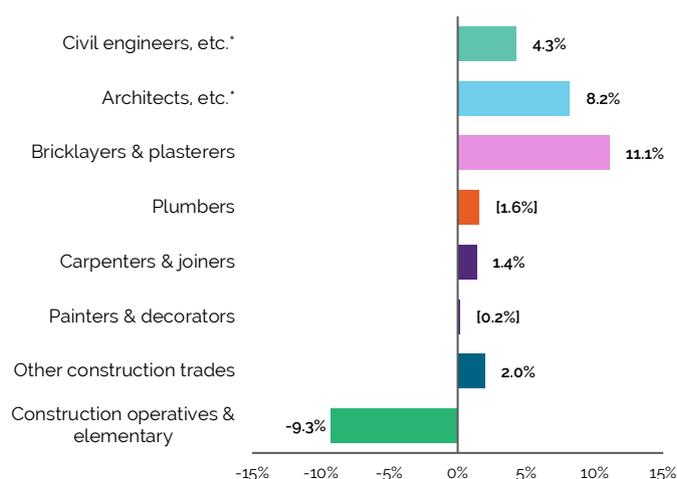
Overall employment: approximately 133,700 persons (95% male) were employed in the selected construction occupations, representing 5.6% of the national workforce.

- **Sector:** 73% of overall employment was concentrated in the construction sector; a further 18% were employed in industry and professional activities combined
- **Employment growth (5-year):** between 2016 and 2021, overall employment decreased by 3,600 (-0.5% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for bricklayers and plasterers (11.1%) during the period
- **Age:** the 25-54 age group accounted for the majority of persons employed, at 70%. The share aged 55 and over (21%) was slightly above the national average of 19%
- **Education:** over half of those employed in the selected construction occupations had attained higher secondary/FET qualifications, above the national average share of 35%. The share who had attained third level qualifications (28%) was well below the national average (53%)
- **Full-time/part-time:** full-time employment accounted for 91% of employment
- **Nationality:** the share of Irish nationals was 82%, slightly below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment declined by 3,600 (-0.5% on average annually compared to a 2.3% increase nationally).

Source: SLMRU (SOLAS) analysis of CSO data

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

*See detailed occupation description in table below.

Construction related technicians are included in overall total but numbers are too small to report.

Overall Outlook for these Occupations

Although overall employment grew in 2021, it remained below pre-COVID-19 levels. The EWSS accounted for 13% of total earnings in the construction sector in the first quarter of 2021, although this had fallen to 4% by the last quarter. At the end of 2021, over 14,000 persons in the construction sector were availing of income support payments (a combination of both PUP and EWSS). Government targets in relation to housing⁵² and climate action⁵³ will continue to drive demand for construction-related skills across a variety of occupations (operatives, skilled trades/supervisors, engineers) with future skills and labour shortages potentially emerging. The transition to a zero carbon economy has significant implications for construction-related skills, from green buildings to renewable energy generation; while a small number of relatively new occupations (e.g. wind turbine technician, retrofit coordinator) are likely to grow in size, the most significant impact will be changes in the skills mix of a range of existing occupations (e.g. civil engineers, plumbers, roofers, glaziers, etc) as well as an increased demand for some.

The increased construction activity observed since the last financial crisis has resulted in growing numbers of apprentices in construction related trades. In 2021, there were over 2,000 new apprentice registrations for construction-related trades (excluding electrical), an increase on the 1,445 in 2019 and the almost 300 observed in 2011. Further increases in apprenticeship registration is likely to be required to meet the additional demands arising from Government ambitions. Issues with the supply and increased cost of construction-related materials could dampen demand in the short-term, although Government targets are likely to see continued demand for construction skills in the short-medium term.

Occupation	Economic summary
Civil engineers & construction project managers Potential shortage: Civil engineers & construction project managers	<p>Although employment growth was above the five-year national average growth, employment in 2021 remained below pre-COVID-19 levels. Over 200 employment permits were issued for this occupation in 2021, primarily for civil engineers but also construction project managers. The Recruitment Agency Survey and the Skills for Growth data identified issues in sourcing civil/site engineers (particularly with modelling skills in BIM and Revit) and construction project managers.</p> <p>With demand for skills for construction projects likely to grow in future years, shortages in these occupations are likely particularly in the area of new technology/green processes. The number of persons graduating from building/civil engineering level 7 or level 8 degree programmes rose to nearly 1,000 in 2020, a 28% increase on 2016 and the highest in seven years.</p>
Architects & town planners, architectural technologists, & surveyors Shortage: Quantity surveyors	<p>Employment growth was strong for this occupation, particularly between 2020 and 2021. Both the Recruitment Agency Survey and the Skills for Growth data pointed to issues in sourcing quantity surveyors. Employment permits related primarily to architects and architectural technologists but also to quantity surveyors, albeit to a lesser extent. The number of vacancies advertised for these roles were relatively small in number. Demand for quantity surveyors is expected to continue, particularly for experienced professionals; supply is unlikely to be sufficient in the short-term, resulting in shortages. A shortage of architects and architectural technologists may also emerge although this is not evident in the data as yet.</p>
Bricklayers & plasterers	<p>The high five-year employment growth in this occupation appears to relate to changes that occurred on the introduction of the new Labour Force Survey in 2017; employment levels have remained relatively unchanged in recent years. Employment permits issued in 2021 primarily related to plasterers. A relatively high volume of vacancies were notified through the DSP for both bricklayers and plasterers and the Skills for Growth data indicated demand in some regions in Ireland. Demand for these occupations is expected to grow due to cosmetic and repair work associated with retrofit activities. This will help to offset the reduced demand for these roles onsite due to the introduction of new technologies and offsite construction methods. Although no shortages appear to exist at present, increased demand for skills may see future shortages emerging.</p>

⁵² <https://www.gov.ie/en/publication/ef5ec-housing-for-all-a-new-housing-plan-for-ireland/#for-low-income-households>

⁵³ <https://www.gov.ie/en/publication/6223e-climate-action-plan-2021/>

<p>Plumbers</p> <p>Potential shortage: Plumbers</p>	<p>Employment growth was below the national average for this occupation and by 2021, employment had not returned to pre-COVID-19 levels. Future demand for plumbers will be driven in part by Ireland's targets for a low carbon economy, for both retrofit and new build activities. This is likely to require re/up-skilling for those already trained as plumbers in order to carry out the work linked to alternative renewable energy sources (e.g. the installation of heat pumps). The number of apprenticeship awards are significantly down which will impact on supply of skills in the short-term, although apprenticeship registration numbers were up in 2021. This lack of qualifying apprentices may lead to potential shortages for this occupation if construction activity increases significantly in the short-term.</p>
<p>Carpenters & joiners</p> <p>Potential shortage: Carpenters</p>	<p>Employment numbers for this occupation have yet to return to pre-COVID-19 levels with average growth below the national average. Employment permits issued in 2021 related mostly to shuttering carpenters as did the majority of the DSP vacancies advertised for this occupation. Mentions of issues sourcing carpenters occurred in both the Recruitment Agency Survey and the Skills for Growth data. The increase in apprenticeship registrations in recent years has yet to be reflected in those qualifying, which could lead to potential shortages for this occupation, particularly in the short-term. The demand for carpenters will likely be accentuated by the need for these roles to fulfil ambitions set out in the Programme for Government and the Climate Action Plan 2021.⁵⁴</p>
<p>Painters & decorators</p>	<p>Employment for painters and decorators declined annually since 2019. Although increasing, new apprenticeship registration numbers remained small for this occupation (43 in 2021). Painters/decorators are likely to be in future demand due to the cosmetic work resulting from retrofit activities.</p>
<p>Other construction trades</p>	<p>Overall employment numbers were unchanged between 2020 and 2021 and remained below pre-COVID-19 levels. The Recruitment Agency Survey identified issues with sourcing curtain wallers, steel fixers/erectors and fitters/glaziers. The older age profile for this occupation (with 38% aged 55 years and older) may also create additional replacement demand in future years. Any increase in commercial construction activity will also see demand for these occupations, while renewable energy targets may create additional demand for roofers in relation to the installation of solar panels, although this may require re/up-skilling for some. Although there are signs of demand for these roles, albeit potentially small in number, no shortages are evident to date.</p>
<p>Construction operatives & elementary</p>	<p>The negative employment growth over the five-year period for this occupation relates to changes that occurred on the introduction of the new Labour Force Survey in 2017; employment levels have remained relatively unchanged in recent years. The relatively high volume of recent job hires in 2021, with no increase in employment numbers, indicates that turnover was occurring. Difficulty in filling vacancies, reported in the Recruitment Agency Survey, refers to scaffolders, ground workers and pipe layers. Future demand for these roles will depend on the level of construction activity in the coming years.</p>

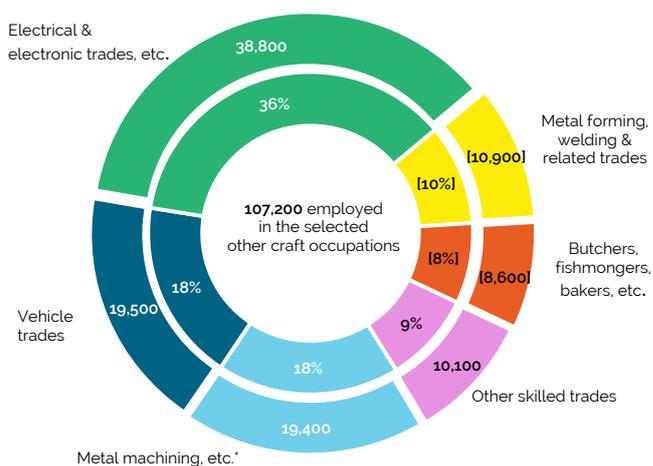
⁵⁴ <https://www.gov.ie/en/publication/7e05d-programme-for-government-our-shared-future/>

10.9 Other Craft Occupations n.e.c.

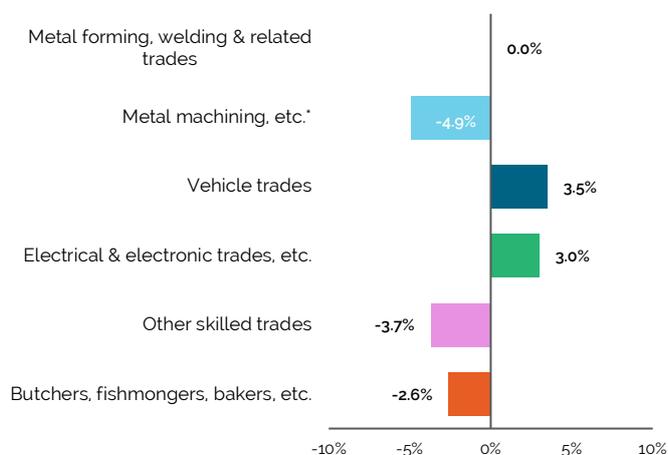
Overall employment: approximately 107,200 persons (91% male) were employed in the selected other craft occupations n.e.c., representing 4.5% of the national workforce.

- **Sector:** 36% of overall employment was concentrated in the industry sector, followed by the wholesale/retail, construction and ICT sectors, which combined accounted for 47%
- **Employment growth (5-year):** between 2016 and 2021, overall employment decreased by 500 (-0.1% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for vehicle trades (3.5%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 71%. The share aged 55 years and over (17%) was slightly below the national average of 19%
- **Education:** the share of persons employed in the selected other craft occupations who had attained higher secondary/FET qualifications was 58%, well above the national average share of 35%. Those who had attained third level qualifications (29%) was significantly below the national average (53%)
- **Full-time/part-time:** full-time employment accounted for 92% of employment
- **Nationality:** the share of Irish nationals was 80%, slightly below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment declined marginally by 500 (-0.1% on average annually compared to a 2.3% increase nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below

Overall Outlook for these Occupations

The five-year annual average employment growth was negative for this occupational group with employment falling between 2020 and 2021. Employment in these occupations was across industry, construction and wholesale/retail, with each of these sectors impacted by COVID-19 at varying levels. A significant share of people from these sectors were in receipt of income support payments (both EWSS and PUP) in 2021, with the impact of the withdrawal of these payments in 2022 on employment numbers is unknown as yet.

Occupation	Economic summary
<p>Metal forming, welding & related trades</p> <p>Potential shortage: Welders</p>	<p>Employment growth was negative for this occupational group over the five-year period with employment declining in the previous two years. Despite this, demand for welders continues to be evident with issues in sourcing suitably qualified candidates highlighted in both the Recruitment Agency Survey and by employers in the Skills for Growth data, in particular for those with MIG/TIG⁵⁵ and ARC skills. Employment permits for this occupation also related to welders while vacancies advertised through DSP were primarily for welders but also fabricators and pipe fitters. The further education and training system, such as through Skills to Advance, is working towards addressing the supply of qualified welders. It appears from some of the data sources that recruitment issues may relate more to fabricators with welding skills rather than welders themselves. As such, the full extent of the shortages for this occupation are unknown.</p>
<p>Metal machining, fitting & instrument making trades</p> <p>Shortage: CNC programmers</p>	<p>The decline in employment in this occupation is thought to relate to changes that occurred on the introduction of the new Labour Force Survey in 2017; although employment levels fell in 2021, they remained above pre-COVID-19 levels. Computer numerical control (CNC) programmers and operators occurred frequently in the vacancies advertised through the DSP and were the main employment permits issued for this occupational group. CNC machinists and programmers were also mentioned in the Skills for Growth data; in addition, issues were highlighted in relation to toolmakers, although overall employment for toolmakers is small and the apprenticeship registrations have been stable. As such, only shortages for CNC programmers have been identified.</p>
<p>Vehicle trades</p>	<p>Despite employment growth being above the national average, employment in this occupation was below 2019 levels. Vacancies advertised through the DSP primarily related to HGV mechanics although car mechanic roles also arose. The decline in new diesel and petrol car registrations along with the increased uptake of electric and hybrid vehicles is likely to result in an increased demand for electric vehicle (EV) mechanics and a gradual decline in demand for traditional motor mechanic skills. While new apprenticeship registration numbers were higher in 2021 than at any time in the previous ten years, the shift towards EVs will require reskilling, as automotive technology will involve substantial electrical skills.</p>
<p>Electrical & electronic trades, etc.</p> <p>Potential shortage: Electricians</p>	<p>Employment growth over the five-year period was marginally above the national average, despite a decline between 2020 and 2021. There was a significant share of recent job hires for this occupation in 2021 without any employment increase, indicating that a level of job churn was occurring. Persons engaged in this occupation were employed across a number of sectors including construction, ICT and industry. Electricians were identified as difficult to fill in the Recruitment Agency Survey and by employers in the Skills for Growth data, particularly in relation to new technology, green skills and housing (e.g. high voltage and renewables), while the number of vacancies advertised through both OVATE and the DSP increased in 2021. The number of new apprenticeship registrations for electricians has been increasing with an additional 800 registrations in 2021 when compared to 2019. Although supply of electricians for the construction sector appears to be sufficient at present, increasing demand in the energy sector may see shortages emerging.</p>
<p>Other skilled trades (e.g. printers, furniture makers, and textile trades)</p>	<p>Over the five-year period, this group of occupations had a negative growth rate, with little change in employment in recent years. Most employment was based in industry. Vacancies occurred for spray painters (including aircraft), cabinet makers and upholsterers. The wide range of jobs in this occupational group, the relatively small employment size, combined with little sign of employment growth, means that the outlook is difficult to determine.</p>

⁵⁵ MIG=Metal Inert Gas; TIG=Tungsten Inert Gas

Butchers,
fishmongers,
bakers etc.

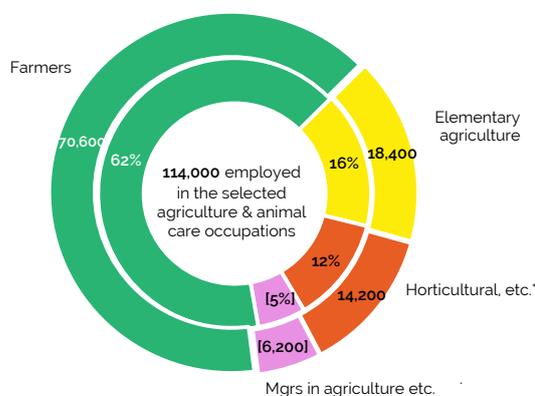
Employment levels have been declining in this occupation in recent years, with 4,000 fewer in 2021 when compared with 2018. In 2021, the share of non-Irish nationals remained higher than the national average, although the numbers involved are small. Only a small number of employment permits were issued, most likely due to the quota being reached. New quotas issued in 2021 will likely see an increase in permit numbers again. A high volume of vacancies was advertised through the DSP for meat de-boners, with a smaller share relating to bakers (in retail). The future demand for butchers and meat processing activities is likely to be impacted by Brexit and climate targets with the attractiveness of the job potentially causing issues in sourcing suitable candidates.

10.10 Agriculture & Animal Care Occupations

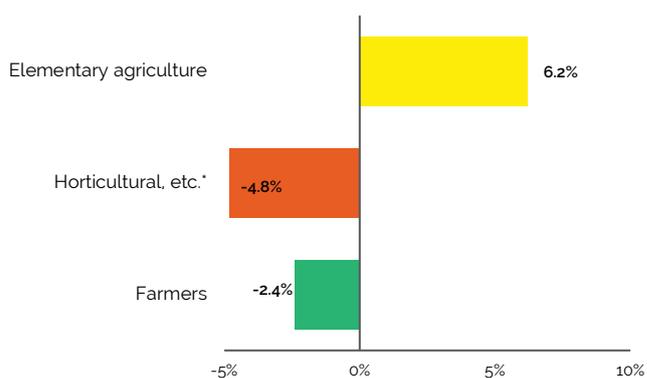
Overall employment: approximately 114,000 persons (87% male) were employed in the selected agriculture and animal care occupations, representing 4.8% of the national workforce.

- **Sector:** 86% of overall employment was concentrated in the agriculture sector
- **Employment growth (5-year):** between 2016 and 2021, overall employment decreased by 3,200 (or by -0.6% on average annually)
- **Age:** the 25-54-year age group accounted for 41% of persons employed, with 49% of those employed aged 55 years and over, well above the national average of 19%
- **Education:** these occupations had the highest share of persons employed with a lower secondary education or less, at 40% compared to 10% nationally; those who attained a higher secondary/FET qualification (40%) was above the national average share of 35%
- **Full-time/part-time:** 72% of agriculture & animal care workers were in full-time employment
- **Nationality:** the share of Irish nationals was 97%, above the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment declined by 3,200 (-0.6% on average annually compared to a 2.3% increase nationally).

Source: SLMRU (SOLAS) analysis of CSO data

*See detailed occupation description in table below.

**The number of animal carers & pest controllers and managers in agriculture etc. were too small in the period 2016-2021 to calculate growth rate; the numbers employed as animal carers & pest controllers in 2021 too small to report.

Overall Outlook for these Occupations

Employment numbers for agriculture and animal care occupations were lower in 2021 compared to 2016, despite an increase in the most recent year since 2020; this increase was driven primarily by a recent rise in the number of farmers. Brexit, Government targets in relation to climate action, and disincentives to engage in low paid work are likely to impact on employment numbers for these occupations in the coming years.

Occupation	Economic summary
Managers in horticulture, agriculture and fishing	Numbers employed in this occupation are too small to allow for any analysis. Employment permits issued in 2021 related to farm managers (including pig and dairy).
Farmers	Farmers had a negative employment growth over the five-year period, although employment grew in 2021. Over half (58%) of farmers were aged 55 years or older which will likely impact future employment numbers in this occupation.
Horticultural, agricultural & fishing trades n.e.c. (e.g. gardeners)	Employment in this occupation declined over the five-year period, with levels falling annually since 2019. Over a third were aged 55 years or older, almost double the national average of 19%. Those employed in building and landscape services were likely to have seen their employment impacted by COVID-19 restrictions during 2021.
Elementary agriculture	Employment growth for elementary agriculture workers was well above the national average, with employment growing annually over the five-year period. Over a half of those employed in these occupations were working part-time. There were very few employment permits issued in 2021 due to set quotas being filled; the introduction of new quotas has already seen an uptake in the number of permits being issued in 2022 particularly for horticultural workers. There was a large number of vacancies advertised through the DSP for horticultural operatives and harvesters for the mushroom industry. Although there is no evidence of shortages, recruitment issues are arising due to the apparent attractiveness of the job. This occupation has been identified as being at high risk of automation, although this may depend on businesses having the resources to invest in new technology. Issues have also been identified with recruiting trained forestry workers, although the numbers involved are very small ⁵⁶ .
Animal carers & pest controllers	Numbers employed in this occupation are too small to allow for any analysis.

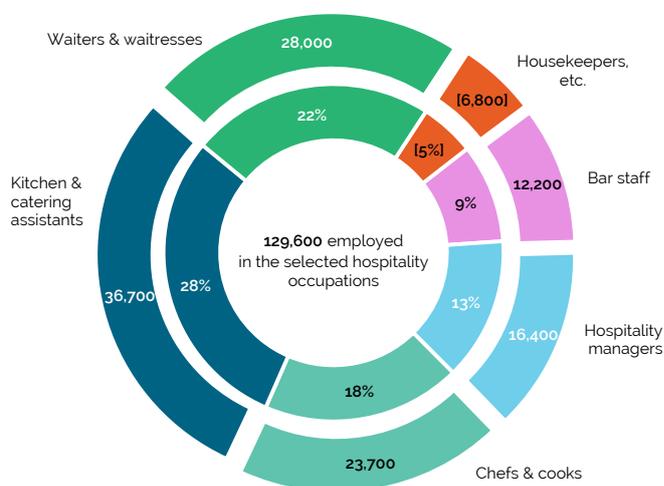
⁵⁶ Partnership for Skills (June 2022) report. Available at <https://regionalskills.us14.list-manage.com/track/click?u=5022a479ede2060ea00e2b0ee&id=236e45ec9f&e=9ac4cage00>

10.11 Hospitality Occupations

Overall employment: approximately 129,600 persons (61% female) were employed in the selected hospitality occupations, representing 5.4% of the national workforce.

- **Sector:** 86% of overall employment was concentrated in the accommodation and food sector
- **Employment growth (5-year):** between 2016 and 2021, overall employment decreased by 22,400 (or by -3.1% on average annually)
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 50%. The share of workers under 25 years was 39%, significantly above the national average of 12%
- **Education:** the share of persons employed in the selected hospitality occupations who had attained higher secondary/FET qualifications was 54%, well above the national average share of 35%. Those who had attained third level qualifications (27%), was significantly below the national average share (53%)
- **Full-time/part-time:** almost half of those employed in the selected hospitality occupations were in full-time employment, the lowest share of all the occupational groups
- **Nationality:** the share of Irish nationals was 73%, below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment declined by 22,400 (-3.1% on average annually compared to a 2.3% increase nationally).

Source: SLMRU (SOLAS) analysis of CSO data

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

The number of catering and bar managers employed was too small to report

Overall Outlook for these Occupations

Employment in 2021 for hospitality occupations remained below pre-COVID-19 levels although the significant levels of rehiring for the accommodation and food sector, particularly for part-time roles, was evident in the employment data in the latter half of the year. A high share of those in the accommodation and food sector (where the majority in these occupations were employed) were in receipt of income support payments (both EWSS and PUP) as discussed in earlier chapters; at the end of December 2021, there were approximately 9,000 persons from this sector in receipt of PUP and a further 99,000 in receipt of EWSS payments. The impact on employment levels with the withdrawal of these income support payments in 2022 have yet to be realised in the data. A study by the DSP showed that of those who exited PUP from the accommodation and food sector, approximately 68% returned to the same sector, either with the same or a new employer, with the remainder moving to a new sector such as wholesale and retail⁵⁷.

A recent report by Fáilte Ireland indicates that the sector has yet to return to full capacity and although domestic demand has increased, demand from overseas visitors continued to be below pre-COVID-19 levels⁵⁸. The report also highlighted that many businesses were reporting difficulties in recruiting across a range of occupations with increased pay and more flexible working patterns being offered to entice new entrants and those returning to the sector. The rising business costs and the potential fall in disposable income due to increasing inflation will likely impact on any further recovery of the sector and demand for these skills.

Occupation	Economic summary
Hospitality managers	Employment in this occupation has declined annually since 2018, although a pick-up in employment levels occurred in the second half of 2021. The fall in employment in 2021 appears to relate to hotel managers with increases for restaurant/catering managers (although still below pre-COVID-19 levels); this is in line with the sectoral employment figures in Section 3 where the accommodation sub-sector accounted for the largest share of the decline. This occupation had higher shares than the national average of non-Irish workers; the age profile was also older than average, with 27% aged 55 years and older. A strong growth in advertised vacancies in the OVATE data was observed, albeit from a low base. Vacancies advertised through the DSP were across a range of managerial roles including restaurant, catering, food and beverage and hotel. This occupation is eligible for employment permits although none were issued in 2021. Despite strong employment in the latter half of 2021, the longer-term demand for this occupation is difficult to determine at present given the current climate.
Chefs & cooks Shortage: Chefs	The number of chefs in employment has been declining since 2018, with almost 11,000 fewer chefs in 2021 than in 2018. However, an increase in employment was seen in the latter half of 2021 with a large volume of vacancies occurring in both the DSP and OVATE data. Although the share of non-Irish has declined, at 39% in quarter 4 2021, it was more than twice the national average. Over 500 employment permits were issued for chefs in 2021. In the Failte Ireland survey, chefs were the job most frequently listed as difficult to recruit for and issues were also identified in the Recruitment Agency Survey. The difficulty in recruiting chefs is having knock-on effects for businesses looking to operate at full capacity. Again, the longer-term demand for chefs is difficult to determine at present but there is strong evidence that skills shortages currently exist.
Catering & bar managers	While numbers were too small for a detailed analysis of employment for this occupation, advertised job vacancies for restaurant and food service supervisors were among the fastest growing, as identified in the Shifting Sands report; the top skills advertised for these roles included customer service, budgeting, and cost control.
Kitchen & catering assistants	Employment numbers increased for this occupation, although 2021 numbers remained below pre-COVID-19 levels. The high volume of recent job hires far exceeded any employment growth however, indicating that job churn was a significant issue for this occupation. In quarter 4 2021, almost two-thirds were in part-time employment and almost a half were aged 15-24 years. Kitchen/catering assistants also had a high share of non-Irish employed at 30%, far above the national average of 17%. Both the Skills for Growth data and the Recruitment Agency Survey

⁵⁷ Department of Social Protection, Trends in Post-PUP Employment: Examining the employment transitions of those closing their Pandemic Unemployment Payment claims, April 2022

⁵⁸ https://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/tourism-barometer-may-2022.pdf?ext=.pdf

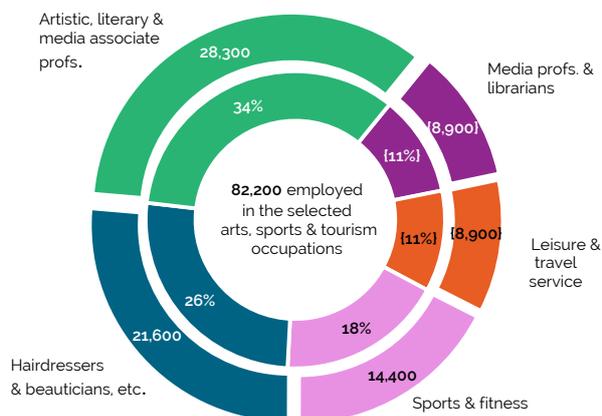
	highlighted issues with the recruitment of kitchen assistants.
Waiters & waitresses	The five-year annual average growth for these occupations was negative. Despite a large volume of rehiring in the latter half of 2021, employment numbers remained far below those seen pre-COVID-19. Recent job hires occurred in large volumes for these occupations, with hires in 2021 for waiters/waitress exceeding overall employment numbers for this occupation, indicating significant job churn. Approximately three quarters of those employed were in part-time roles and over two thirds were aged 15-24 years. Although issues with attracting candidates to the roles are evident, no shortages have been identified.
Bar staff	
Housekeepers & caretakers, etc.	Employment numbers in this occupation have been declining since 2019; this decrease is a reflection in part of the overall fall in employment in the accommodation sub-sector. The numbers in employment in 2021 are too small for further analysis.

10.12 Arts, Sports & Tourism Occupations

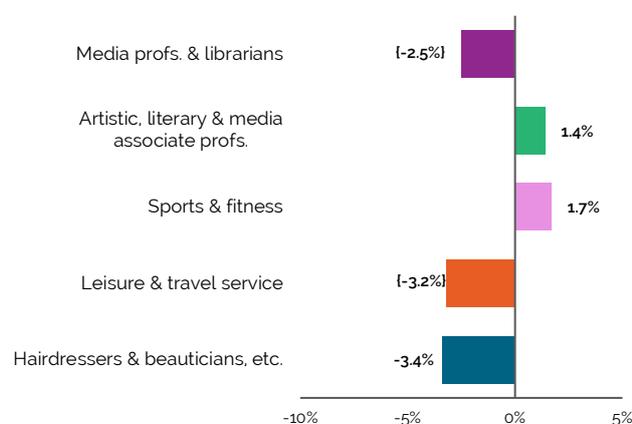
Overall employment: approximately 82,200 persons (57% female) were employed in the selected arts, sports and tourism occupations, representing 3.4% of the national workforce.

- **Sector:** 53% of overall employment was concentrated in the arts, entertainment and other services sector, with the ICT accounting for a further 15%
- **Employment growth (5-year):** between 2016 and 2021, overall employment decreased by 3,900 (-0.9% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for sports and fitness occupations (1.7%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 72%. The share of workers aged 55 years and over was 15%, below the national average of 19%
- **Education:** the share of persons employed in the selected arts, sports and tourism occupations who had attained higher secondary/FET qualifications was 34%, almost in line with the national average share of 35%. Those who had attained third level qualifications (56%) was slightly above the national average share (53%)
- **Full-time/part-time:** 69% of those employed were in full-time roles
- **Nationality:** the share of Irish nationals was 82%, slightly below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment declined by 3,900 (-0.9% on average annually compared to a 2.3% increase nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Overall Outlook for these Occupations

Employment in this occupational group has yet to see a full recovery since the onset of the COVID-19 pandemic. The EWSS accounted for an average of a fifth of total earnings for the arts, entertainment and other services sector in 2021 where over half of persons in these occupations were employed. The impact of the cessation of this scheme (in May 2022) is yet to be observed in terms of employment levels. A continued increase in inflation is likely to have a knock-on effect for consumer demand which will particularly impact those in service-related roles.

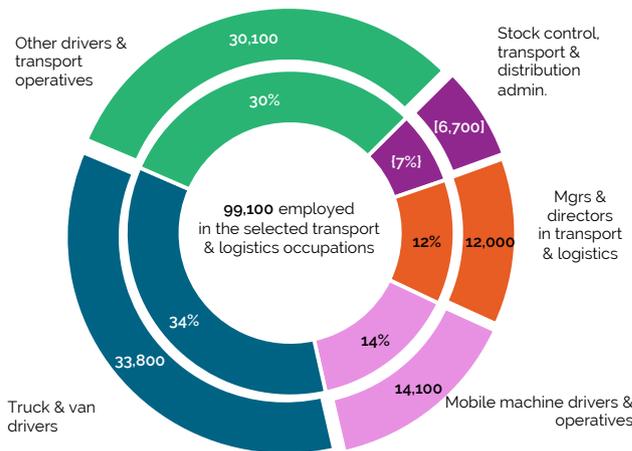
Occupation	Economic summary
Media profs. & librarians	Employment numbers in this occupation had a negative growth rate and were too small in 2021 to allow for any meaningful analysis.
Artistic, literary & media associate profs.	Employment growth was below the national average for this occupation over the five-year period. Employment was spread across a number of sectors including professional activities, IT, and the arts and entertainment sector, with most of the occupations included in this group too small to report. Vacancies arose for a number of roles including graphic designers and various artistic roles (e.g. film/TV, animators) while new employment permits issued for this occupation were mainly for film/TV and animation/visual effects (VFX) roles. No issues with sourcing suitably qualified candidates for these roles have been identified.
Sports & fitness occupations	The five-year average employment growth for this occupation was below the national average with little change in employment levels over the period. Recent job hires exceeded any employment growth in 2021, most likely related to rehiring activity with the re-opening of leisure and sports facilities resulting from the easing of COVID-19 restrictions. Part-time roles accounted for a higher share than the national average (39% compared to 22% nationally). Employment permits issued for this group related to professional sports players.
Leisure & travel service occupations	The slight decline in the five-year growth rate for this occupation masks a particularly strong fall in employment that occurred in each of the two years since 2019. These occupations were significantly impacted by COVID-19, particularly air travel assistants and those directly employed in the travel and leisure industry. Employment recovery will depend on a number of factors such as national and international travel, energy costs, and consumer demand and preferences given the climate change agenda and cost of living pressures.
Hairdressers & beauticians, etc.	<p>This occupation saw a negative average employment growth with declines occurring annually since 2019, although there were signs of increased employment in the latter half of 2021. Vacancies for beauty therapists appeared in both the OVATE and DSP data, which may be due to the re-opening of hotel spas and beauty salons with the easing of restrictions. Almost two-fifths of all employment was in part-time roles, well exceeding the national average.</p> <p>Future demand for hairdressers and beauticians is likely to be linked to consumer behaviour, given the increasing cost of living.</p>

10.13 Transport & Logistics Occupations

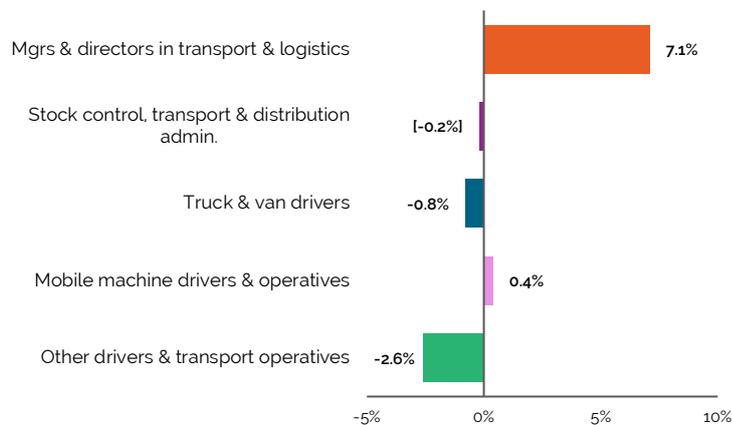
Overall employment: approximately 99,100 persons (93% male) were employed in the selected transport and logistics occupations, representing 4.1% of the national workforce.

- **Sector:** 54% of overall employment was concentrated in the transport sector with industry and wholesale/retail combined accounting for a further 27%
- **Employment growth (5-year):** between 2016 and 2021, overall employment decreased by 1,400 (-0.3% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for managers and directors in transport and logistics (7.1%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 69%. The share of workers aged 55 years and over was 27%, well above the national average of 19%
- **Education:** the share of persons employed in the selected transport and logistics occupations who had attained higher secondary/FET qualifications was 50%, above the national average share of 35%. These occupations had the second highest share of persons with a lower secondary education qualification or less, at 27%
- **Full-time/part-time:** 82% of transport & logistics workers were in full-time employment
- **Nationality:** the share of Irish nationals was 81%, slightly below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment saw a marginal decrease of 1,400 (-0.3% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

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

Aircraft pilots, ship officers and air traffic controllers included in overall total but numbers too small to report.

Overall Outlook for these Occupations

Overall employment levels fell for this occupational group over the five-year period, driven primarily by a fall in the number of other drivers/operatives. Employment in the transport sector, in which many of these workers were employed, was slow to return to pre-COVID-19 levels, although the latter quarters of 2021 saw growing employment levels. EWSS, which has now ceased, accounted for an average of 10% of total earnings in the transport sector in 2021. By quarter 1 2022 this had fallen to 5.5%.

The continued knock-on effects of Brexit, the supply chain issues that emerged during the COVID-19 pandemic, rising fuel costs and the increasing levels of inflation, will all have an impact on the overall demand for these occupations. Changes in the nature of the roles, due to factors such as automation, technological changes, and the implementation of the Climate Action Plan, will result in upskilling/reskilling requirements across all occupations in this field (e.g. enhanced digital skills, green skills for business).

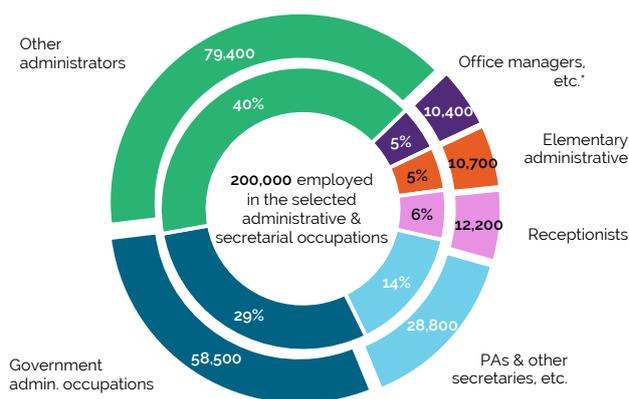
Occupation	Economic summary
Managers & directors in transport & logistics	The overall five-year average employment growth for this occupation was above average, with employment in 2021 above pre-COVID-19 levels. There was a small number of employment permits issued in 2021 relating to logistics managers, while freight-forwarding and transport managers were mentioned as vacancies which were difficult to fill in the Recruitment Agency Survey. The Shifting Sands report highlighted the strong growth that occurred in the number of advertised job vacancies for storage and distribution managers, for which skills such as warehouse/project/stakeholder management and budgeting were in demand. Technological and regulatory changes associated with the transport/logistics sector will likely result in a change in the skills profile for those working in this occupation. Training in these areas for those already employed in this occupation will assist in preventing future recruitment difficulties.
Stock control, transport & distribution admin.	Although the numbers employed in this occupation are too small to allow for any analysis, there is evidence of demand for these skills. The Recruitment Agency Survey identified issues in sourcing transport and junior logistics co-ordinators, and there was a relatively high volume of advertised vacancies in the OVATE data.
Truck & van drivers Potential shortage: HGV drivers	<p>Employment in this occupation declined annually since 2019, with numbers reverting to 2018 levels; however, a recovery in employment was evident in the latter half of 2021. At 22%, the share of those aged 55 years and older was above average and had grown for this occupation compared to the previous year, although it remained below the 27% share in quarter 4 2019. The share of non-Irish nationals employed was also above the national average. There was a number of employment permits issued for HGV drivers in 2021; there was also a high volume of vacancies advertised through the DSP, and truck and delivery drivers figured among the top growing occupations in terms of advertised job vacancies in the Shifting Sands report; the top skills mentioned in online vacancies included customer service, forklift operation, and product sales. The Recruitment Agency Survey identified issues sourcing articulated and rigid truck drivers, while the Skills for Growth data noted issues in terms of HGV drivers with digital, time management, and manual handling skills.</p> <p>The implications of Brexit and the rising cost of fuel will influence the demand for HGV drivers but if employment levels begin to increase again, issues in sourcing suitably qualified candidates may intensify.</p>
Mobile machine drivers & operatives	Overall employment growth was below average over the five-year period for this occupation, with employment declining annually in recent years. Mentions of difficult-to-fill vacancies related primarily to drivers for the construction sector (e.g. crane, site, forklift drivers and teleporter operators). In addition, the Skills for Growth data highlighted issues with sourcing warehouse operatives with forklift skills; programmes such as Skills to Advance are designed to address these types of skills issues. Future demand for drivers/operatives will be dependent on the level of construction activity in the short to medium term.
Other drivers & transport operatives Potential labour shortage: Taxi drivers	Employment growth was negative for this occupation, although employment levels remained unchanged between 2020 and 2021. Most are employed as taxi drivers and bus and coach drivers; the increase in employment for bus and coach drivers between quarter 4 2019 and quarter 4 2021 masked the decline in the number of persons employed as taxi drivers. At 43%, the share aged 55 years and older far exceeded the national average and may lead to an increase in replacement demand in the coming years. The issues for taxi drivers reported in the media, including the rising cost of insurance and fuel, along with both anti-social hours and anti-social behaviour, may create further issues in attracting sufficient supply, particularly in cities such as Dublin.

10.14 Administrative & Secretarial Occupations

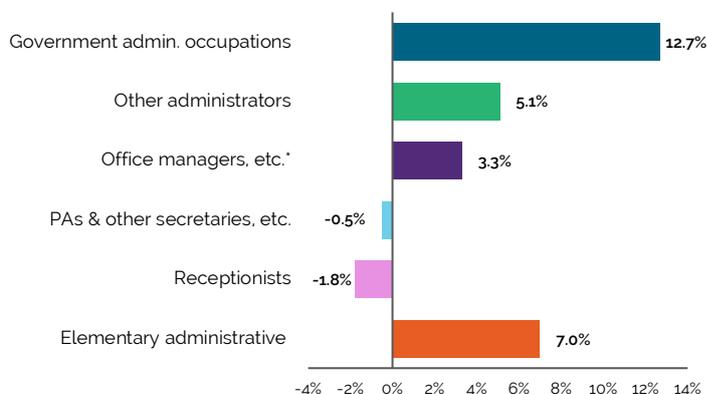
Overall employment: approximately 200,000 persons (78% female) were employed in the selected administrative and secretarial occupations, representing 8.4% of the national workforce.

- **Sector:** these occupations are employed across all sectors, with employment concentrated in PAD (27%), health (15%), with transport, industry and professional activities which combined accounted for a further 23% share
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by almost 47,000 persons (5.5% on average annually compared to 2.3% for the national average). The strongest rate of employment growth was observed for government administrative occupations (12.7%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 66%; the share aged 55 years and over was 26%, above the national average of 19%
- **Education:** the share of persons employed in the selected administrative & secretarial occupations who had attained higher secondary/FET qualifications was 43%, above the national average share of 35%; those who had attained third level qualifications (49%) was below the national average share (53%)
- **Full-time/part-time:** 71% of administrative & secretarial workers were in full-time employment
- **Nationality:** the share of Irish nationals was 92%, above the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 47,000 (5.5% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data
*See detailed occupation description in table below.

Overall Outlook for these Occupations

The strong employment growth in this occupational group continues to be driven primarily by growth for those employed in government roles, particularly in relation to annual growth in 2021. Over a quarter of all those employed in this occupational group worked in the public administration and defence sector, with the remainder spread across all other sectors in the economy. Demand for administrative workers in 2021 was likely driven by continued COVID-19 related activities in the public and health sectors, such as contact tracing centre operations, annual recruitment activity in the Civil Service, and the re-opening of businesses following COVID-19 closures. Although automation of services may result in a fall in demand for some administrative occupations, job opportunities will continue to arise due to the replacement demand (due to retirement, etc.) for such a large occupational group. SLMRU research has indicated that many persons employed in these roles may be over-qualified, with almost half holding third level qualifications.⁵⁹

Occupation	Economic summary
Government admin. occupations	Although the strong employment growth for this occupation is partly related to changes that occurred on the introduction of the new Labour Force Survey in 2017, there was also evidence of employment growth between 2020 and 2021, with an additional 10,000 persons employed. Over half of those employed held third level qualifications. There was a large volume of vacancies advertised through the DSP including for temporary clerical officers but also for Census Enumerators (although these were unlikely to have commenced employment in 2021). The share employed aged 55 years and older grew from 24% in quarter 4 2020 to 28% in quarter 4 2021 and far exceeds the national average; as such, replacement demand alone may result in job opportunities in this occupation. Upskilling and reskilling may also be required in order to reach targets set out in the Civil Service Renewal Plan 2024 in areas such as in digital skills. ⁶⁰
Other administrators	The strong employment growth for this occupation primarily relates to a significant jump in employment between 2019 and 2020, with further, more modest, increases in 2021. The high volume of recent job hires, which far exceeded any employment growth in 2021, indicates that job churn is a factor for this occupation. A quarter of those employed were aged 55 years and older, and over half of those in this occupation held third level qualifications. Industry and the health sector combined accounted for approximately 30% of employment in this occupation with the remainder spread across numerous other sectors. Due to the demand across sectors and the high volume of job churn, job opportunities are likely to continue to arise for this occupation, although automation technologies associated with these roles may subdue future growth.
Office managers & supervisors	Employment growth for office managers and supervisors was marginally above the national average, although employment in 2021 was below pre-COVID-19 levels. These roles were found across all sectors of the economy, albeit in small numbers. Office managers were one of the occupations identified in the Shifting Sands report as hard-hit, due to a fall in the volume of job vacancies advertised for these roles since the onset of COVID-19.
PAs & other secretaries, etc.	Employment in this occupation has been declining annually since 2019, resulting in a negative average growth rate for the five-year period. Almost half of employment was in the health and professional activities sector, 45% were in part-time roles, and a quarter were aged 55 years and older. The OVATE data shows an increase in the volume of advertised vacancies which may be due to re-hiring activities with the re-opening of offices in 2021.
Receptionists	Despite some rebound in employment numbers in the latter half of 2021 for this occupation, levels remained below pre-COVID-19 levels. An increased volume of advertised vacancies (in both DSP and OVATE data), including for hotel receptionists, most likely relates in some part to rehiring activities as businesses reopened in 2021. Factors such as automation may limit the extent of the recovery for this occupation.
Elementary admin (e.g. postal workers, couriers)	The strong employment growth rate may in part relate to changes in the Labour Force Survey in 2017; employment increased in the first half of 2021 but declined thereafter. Employment in this occupation is concentrated in the transport sector with demand for couriers etc. strong in early 2021 due to increased volumes of online shopping during restrictions. Future demand for these occupations may depend on consumer behaviour and levels of personal consumption, which may be dampened with rising inflation.

⁵⁹ https://www.solas.ie/f/70398/x/32c0cebdf4/solas_spring-skills-bulletin-2021.pdf

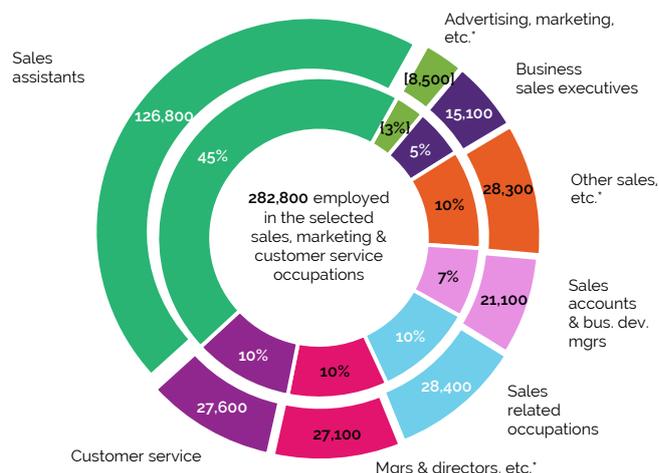
⁶⁰ <https://assets.gov.ie/211842/8d223347-9114-43dd-84c5-78f685c63f1b.pdf>

10.15 Sales, Marketing and Customer Service Occupations

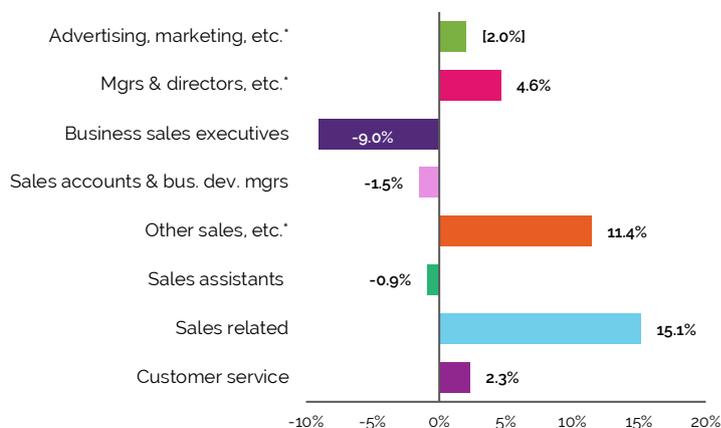
Overall employment: approximately 282,800 persons (53% female) were employed in the selected sales, marketing and customer service occupations, representing 11.8% of the national workforce.

- **Sector:** 67% of overall employment was concentrated in the wholesale/retail sector, with industry and ICT combined accounting for a further 13%
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 19,000 (1.4% on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for sales related occupations (15.1%) during the period
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 61%. The share of employees aged under 25 years was the second highest at 27%, significantly above the national average of 12%
- **Education:** the share of persons employed in the selected sales, marketing and customer service occupations who had attained higher secondary/FET qualifications was 47%, well above the national average share of 35%. Those who had attained third level qualifications (42%) was below the national average share (53%)
- **Full-time/part-time:** full-time employment accounted for a 67% share
- **Nationality:** the share of Irish nationals was 81%, slightly below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 19,000 (1.4% on average annually compared to 2.3% 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.

Overall Outlook for these Occupations

Employment growth over the five-year period remained below the national average, although overall employment in 2021 exceeded that of 2019. Over two-thirds of persons employed in these occupations were in the wholesale and retail sector, which has been particularly impacted by COVID-19. At the end of January 2021, almost 120,000 persons in the wholesale and retail sector were in receipt of income support payments (both EWSS and PUP); by the end of 2021, this had fallen to approximately 29,000, with EWSS accounting for almost three quarters of payments. The impact of the cessation of these payments in 2022 is yet to be realised in the data. It is also unclear if the increased volume of online shopping that occurred with the introduction of COVID-19 restrictions will be sustained in the coming years. Rising inflation and a fall in consumer demand, already evident in declining retail sales according to recent CSO figures⁶¹, will impact on future demand for these occupations.

For those employed outside the wholesale and retail sector (e.g. industry), demand for a combination of sales skills with specific industry knowledge and technical expertise persists. Analysis from Enterprise Ireland's Spotlight on Skills data highlights the fact that skills including consultative sales, technical sales and digital marketing are in demand across a variety of sectors and occupations. The difficulty in sourcing candidates with these skills will vary across occupations. The demand for those with both sales and language skills is primarily related to the ICT sector, evidenced in the employment permit data, although the numbers employed in sales in this sector are comparatively small.

Occupation	Economic summary
Advertising, marketing & sales directors	The numbers employed in this occupation were too small to allow for any analysis.
Managers & directors in retail & wholesale	Employment growth was above average over the five-year period for this occupation; employment grew particularly strongly in the latter half of 2021. There was also a notable increase in the volume of vacancies advertised in the OVATE data in 2021; rehiring following the easing of restrictions is likely to be one of the main causes of this increase, with no indications in the data as yet of any difficulty in sourcing candidates.
Business sales executives	The negative growth rate for this occupation can be attributed in part to changes to the LFS in 2017; however, employment levels have remained relatively unchanged in recent years. Business sales executives are employed across a range of sectors, with approximately half employed in wholesale/retail. Despite this, most of the employment permits issued in 2021 related to the ICT sector in roles requiring language skills. This occupation had a higher share of non-Irish nationals employed than the national average although the numbers involved were small. Any future issues with filling vacancies for these roles will depend on the availability of candidates with specific skill combinations.
Sales accounts & bus. dev. managers	Despite negative employment growth over the five-year period for this occupation, small increases have occurred annually since 2018. Employment was spread across many sectors, with the highest volumes in wholesale and retail and ICT. Similar to business sales executives, the ICT sector appears to be the main beneficiary of employment permits issued in 2021 for this occupation. Although this occupation figured amongst the top growing in terms of the number of online job vacancy adverts (identified in the Shifting Sands report), the demand pertained to product managers, typically with skills in product development, sales, project management and stakeholder management. No issues with sourcing suitable candidates for these roles were evident from other sources.
Other sales & marketing assoc. professionals	Employment growth was strong for this occupation over the five-year period, particularly since 2019. Almost half of persons employed in this occupation were marketing specialists; the remainder were across occupations such as buyers/procurement officers, estate agents, property managers and conference managers. Demand for marketing specialists/executives (with languages), particularly in the ICT sector, was evident in the employment permit data. The shift to online services, which accelerated due to COVID-19, is likely to be contributing to an increased demand for digital marketing and research skills. The Recruitment Agency Survey highlighted issues in sourcing buyers and procurement analysts. The future demand for roles such as buyers and estate agents will very much depend on consumer spending in light of rising inflation.

⁶¹ <https://www.cso.ie/en/releasesandpublications/ep/p-rsi/retailsalesindexjune2022provisionalandmay2022final/>

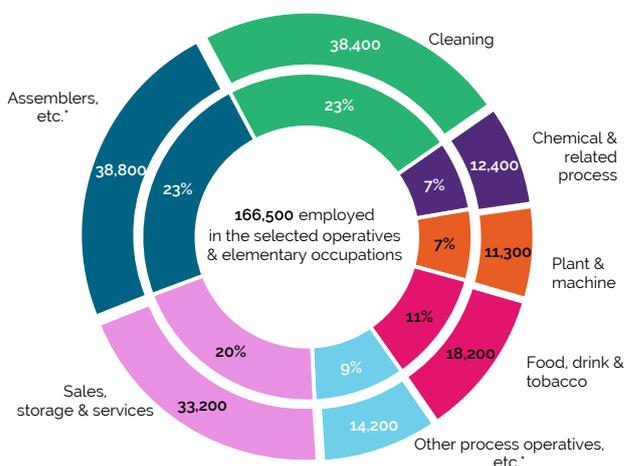
Sales assistants	<p>This occupation had a negative growth rate over the five-year period; although employment increased between 2020 and 2021, it remained below pre-COVID-19 levels. The large volume of recent job hires, which far exceeded any employment growth in 2021, is likely to be a combination of both job churn and significant rehiring over the year as restrictions eased. The volume of advertised vacancies in the OVATE data also increased in 2021 and the Shifting Sands report identified sales assistants as having one of the strongest growth rates in the number of advertised job vacancies, with customer service, industry knowledge, and product sales in particular demand. Employers have also identified some sales assistant roles (e.g. deli-counter) as difficult to fill in the Skills for Growth data. Of those employed in quarter 4 2021, 57% were in part-time roles and 45% were aged 15-24 years. Given the large volume of persons employed in this occupation, it is likely that sales assistants accounted for a significant share of those in the wholesale/retail sector in receipt of income support payments, particularly outside the grocery sub-sector. The closure and job reductions in a number of high street shops is likely to have an impact on the demand for sales assistants, and a fall in consumer spending due to rising inflation could further affect demand for these roles. However, as it is a large occupation, and demand continues to be strong in food retail, job opportunities are likely to continue to arise to replace those leaving the occupation (e.g. due to retirement).</p>
Customer service occupations	<p>Employment growth for this occupation was on a par with the national average, although annual employment fell in 2021. Despite the decline in employment in 2021, there was a high volume of recent job hires indicating that job churn is a factor for this occupation. At 29%, the share of non-Irish nationals employed far exceeded the national average. The majority of the employment permits issued in 2021 were for the ICT sector with language skills required for some. The Recruitment Agency Survey highlighted issues in attracting customer service agents, particularly in finance/banking.</p>
Sales related occupations n.e.c.	<p>Employment in this occupation experienced strong growth over the five-year period, particularly between 2018 and 2019; employment continued to rise in the subsequent years, albeit at a slower pace. At 27%, a higher than average share of non-Irish nationals were employed. Employment was across a number of roles (e.g. sales supervisors, window dressers, street traders and debt collectors); over half (54%) were employed in wholesale and retail with the remainder spread across many other sectors. As such, the outlook is difficult to determine, although it will most likely be tied to the overall resilience of the wholesale and retail sector as it recovers from the COVID-19 restrictions and reduced consumer spending.</p>

10.16 Operatives & Elementary Occupations n.e.c.

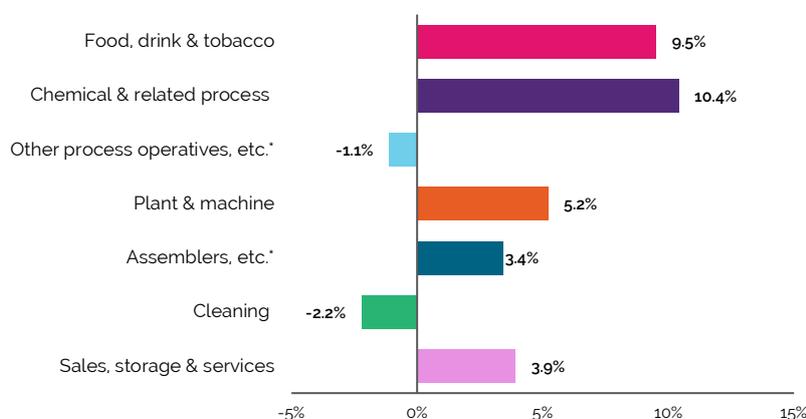
Overall employment: approximately 166,500 persons (61% male) were employed in the selected operatives & elementary occupations n.e.c., representing 7.0% of the national workforce.

- **Sector:** 58% of overall employment was concentrated in industry, with the wholesale/retail and the administrative services sectors combined accounting for a further 19%
- **Employment growth (5-year):** between 2016 and 2021, overall employment increased by 20,500 (2.7% on average annually compared to 2.3% nationally); the strongest rate of employment growth was observed for chemical & related process operatives (10.4%)
- **Age:** the 25-54-year age group accounted for the majority of persons employed, at 67%; the share of workers aged 55 years and over was 16%, slightly below the national average of 19%
- **Education:** the share of persons employed in the selected operatives and elementary occupations n.e.c. who had attained higher secondary/FET qualifications was 53%, well above the national average share of 35%; almost a fifth had a lower secondary education qualification or less
- **Full-time/part-time:** over three quarters of operatives & elementary occupations n.e.c. workers were in full-time employment
- **Nationality:** the share of Irish nationals was 70%, below the national average of 83%.

Numbers employed, 2021 (annual average)



Average growth rates (%) 2016-2021



Between 2016 and 2021, overall employment increased by 20,500 (2.7% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data
*See detailed occupation description in table below.

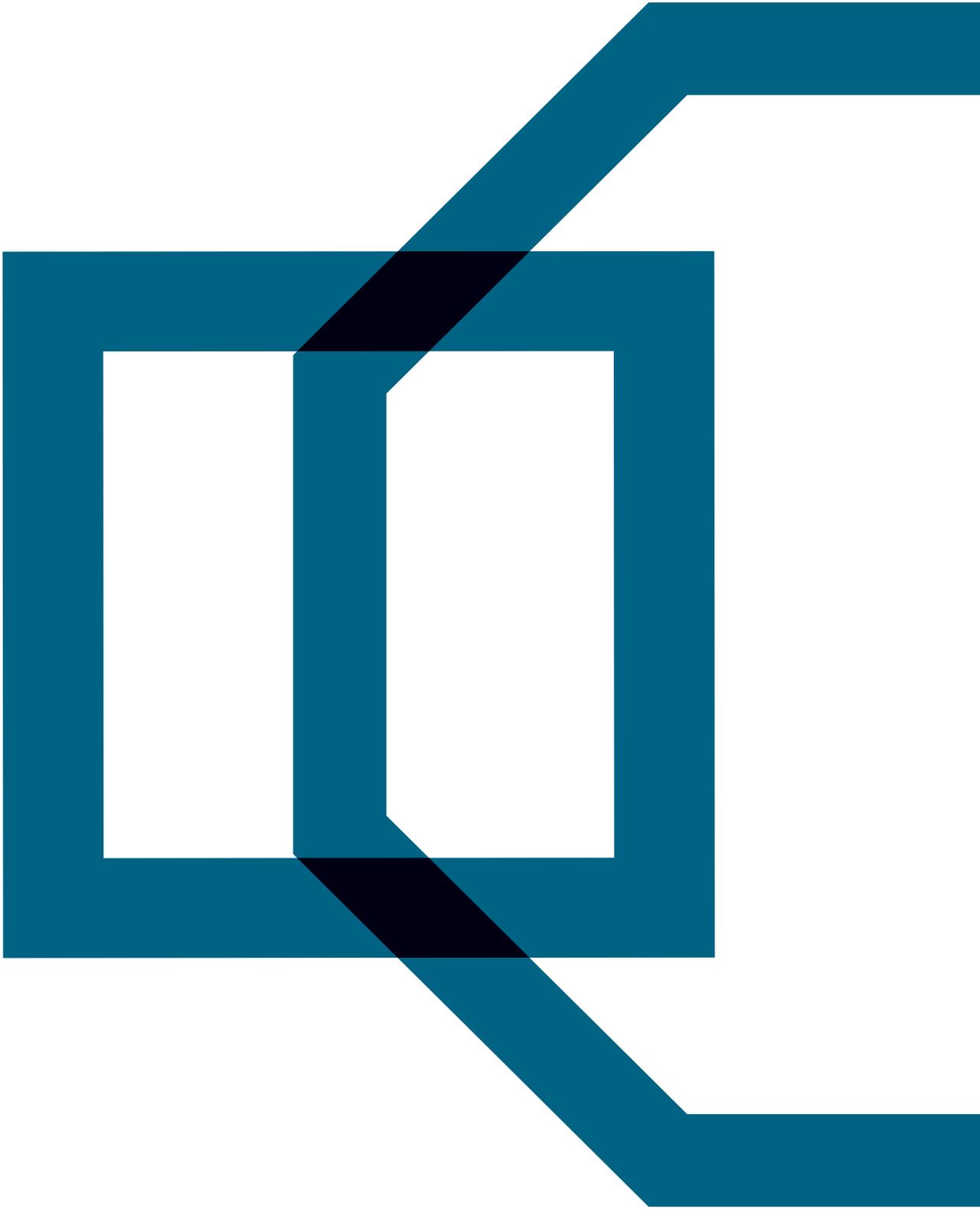
Overall Outlook for these Occupations

The overall employment growth for this occupational group was marginally above the national average, although levels in 2021 remained below that of 2019. The majority of those employed (77%) were in industry, wholesale and retail, and the administrative and support services sectors, all of which saw significant numbers of persons employed accessing income support payments (both EWSS and PUP) since the start of the COVID-19 restrictions. The impact on employment levels with the ceasing of these schemes is yet to be realised. These occupations have a high share of persons employed with lower secondary education or less and a higher share who are non-Irish than the national average.

There is a continued demand for operatives (OVATE, Skills for Growth) in various manufacturing subsectors (food, machinery, high-tech etc), with a range of technical (e.g. goods manufacturing) and transversal skills (team work, problem solving, health & safety) being sought. Automation is likely to see the skills required for some operative occupations, particularly those in manufacturing, to shift upwards, and training and upskilling of the employed will be important in ensuring not just that there is an adequate supply of skills for this occupation but also that workers are not displaced due to automation.

Occupation	Economic summary
Food, drink & tobacco	The strong employment growth for this occupation may in part relate to a dip in employment numbers in 2016; employment levels have remained relatively stable in recent years. At 45%, this occupation had a far larger share of non-Irish persons employed compared to the national average of 17%. There was a significant fall in the number of new employment permits issued in 2021 compared to the previous year; this is due to the fulfilment of the quota for general/meat processing operatives; a new quota of 1,500 permits was announced in 2021. There was a high volume of vacancies advertised through the DSP, particularly for meat processing operatives with vacancies across many counties in Ireland. Demand for these roles will likely be curtailed by targets to reduce agricultural carbon emissions, although issues with recruitment may persist due to the perceived attractiveness of some of the roles in this group.
Chemical & related process	The strong growth rate for this occupation is driven primarily by a recovery in employment in the latter half of 2021. The volume of vacancies advertised for these roles was small across both DSP and OVATE data. Almost half of those employed in these operative roles held third level qualifications; while skills mismatches may be occurring it could also be the case that these relate to super-operative roles that require significant skills. The Skills for Growth data indicates that there are issues in sourcing skills in high tech manufacturing for roles including general and machine operatives in precision and med tech, medical devices and injection moulding. Although no overall shortage has been identified to date, the rapid pace of technological change associated with these roles means that the demand for relatively highly skilled operatives in high tech manufacturing is likely to be sustained.
Other process operatives & process plant occupations (e.g. packers, bottlers and elementary process plant ops.)	Employment levels in this occupation have been declining since 2019, resulting in a negative employment rate over the five-year period. At 41%, the high share of non-Irish persons employed far exceeded the national average. The numbers employed in the individual occupations in this group were too small to allow for an analysis of the future demand for these roles.
Plant & machine operatives (e.g. quarry workers, energy and sewerage plant operatives)	Despite strong employment growth over the five-year period, employment has declined annually since 2019. Meeting Ireland's climate agenda may see a change in demand for waste management skills although this is likely to relate to a small number of roles.
Assemblers & routine operatives	Employment growth was above the national average, with employment in 2021 above pre-COVID-19 levels. However, the high volume of recent job hires far exceeded any employment growth suggesting that some level of job churn is a factor for these roles. The share of females in employment in these roles increased to 45% in quarter 4 2021. Vacancies advertised through the DSP were primarily for production operatives and product builders.

Cleaning operatives	<p>Employment numbers in cleaning in 2021 remained far below pre-COVID-19 levels, although an increase in employment was seen in the latter half of 2021. The high volume of recent job hires can be attributed to both a considerable level of rehiring as businesses re-opened and also to job churn. Of those employed in this occupation in quarter 4 2021, 69% were female, 61% were in part-time roles and a third were non-Irish nationals, all of which were above the national averages, as was the share aged 55 years and older. Almost half of those in cleaning roles were employed in the administrative and support services sector, with many in this sector in receipt of income support payments. The impact on employment with the removal of these payments is yet to be realised with future employment dependent on the extent to which offices and businesses fully reopen.</p>
Sales, storage & services	<p>Employment growth was above the national average over the five-year period, with numbers remaining unchanged since 2019. Despite this, there was a high volume of recent job hires indicating job churn is a factor for this occupation. The Recruitment Agency Survey highlighted issues in relation to warehouse operatives and packaging/supply chain operatives, while the Skills for Growth data also identified issues with sourcing warehouse operatives (particularly those with forklift skills). As overall employment levels have remained unchanged, it is not possible to determine if recruitment issues for warehouse operatives relate to increased demand, a change in the overall skill requirement or the perceived attractiveness of the job.</p>



Appendix A:

Demand and Supply Indicators by Occupational Group

10.1 Science & Engineering Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Chemical, biological & physical scientists	22,000	5.5%	50%	92%	-	89%	96%	164	X
Other engineering professionals	21,300	14.1%	-	94%	-	77%	87%	414	X
Production, design & QC engineers	22,500	13.4%	[32%]	98%	-	81%	97%	619	X
Science & engineering technicians	30,700	2.8%	39%	93%	-	79%	78%	37	X
Production managers in manufacturing, mining and energy	19,200	3.5%	[24%]	97%	[18%]	84%	73%	51	X
Total	115,700	6.9%	33%	95%	12%	82%	86%	1,285	

10.2 ICT Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
ICT specialist & project managers	22,600	7.7%	[26%]	97%	-	71%	82%	359	X
Programmers & software developers	45,900	11.6%	[17%]	98%	-	63%	94%	1,650	X
ICT profs. n.e.c.	20,000	2.1%	-	96%	-	74%	87%	1,458	X
IT technicians	29,800	10.0%	[26%]	93%	-	64%	76%	116	X
Total	118,300	8.5%	24%	96%	8%	66%	85%	3,583	

10.3 Business & Financial Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Accountants & tax experts	47,000	0.7%	53%	89%	15%	86%	95%	336	X
Mgt. consultants, bus. analysts & project managers	29,400	17.6%	44%	93%	[18%]	80%	90%	739	X
Actuaries, economists & statisticians; other business profs.	13,200	[18.7%]	[47%]	86%	-	80%	94%	66	X
Financial analysts and insurance underwriters	20,900	6.0%	50%	96%	-	83%	84%	24	X
Other bus. associate profs.	27,400	13.7%	57%	89%	[15%]	86%	82%	124	X
Financial accounts managers	11,300	-2.9%	[53%]	96%	-	[80%]	[74%]	7	
Financial managers & directors	15,700	1.8%	[44%]	94%	-	92%	90%	43	X
Financial admin. occupations	64,000	4.1%	72%	78%	20%	87%	58%	5	X
HR managers and officers	15,400	-1.7%	75%	86%	-	92%	91%	59	X
Total	244,300	5.1%	57%	88%	16%	86%	81%	1,403	

10.4 Healthcare Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Medical practitioners	14,300	1.1%	[43%]	85%	-	81%	99%	1,941	X
Therapy profs.	11,900	0.7%	81%	73%	-	93%	98%	5	
Nurses & midwives	60,200	1.8%	89%	76%	16%	75%	97%	2,855	X
Other healthcare profs.	31,000	9.6%	74%	82%	[19%]	88%	94%	172	
Health associate profs.	13,900	0.9%	71%	72%	-	81%	74%	5	
Total	131,300	3.1%	78%	78%	16%	81%	94%	4,978	

10.5 Education Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Higher & further education teaching profs.	20,600	6.6%	45%	77%	[24%]	85%	98%	47	
Secondary teachers	37,000	3.9%	72%	87%	[10%]	95%	98%	-	
Primary & nursery teachers	53,200	4.2%	85%	87%	[8%]	95%	95%	3	
Teaching & other educational profs.	22,700	7.5%	71%	71%	[29%]	90%	88%	3	
Educational support assistants	23,800	11.2%	91%	77%	38%	93%	39%	-	
Trainers & instructors, career guidance	10,400	-0.5%	[58%]	[82%]	-	93%	[76%]	1	
Total	167,600	5.4%	74%	82%	18%	93%	86%	54	

10.6 Social & Care Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Welfare & housing associate profs.	11,600	6.7%	[63%]	78%	-	94%	77%	-	
Childminders, etc.	29,900	4.2%	95%	57%	-	85%	[30%]	-	
Other caring services	16,500	5.4%	73%	65%	-	80%	-	41	X
Social workers & welfare profs.	10,500	-0.3%	[59%]	88%	-	90%	97%	3	
Care workers, home carers, etc.	61,500	0.5%	81%	64%	27%	87%	32%	16	
Total	130,000	2.3%	79%	66%	24%	86%	40%	60	

10.7 Legal & Security Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Barristers, judges, solicitors & related profs.	15,200	0.4%	59%	97%	-	95%	99%	11	
Gardai	15,900	9.3%	-	96%	-	100%	85%	-	
Other protective service occupations	13,700	0.4%	-	91%	-	95%	[53%]	-	X
Security guards	17,400	2.8%	-	77%	[32%]	67%	-	-	
Total	62,200	3.0%	30%	90%	19%	88%	64%	11	

10.8 Construction Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Civil engineers & construction project managers	16,500	4.3%	-	97%	-	90%	70%	235	X
Architects & town planners, architectural technologists & surveyors	14,200	8.2%	-	92%	-	85%	98%	63	X
Bricklayers & plasterers	11,800	11.1%	-	91%	-	78%	-	5	
Plumbers	[9,400]	[1.6%]	-	[86%]	-	[90%]	-	-	X
Carpenters & joiners	17,700	1.4%	-	98%	-	80%	-	-	X
Painters & decorators	[6,600]	[0.2%]	-	-	-	-	-	-	
Other construction trades	22,100	2.0%	-	91%	38	76%	-	13	X
Construction operatives & elementary	32,000	-9.3%	-	85%	[18%]	80%	-	3	X
Total	133,700	-0.5%	[5%]	91%	21%	82%	28%	319	

10.9 Other Craft Occupations n.e.c.

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Metal forming, welding & related trades	[10,900]	0.0%	-	96%	-	[63%]	-	89	X
Metal machining, fitting & instrument making trades	19,400	-4.9%	-	97%	-	86%	[36%]	44	X
Vehicle trades	19,500	3.5%	-	96%	-	90%	-	6	
Electrical & electronic trades, etc.	38,800	3.0%	-	96%	[13%]	79%	41%	9	X
Other skilled trades	10,100	-3.7%	-	[69%]	-	84%	-	1	
Butchers, fishmongers, bakers etc.	[8,600]	[-2.6%]	-	[81%]	-	[70%]	-	7	X
Total	107,200	-0.1%	9%	92%	17%	80%	29%	156	

10.10 Agriculture & Animal Care Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Managers in horticulture, agriculture and fishing	[6,200]	-	-	[97%]	-	[94%]	-	21	
Farmers	70,600	-2.4%	[8%]	79%	58%	99%	17%	-	
Horticultural, agricultural & fishing trades n.e.c.	14,200	-4.8%	-	68%	[36%]	91%	-	-	
Elementary agriculture	18,400	6.2%	[24%]	[44%]	[29%]	90%	-	3	
Animal carers & pest controllers	-	-	-	-	-	-	-	-	
Total	114,000	-0.6%	13%	72%	49%	97%	18%	24	

10.11 Hospitality Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Hospitality managers	16,400	-6.5%	48%	87%	[27%]	75%	[35%]	-	
Chefs & cooks	23,700	-4.0%	46%	74%	-	61%	44%	541	X
Catering & bar managers	-	-	-	-	-	-	-	-	
Kitchen & catering assistants	36,700	5.1%	67%	38%	-	70%	-	1	X
Waiters & waitresses	28,000	-4.3%	80%	[25%]	-	79%	-	-	X
Bar staff	12,200	-11.3%	[38%]	-	-	99%	-	-	X
Housekeepers & caretakers, etc.	[6,800]	[-5.9%]	[81%]	-	-	-	-	-	
Total	129,600	-3.1%	61%	49%	11%	73%	27%	542	

10.12 Arts, Sports & Tourism Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Media profs. & librarians	[8,900]	[-2.5%]	[53%]	91%	-	84%	93%	13	
Artistic, literary & media associate profs.	28,300	1.4%	45%	73%	[17%]	81%	79%	165	
Sports & fitness occupations	14,400	1.7%	[40%]	61%	-	76%	[40%]	36	
Leisure & travel service occupations	[8,900]	[-3.2%]	[67%]	[63%]	-	90%	-	-	
Hairdressers & beauticians, etc.	21,600	-3.4%	85%	61%	-	84%	-	-	
Total	82,200	-0.9%	57%	69%	15%	82%	56%	214	

10.13 Transport & Logistics Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Managers & directors in transport & logistics	12,000	7.1%	-	95%	-	87%	[45%]	10	X
Stock control, transport & distribution admin	[6,700]	[-0.2%]	-	[85%]	-	[74%]	-	39	X
Truck & van drivers	33,800	-0.8%	-	86%	22%	79%	-	92	X
Mobile machine drivers & operatives	14,100	0.4%	-	92%	-	86%	-	-	X
Other drivers & transport operatives	30,100	-2.6%	-	68%	43%	80%	[19%]	-	
Total	99,100	-0.3%	[7%]	82%	27%	81%	22%	141	

10.14 Administrative & Secretarial Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates Q4 2021	New Employment Permits issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Government admin.	58,500	12.7%	75%	88%	28%	97%	53%	2	
Other administrators	79,400	5.1%	79%	66%	25%	88%	54%	2	X
Office managers & supervisors	10,400	3.3%	[74%]	[76%]	-	87%	[63%]	-	
PAs & other secretaries, etc.	28,800	-0.5%	89%	55%	25%	93%	41%	1	X
Receptionists	12,200	-1.8%	93%	[54%]	-	86%	-	-	
Elementary administrative	10,700	7.0%	-	[86%]	-	[96%]	-	-	
Total	200,000	5.5%	78%	71%	26%	92%	49%	5	

10.15 Sales, Marketing & Customer Service Occupations

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Advertising, marketing & sales directors	18,500	2.0%	-	95%	-	72%	72%	45	X
Managers & directors in retail & wholesale	27,100	4.6%	42%	90%	16%	84%	37%	4	
Business sales executives	15,100	-9.0%	-	96%	-	75%	56%	248	
Sales accounts & bus. dev. managers	21,100	-1.5%	41%	97%	-	87%	77%	100	
Other sales and marketing assoc. prof.	28,300	11.4%	55%	86%	-	78%	82%	300	X
Sales assistants	126,800	-0.9%	62%	43%	12%	85%	21%	1	
Sales related occupations n.e.c.	28,400	15.1%	38%	82%	-	73%	43%	-	
Customer service occupations	27,600	2.3%	52%	79%	-	71%	55%	100	X
Total	282,800	1.4%	53%	67%	12%	81%	42%	798	

10.16 Operatives & Elementary Occupations n.e.c.

Bulletin description	Number Employed, 2021 (Annual Average)	Annualised Employment Growth Rate, 2016-2021	% Female (Q4 2021)	% Full-Time (Q4 2021)	Aged 55 years and over (Q4 2021)	% Irish Nationals (Q4 2021)	% Third Level Graduates (Q4 2021)	New Employment Permits Issued, 2021 (Number)	SLMRU Recruitment Agency Survey, Oct 2021
Food, drink & tobacco	18,200	9.5%	-	84%	-	55%	-	105	
Chemical & related process	12,400	10.4%	-	95%	-	82%	[48%]	-	
Other process operatives and process plant occupations	14,200	-1.1%	-	88%	-	59%	-	6	
Plant & machine	11,300	5.2%	-	[94%]	-	[77%]	-	4	
Assemblers & routine operatives	38,800	3.4%	45%	93%	[10%]	74%	34%	1	
Cleaners	38,400	-2.2%	69%	39%	[23%]	67%	-	-	
Sales, storage & services	33,200	3.9%	-	69%	-	76%	-	-	X
Total	166,500	2.7%	39%	76%	16%	70%	25%	116	

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 electronic 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 & Financial Occupations	Accountants & tax experts
	Chartered and certified accountants and 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 (including dispensing opticians) 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
	Health associate profs.
	Paramedics 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	
Secondary teachers	
Secondary education teaching professionals	
Primary & nursery teachers	
Primary and nursery education teaching professionals	
Teaching & other educational profs.	
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 & 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 & 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 & Security Occupations continued	<p>Security guards</p> <p>Security guards and related occupations Parking and civil enforcement occupations School midday and crossing patrol occupations Elementary security occupations n.e.c.</p>
Construction Occupations	<p>Civil engineers & construction project managers</p> <p>Civil engineers Construction project managers and related professionals Production managers and directors in construction</p> <p>Architects & town planners, architectural technologists, & surveyors</p> <p>Architects and town planners Quantity surveyors Chartered surveyors Chartered architectural technologists</p> <p>Construction related technicians</p> <p>Building and civil engineering technicians Architectural and town planning technicians Draughtspersons</p> <p>Bricklayers & plasterers</p> <p>Bricklayers and masons Plasterers</p> <p>Plumbers</p> <p>Plumbers and heating and ventilating engineers</p> <p>Carpenters & joiners</p> <p>Carpenters and joiners</p> <p>Painters & decorators</p> <p>Painters and decorators</p>
	<p>Other construction trades</p> <p>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</p> <p>Construction operatives & elementary</p> <p>Elementary construction occupations Scaffolders, staggers and riggers Road construction operatives Rail construction and maintenance operatives Construction operatives n.e.c.</p>

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

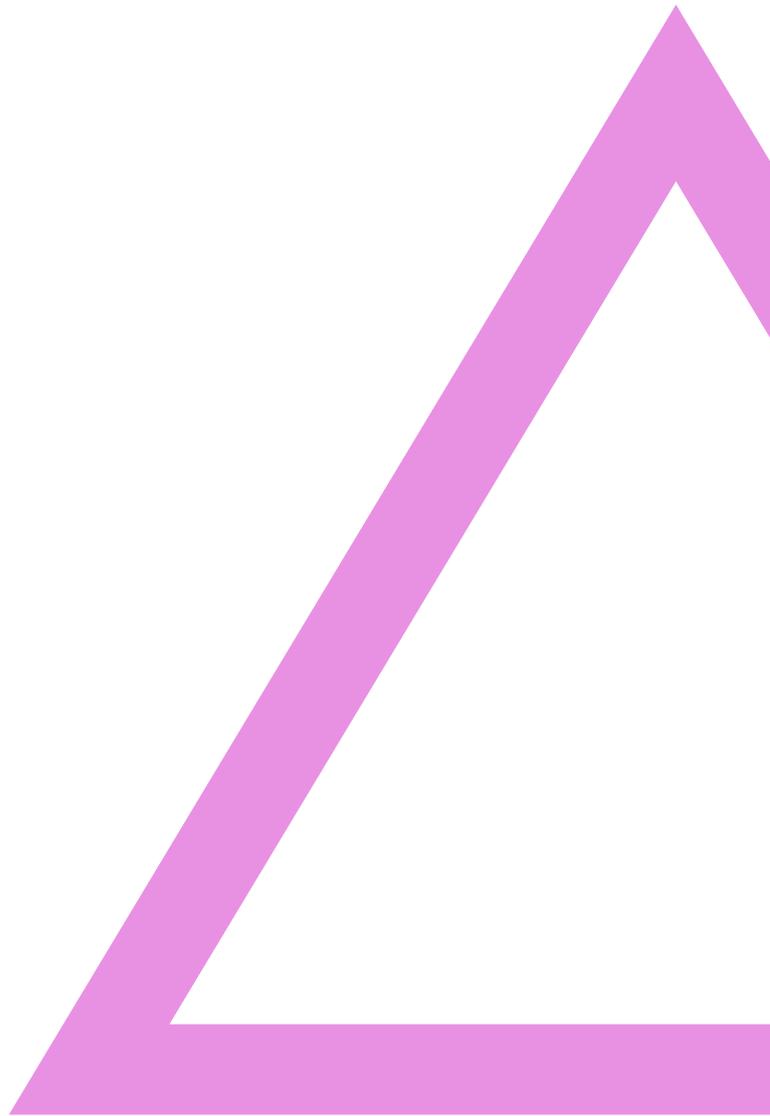
Agriculture & Animal Care continued	Farmers
	Farmers
	Horticultural, agricultural & fishing trades n.e.c.
	Horticultural trades Gardeners and landscape gardeners Groundsmen and greenkeepers Skilled workers in horse racing and related industries Agricultural and fishing trades n.e.c.
	Animal carers & 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 and catering assistants
	Waiters & waitresses
	Waiters and waitresses
	Bar staff
Bar staff	
Housekeepers & caretakers, etc.	
Housekeepers and related occupations Cleaning and housekeeping managers and supervisors	
Arts, Sports & Tourism Occupations	Media profs. & librarians
	Librarians Archivists and curators Journalists, newspaper and periodical editors Public relations professionals Advertising account managers and creative directors

Arts, Sports & 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 theme park attendants Travel agency managers and proprietors Leisure and travel service occupations n.e.c.
	Hairdressers & beauticians, etc.
	Hairdressers, barbers, beauticians and related occupations
	Transport & 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.	
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 Forklift truck drivers Agricultural machinery drivers Mobile machine drivers and operatives n.e.c.	

Transport & 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 & Secretarial Occupations	Government admin.
	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
	Office managers Office supervisors
	PAs & other secretaries, etc.
	Medical 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 & 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 & 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 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
	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.	



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