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Quality of Employment: Indicators and Trends

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Irish Government Economic and Evaluation Service

Summary

Labour Market and Quality of Employment

Total employment has reached a new peak and the economy is generally moving towards a position of full employment. However, a number of challenges exist including regional variation in performance, a relatively low labour force participation rate and various future risks. The quality of employment is a focus of enterprise and labour market policy while there a variety of supports in place linked to both policy areas. There is no one definition of the quality of employment internationally and this paper assesses four broad related areas including occupation, tenure, hours and income across the period between 2007 and 2018.

Occupation

There has been a shift in the occupations of employment in Ireland. There are 160,000 fewer people in employment in Skilled Trade, Elementary and Operative roles across the construction and industry sectors compared to 2007. These have been more than replaced with jobs from sources including Managers, Professionals and Associate Professionals in both the ICT, Finance and Scientific sectors and the Public Sector (Education and Health) as well as in Skilled Trade, Elementary and Operative roles in the Retail Sector.

Hours

In 2018, approximately a quarter of those in employment are working part-time. Between 2007 and 2018, there has been a slight increase in the proportion of employment on a part time basis, particularly in employment in Admin, Caring, Sales roles in the Accommodation & Food sector, and a significant increase in the proportion of people working longer hours (40+). Average weekly hours have increased significantly for occupations such as Managers, Professionals & Associate Professionals and decreased in some others, such as Skilled, Trade, Operatives & Elementary roles in Finance, Insurance and Real Estate sectors.

Tenure

Approximately 90% of all occupations are employed on a permanent contract in 2018. A higher proportion of temporary employment is seen in the Mid-West and South-East region and in sectors such as Accommodation and Food Services, Education and Administrative & Support Service activities. Overall, temporary employment increased from 9.5% in 2007 to 11% in 2011 and back to close to pre-crisis levels (10%) in 2018. In certain sectors the proportion remains at a higher level than previously.

Income

The income of Managers, Professionals and Associate Professionals is double that of other occupation groups. Those with a Post-Graduate qualification earn over double that of people with a Secondary education or below. The mean income in the ICT and Finance sector is double that of the rest of the Services sector. Overall, the mean income from employment remained relatively constant between 2007 and 2012, increasing by 16% between 2012 and 2017. The income of Managers, Professionals and Associate Professionals has increased at the greatest rate, resulting in growing divergence between the incomes received across occupation groups.

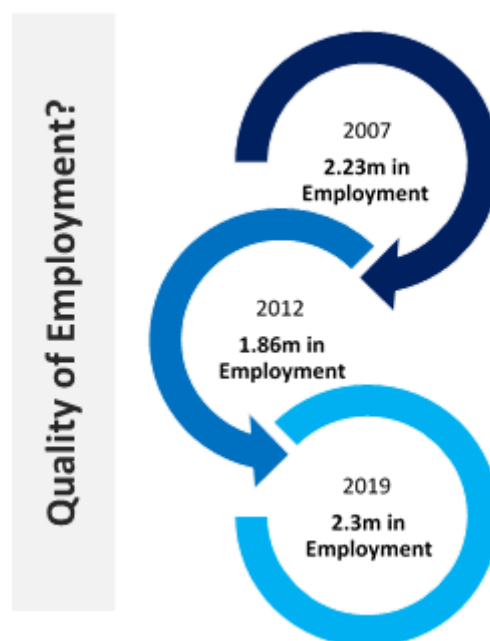
Discussion and Conclusions

The quality of employment is an important consideration within enterprise, education and labour market policy. This paper shows that the nature of employment has changed over time based on the four selected indicators of quality employment, with these changes varying across different cohorts resulting in differing outcomes. Continued consideration of this issue is necessary in the context of existing resources targeted at enterprises, education and employment.

1. Introduction

The performance of the labour market is of critical concern to the Government's economic and social policies. The level, type and nature of employment within the economy has implicit implications across policy areas including living standards, social supports and enterprise and economic development. There has been a significant labour market recovery within Ireland following the economic downturn. Total employment has reached a new peak and the economy is currently moving towards a position of full employment. However, there are a number of challenges including regional variation in performance, a relatively low labour force participation rate and various potential economic challenges.

Given developments, further policy emphasis has been placed on the nature and quality of employment as well as targeting productivity growth, particularly among SMEs. This follows a period where significant focus was placed on job creation¹ and is signalled within the Future Jobs strategy launched in March 2019. The overall policy focus is on highly productive and sustainable jobs and five pillars have been established to progress². A key question which this paper seeks to explore is how is the quality of employment best measured, how does Ireland's current labour market perform and how has this changed over time. While it is well known that the overall labour market has improved, it is important to consider whether the quality and nature of employment has changed in terms of a number of factors. This paper contributes to a range of research which has been completed by IGEEES in the areas of enterprise policy, employment and incomes³.



2. Labour Market Overview and Policy Context

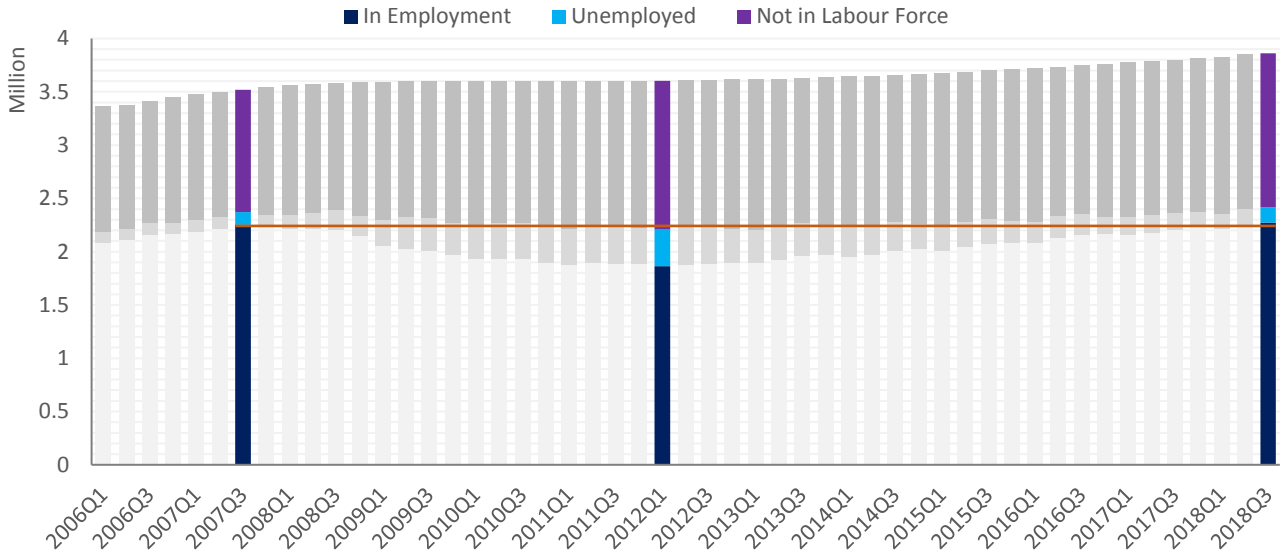
Before considering what is meant by employment quality it is useful to consider the wider labour market and policy context. There has been a significant improvement in the labour market within Ireland following the economic downturn. Total employment has reached a new peak and the economy is generally moving towards a position of full employment. Figure 1 below highlights the recovery that has occurred in labour market conditions. Total employment is currently above its previous peak in 2007. The unemployment rate has reduced from 16% in 2012 to 5.2%. However, there is also an increased number of people not in the labour force with the participation rate remaining at around 62%, down from 66% in pre-crisis years.

¹ E.g. Action Plan for Jobs 2012-2019.

² Future Jobs Ireland (2019) <https://dbei.gov.ie/en/Publications/Publication-files/Future-Jobs-Ireland-2019.pdf>. Pillars relate to embracing innovation and technological change, improving SME productivity, enhancing skills and developing and attracting talent, increasing participation in the work force and transitioning to a low-carbon economy.

³ O'Callaghan, D. and Kane, F. (2019) Enterprise, Employment and Income Framework: An Overview of IGEEES Analysis.

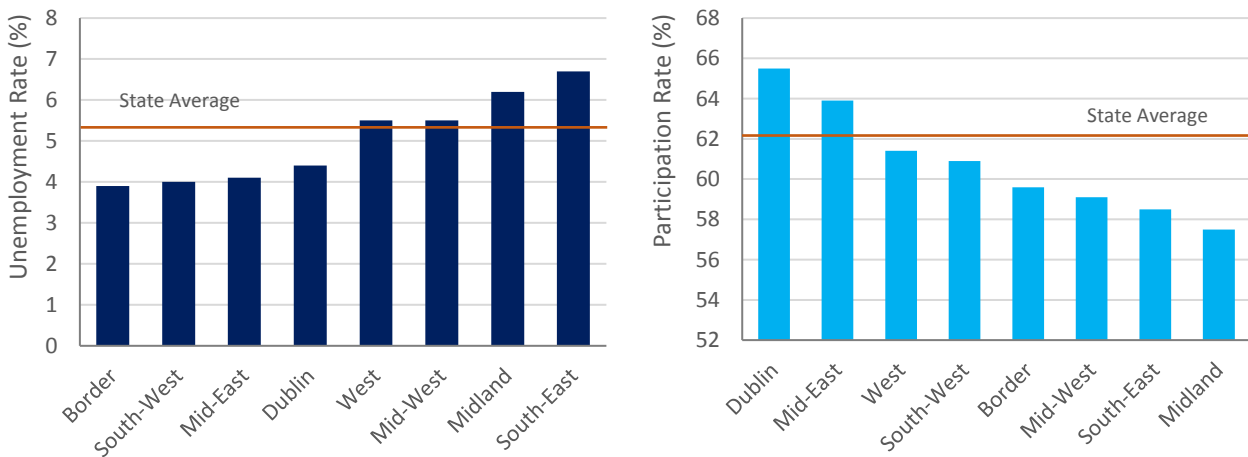
Figure 1: Total Number in Employment, Unemployment and Outside the Labour Force, Q1 2005 – Q3 2018



Source: CSO Labour Force Survey

Despite the improvement in labour market conditions at a national level, regional differences continue to persist, as can be seen in Figure 2 and 3 below. The South East and the Midlands, for example, have the highest level of unemployment and the lowest level of labour force participation. Conversely, Dublin and the Mid-East have participation rates which are above the state average as well as unemployment rates below the average. As such, while nationally the labour market is performing strongly, when individual regions are analysed below it is evident that there is significant variation.

Figure 2 and 3: Unemployment and Participation Rate by Region, 2019 Q1



Source: CSO LFS, Q1 2019

In recent years the focus of enterprise policy has changed to reflect the improved economic conditions. The Future Jobs strategy, for example, targets a shift in the emphasis of enterprise policy towards focusing on the quality of jobs rather than on increases in employment. The overall policy focus is on highly productive and sustainable jobs and five pillars have been established to progress⁴. The Future Jobs strategy compliments Enterprise 2025 Renewed, Ireland’s national enterprise strategy which also seeks to deliver quality jobs, and

⁴ Future Jobs Ireland (2019) <https://dbej.gov.ie/en/Publications/Publication-files/Future-Jobs-Ireland-2019.pdf>

the various Regional Enterprise Plans. In light of this shift towards focusing on creating productive, high quality employment it is useful to consider how employment in Ireland performs in relation to indicators of the quality of employment and whether there have been any changes in recent years.

Various elements that will be considered in this paper to assess the quality of employment are of relevance to a range of policy areas. The Government plays a role in influencing various elements of the quality of employment through enterprise policy, regulation in relation to employment, education policy, etc. Many of these areas require investment of resources through expenditure or tax expenditures. For example in the area of enterprise policy approximately €1 billion is spent on the various enterprise agencies annually⁵.

In addition to having a role in influencing the type of employment in the economy, the Government plays a significant role in adjusting outcomes from the market. The most obvious example of this is where the income received from employment is insufficient and therefore the Government intervenes to provide income supports⁶. These supports are administered in the form of both social welfare payments and public services which are specifically targeted at those on low income. An estimated €7.8 billion was spent in 2017 supporting those on a low income through payments targeted based on income level, while a further €3.9 billion was spent on providing services which were targeted based on income (this includes, for example, expenditure on Free Travel, Medical Cards, various childcare supports amongst other services).

3. Elements of Employment Quality

At the outset, it is important to analyse what is understood to relation to the quality of employment. For instance, what do we mean when we say quality of employment and what are the potential ways we can measure this. A variety of academic and policy literature internationally have focused on this issue and, while a number of statistical frameworks have been developed, it is evident from a review of relevant sources that there is no one clear and agreed definition of job quality. This section will provide a brief overview of concepts relevant to the quality of employment. It will consider the issue from a number of perspectives including the economy, enterprise policy and employment. For instance, how does job quality matter, what are the important elements, from the perspective of the economy, enterprises and employees. Figure 4 highlights a high level overview of relevant concepts.

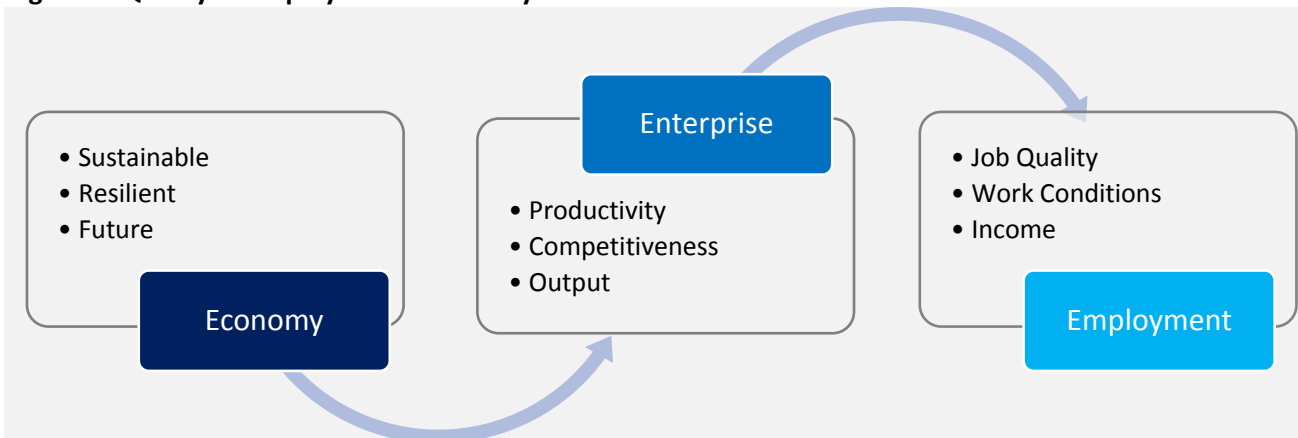
From the point of view of the broader performance of the economy, the term quality of employment could be seen to relate to the nature of employment and the extent to which jobs are embedded in the economy, resilient to shocks and adaptable to the future. Considering the quality of employment from the perspective of enterprise policy may include elements such as productivity, competitiveness and output. Finally, from the perspective of those in employment, quality might relate to working conditions and income, and in particular

⁵ Kane, F. and O'Callaghan, D. (2018) 'Overview of Enterprise Supports and the Labour Market'.

⁶ Kane, F. (2018) 'Analysis of Low Income Supports'.

whether this income allows for a suitable standard of living. The remainder of this section will look at each of these elements in further detail.

Figure 4: Quality of Employment and Policy Areas



Economy

One element of this area which could be seen as being relevant from the point of view of the economy is that employment is sustainable and resilient. As a highly open and globalised economy which is deeply engaged in international trade, Ireland is exposed to the actions and risks of other countries' economies. Therefore from the point of view of the economy, the creation of quality employment may relate to the creation and retention of jobs that can be more resilient in the context of uncertainties such as Brexit, economic downturns, changes in global trade conditions or the threat of labour outsourcing. From the point of view of the economy, employment quality could also relate to jobs that are suitable for the future. In order to achieve this there is a need to identify future trends and skills required for jobs of the future which will ensure that there is sufficient skills supply in the economy, thus limiting job loss and sections of the labour force entering inactivity. In addition to this, quality employment could be jobs which can adapt and be resilient in the context of the risk of automation due to technological advancements and within a low carbon transition.

Enterprise

One of the elements relating to employment quality which is of relevance from the point of view of enterprise is productivity. Labour productivity measures the quality of work completed in a given economy over time, with higher value-added jobs (employing high-skilled workforce) typically generating the greatest productivity. Job quality is closely related to productivity as evidence suggests that temporary employment (less hours, less variability in hours) is correlated with slow productivity growth across sectors. A further factor which is of interest in terms of the quality of employment is competitiveness. Quality employment is of importance in terms of competitiveness given the link between labour costs and implications for cost competitiveness as well as the importance of quality employment in the delivery of productivity gains. A final element that may be of interest in relation to the quality of employment relates to output. A higher quality of employment from

the perspective of an enterprise can positively impact the output of the firm. In general, productivity growth can be seen as a key enabler of sustainable increases in living standards.

Employment

The final perspective on what relates to quality employment to be covered in this discussion is that of those in employment. From the point of view of the employee, the quality of employment can relate to the conditions in which employees' work, the hours they work, job security, safety at work, the level of job strain, and overall job satisfaction, amongst others elements. Each of these factors may influence what a person deems to be quality employment. Finally, a significant element that relates to the quality of employment is income. From the point of view of an employee, quality employment would include an income that provides a suitable standard of living. There are a variety of international bodies, including the OECD, UN and ILO, which set out statistical frameworks for considering the quality of employment⁷. The majority of these measures relate to the perspective of employees with consideration of income and employment conditions.

Conclusion and Discussion

As detailed throughout this section, there are a number of framework which exist internationally in terms of the definition and assessment of job quality. In general, these frameworks, as defined by the OECD, UN and ILO, refer to job quality at the individual level. We can generally observe consistency across these frameworks with common elements in terms of the focus on earnings, job security and tenure, working hours, and the quality of the working environment. In terms of the policy context for pursuing quality jobs, it is also worth considering the concept of job quality from the perspective of overall economic and enterprise policy as well. The issue of job quality is of interest from a variety of perspectives and policy areas including welfare and the provision of low income supports; working conditions and employment policy; and enterprise policy and wider economic policy.

⁷ Cazes, S., A. Hijzen and A. Saint-Martin (2015), "Measuring and Assessing Job Quality: The OECD Job Quality Framework", OECD Social, Employment and Migration Working Papers. <http://dx.doi.org/10.1787/5jrp02kpw1mr-en>
UNECE (2015) 'Handbook on Measuring Quality of Employment: A Statistical Framework'.
https://www.unece.org/stats/publications/stat_qua_emp.html
ILO (2008) 'Proposals for the Measurement of Decent Work'.
https://www.ilo.org/integration/resources/mtgdocs/WCMS_115402/lang--en/index.htm

4. Existing Research in Irish Context

A number of papers have looked at the issue of job quality within an Irish context, which are summarised in the following table. It is of note that there is not a large volume of research completed within this area. While there are a variety of related papers looking at different aspects of the labour market in Ireland, there is a lack of direct research on the issue of the quality of employment.

Table 1: Summary of Existing Research

Source	Summary
Fulfilling Work in Ireland – Discussion Paper and Data Review (Carnegie Trust, October 2018)	<p>The research builds upon a research programme on the measurement of job quality which included a proposed framework for measurement in the UK⁸. The report assesses the Irish labour market across a definition of fulfilling work which includes elements such as income/pay; personal agency; engagement; terms and conditions; work-life balance; job security; management support; training and skills development; and satisfaction. The analysis had the following findings:</p> <ul style="list-style-type: none"> • Across several measures, workers in Ireland appear to fare better than their EU counterparts, and on some measures, better than performance in the UK although some of the data sources relate to subjective survey responses. • The incidence of involuntary part-time work in Ireland today is particularly concentrated among young people, women, and in the retail, hospitality and cleaning sectors. There may also be significant underemployment among disabled people. • Workers in Ireland are less likely than their EU and UK counterparts to be employed on a permanent basis. However, workers in Ireland do not appear to be more concerned overall about their job insecurity. • Ireland has a relatively large number of highly paid workers but the number of low-paid workers is above the EU average. • Young people, women and low earners are disadvantaged in terms of access to a range of aspects of fulfilling work.
Job Creation & Job Quality in Ireland: an Exploration of the Policy Issues (J. Sweeney, 2016)	<p>This paper found that in an international comparative perspective Ireland does not have a particular problem with the quality of employment but its performance is mediocre and is outside a high performing group of OECD countries. The analysis also discusses the wider policy context including labour market, enterprise and skills policies and strategies.</p>
Job Types and Job Quality in Europe (Holman, 2013)⁹	<p>This analysis contains some useful insights into the comparability of Irish job quality with other European countries. The approach taken in the paper classifies a taxonomy of six job types based on their nature and defines different types of high and low quality jobs. Ireland’s work force is estimated to be split into 45% in the defined high quality job categories and 55% in the low job quality categories. This is similar to the UK (48% and 51% respectively); lower than Social Democratic countries (66%/34%) and Continental countries (52%/48%); and higher than Southern European (30%/70%) and Transitional countries (34%/67%)¹⁰. As such, job quality in Ireland can be seen to be broadly in the middle of European countries based on this methodology.</p>

⁸ <https://www.carnegieuktrust.org.uk/publications/measuring-good-work-the-final-report-of-the-measuring-job-quality-working-group/>

⁹ Holman, D. (2013) ‘Job Types and Job Quality in Europe’. Human Relations 66(4) 475-502.

¹⁰ Social Democratic includes Denmark, Finland and Sweden; Continental includes Austria, Belgium, France, Germany, Luxembourg and Netherlands; Southern European includes Cyprus, Spain, Greece, Italy, Malta and Portugal; Transitional includes Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia and Slovakia.

5. Approach, Data and Limitations

As detailed through this paper, the issue of job quality is multifaceted and complex. There is no one definition across the available literature and there are a variety of perspectives from which to consider the issue. In terms of generating relevant evidence in this area, this paper takes the approach of focusing on a number of key variables which can provide an insight into the nature of employment in Ireland and how this has changed over time. As detailed below, the analysis focuses on the occupation of employment, trends in income from employment, the number of hours worked and the tenure status as relevant indicators for job quality.



These indicators have been chosen given the data available to this study and their inherent link to the nature of employment. Occupational profile data can provide an insight into the type of work being carried out in employment. Those in employment are classified into individual job types which can then be grouped based on characteristics such as qualifications, training, skills and experience. This can provide an insight into the nature of work in the Irish labour market. Hours and tenure of employment is also analysed here given their inherent link to the type of work within the labour market. Tenure relates to the permanency of employment while hours relates to the number of hours which people are working in a usual week. Finally, income is analysed to assess the level of value which employees garner from employment. As stated, quality can be assessed from a variety of perspectives and the indicators presented here provide an insight into the nature of employment. Future research assessing quality from other perspectives (including productivity and resilience) would be of significant benefit.

In completing this analysis, data has been accessed from the CSO for both the Labour Force Survey (LFS) and the Survey on Income and Living Conditions (SILC)¹¹. The Labour Force Survey (LFS) is a nationwide household survey designed to produce quarterly labour force estimates that include the official measure of employment and unemployment in the state. It replaced the Quarterly National Household Survey in Q2 2017 and this presents some limitations for comparability as detailed in Appendix One. SILC is an annual household survey which focuses on the income and living conditions of different types of households in Ireland, in order to derive indicators on poverty, deprivation and social exclusion. SILC is an annual survey. The income reference period

¹¹ Note: Results in this paper are based on analysis of strictly controlled Research Microdata Files provided by the Central Statistics Office (CSO). The CSO does not take any responsibility for the views expressed or the outputs generated from this research.

for SILC is the twelve months immediately prior to date of interview. Therefore, the income reference period differs from household to household (depending on the interview date) and overall within the 2017 dataset we have income data spanning from January 2016 to December 2017¹². Other limitations associated with the SILC survey includes a potentially low response rate from high income households, low income households and minorities¹³. SILC and LFS are separate surveys and analysis based on these should be read separately.

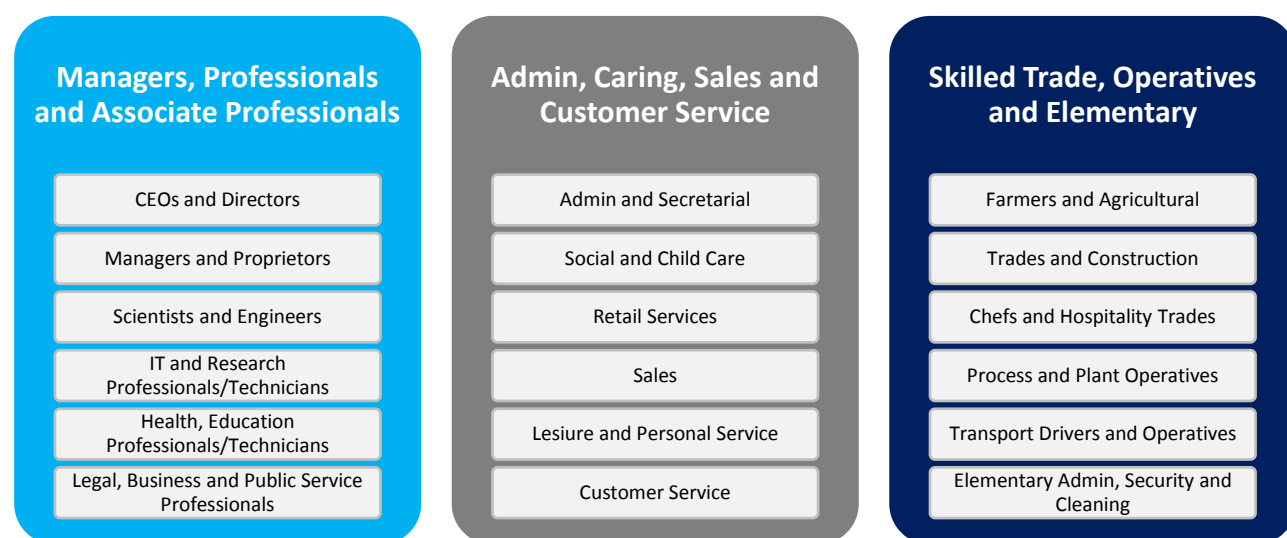
In general the analysis as presented assesses changes in underlying trends in the time periods of 2007, 2011 and 2018. These periods were chosen to reflect the pre-crisis peak, the mid-crisis trough and the recent labour market recovery and the analysis demonstrates shifts between these time periods. To facilitate greater comparison Q2 has been used in each year. It should be noted that some trends reflect longer term developments in the labour market and wider economy and the analysis presented here should be seen in that context.

6. Indicators and Analysis

The following section sets out relevant analysis in relation to the identified indicators of job quality. As such it is structured around each of these areas including occupation, income, working hours and tenure.

Occupation of Employment

As of Q2 2018 there were 2.26 million people in employment in Ireland. An important element of understanding the nature and quality of employment within the labour market is an assessment of the occupations that people are employed in. The occupation of employment refers to the particular work performed by an individual as distinct from the sector which the organisation they work for operates within. For the purposes of this analysis occupations have been grouped into the categories¹⁴ set out below. Example occupations within each group are also provided for illustrative purposes.



¹² Standard Report on Methods and Quality for the 2017 Survey on Income and Living Conditions (EU- SILC) (CSO, 2017)

¹³ https://www.nerinstitute.net/download/pdf/earnings_and_lowpay_in_roi_neri_wp29.pdf

¹⁴ Managers, Professionals and Associate Professionals refers to SOC Codes 1-3, Admin, Caring, Sales and Customer Service refers to 4, 6 and 7 while Skilled Trade, Operatives and Elementary refers to 5, 8 and 9.

The occupation group of Managers, Professionals and Associate Professionals consists of those involved in either planning, directing and coordinating resources, those involved in the practical application, development or teaching of an extensive body of theoretical knowledge and those involved in the operation and maintenance of complex equipment, services and tasks. The occupation group of Admin, Caring, Sales and Customer Services includes those who undertake general and/or specialist administrative, clerical and secretarial work, those who are involved in the provision of a service to customers, whether in a public protective or personal care capacity and those whose tasks require the knowledge and experience necessary to sell goods and services and provide other services to customers. Finally, the occupational group of Skilled Trade, Operatives and Elementary includes those whose tasks involve the performance of complex physical duties that normally require a degree of initiative, manual dexterity and other practical skills, tasks including the operation/monitoring of industrial plant, assemble products, operate vehicles and mostly routine tasks.

41% of those in employment are in higher occupation groups like Managers, Professionals or Associate Professionals. This occupational group has relatively high levels of education, there are slightly more males and people aged between 30 and 50.

As of Q2 2018, 41% of those employed in Ireland worked in the occupational group of Managers, Professionals and Associate Professionals. In terms of the make-up of this group it is noted that there is a slightly higher proportion of males (53%), a higher concentration of workers in the age range of 30 to 50 and higher levels of education generally in comparison to the other occupational groups. In terms of region, it is also of note that the Eastern and Midland region, which includes Dublin, has a larger share of its employment in this group.

Table 2: Composition of Employment by Occupation and Characteristic, Q2 2018

Indicator	Managers, Professionals & Associate Professionals	Admin, Caring, Sales & Customer Service	Skilled Trade, Operatives & Elementary
Total Employment			
Number in Employment	919,000	589,000	730,000
% of Total Employment	41%	26%	32%
Gender			
Male	53%	26%	78%
Female	47%	74%	22%
Age			
Under 30	15%	27%	23%
30-50	59%	47%	46%
50 Plus	26%	26%	31%
Region (Read % Across)			
Northern and Western	34%	24%	41%
Southern	36%	27%	36%
Eastern and Midland	46%	28%	26%
Level of Education			
Post-Secondary and Below*	20%	62%	78%
Degree	52%	31%	17%
Masters and PhD	26%	5%	2%

Source: Analysis of CSO LFS Data. Note: Data may not sum to 100% due to rounding and not stated. * This includes those with Leaving Certificate and below as well as Apprenticeships, PLC and FET)

A quarter of those in employment are within the occupational group of Admin, Caring, Sales and Customer Service. This group has a high proportion of females (74%) and those under the age of 30 (27%). Of those in employment within this occupation group one third have a degree or higher while two thirds have a Post-Secondary education or below. The occupation group of Skilled Trade, Operatives and Elementary accounted for one third of those in employment in Q2 2018. This occupational group is largely made up of males (78%) and those who hold a Post- Secondary education or below (including Apprenticeships, PLC and FET) (78%). In terms of the regional distribution this occupation group accounts for a higher proportion of the total level of employment in the Northern and Western region and also a lower level in the Eastern and Midland region (which includes Dublin).

There are substantially fewer people in employment in Skilled Trade, Operatives and Elementary roles in the construction and industry sectors. Additional employment growth in other areas replaced this. Firstly, employment in the education and health sectors. Secondly, higher profession jobs in ICT, finance and scientific sectors. Thirdly, Skilled Trade, Operatives and Elementary roles in accommodation and food.

In comparing the sectoral and occupational make up of those in employment between now and the previous peak in 2007, a number of trends are evident. There are significantly fewer people in employment in the occupational group of Skilled Trade, Operatives and Elementary with the proportion of total employment that this group represents falling from 41% in 2007 to approximately 32% in 2018. This is focused in the Construction sector. In total, the decrease in employment within that occupation and sector amounts to around 100,000 jobs. However, employment growth has occurred within this sector between 2011 and 2018. In addition there has been a decrease of around 60,000 within the same occupation group in the Industry sector. This decrease in employment in the Skilled Trade, Operatives and Elementary occupations in the construction and industry sectors has more than been replaced by growth in other sectors. This can broadly be broken down into a number of areas as described in Figure 5:

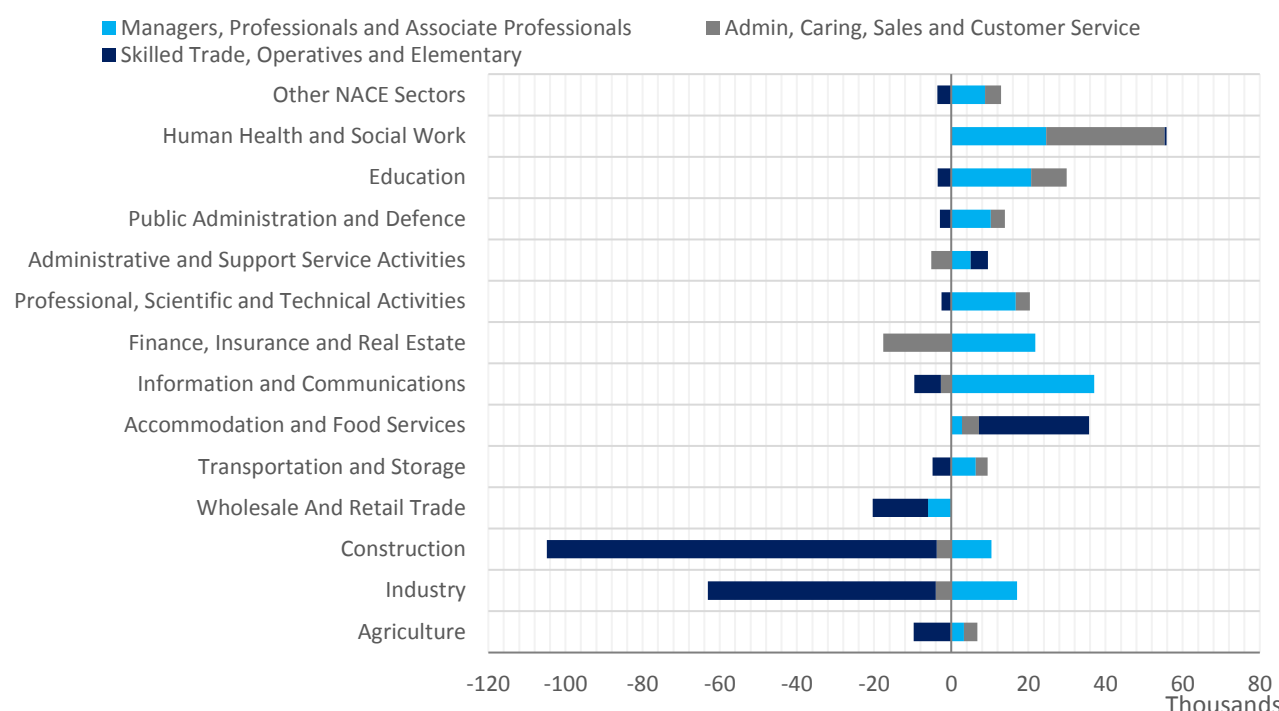
- A significant proportion of the additional jobs in the economy are in the higher occupation group within areas of the economy broadly linked to the public sector and social services. In total, there are around 55,000 more people in employment with the occupation of Manager, Professional and Associate Professional. These jobs are across the sectors of Public Administration and Defence, Health and Social Work and Education.
- There has been a significant increase in Manager, Professional and Associate Professional employment in the Financial, Insurance and Real Estate, Information and Communications and Professional, Scientific and Technical Activity sectors. There are just over 75,000 additional people in employment of this type.
- There has also been an increase in skilled trade, operative and elementary jobs in Accommodation and Food Services. There are just under 30,000 extra people in employment of this kind compared to Q2 2007.

As a result of these changes, there has been an increase in the proportion of those in employment working as Managers, Professionals and Associate Professionals from 33% in 2007 to 41% in 2018. The proportion of those

in employment in Admin, Caring, Sales and Customer Service roles has remained relatively constant over time at around a quarter.

It should be noted that while Q2 2007 has been chosen as a time period to assess labour market developments given that this was the previous peak level of employment, there was at that time a large increase in the level of employment in the Construction sector. The Construction sector accounted for 11% of total employment in 2007 while it had accounted for between 7-9% from 1998 to 2004. The large levels of employment in the Construction sector, linked to the overall property bubble, impact the comparison and should be kept in mind.

Figure 5: Change in Employment by Occupation and Sector, Q2 2007 – Q2 2018



Source: Analysis of CSO LFS. A,C,S & CS in Agriculture and Construction and ST, O & E in Public Admin and Defence and Education are based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution. ST, O & E in Finance, Insurance and Real Estate excluded due to small sample size.

In terms of the type of people working within these occupational groups over time we can observe that:

- Overall, the proportion of the workforce which is male has decreased from 57% to 54%, potentially linked to the decrease in construction employment and increased female employment.
- There is a reduction in the proportion of all occupational groups that are under the age of 30 and an increase in the proportion of each occupation group in older occupation groups.
- Under 30's share of the Manager, Professional and Associate Professional has reduced from 25% to 15%, the share of Skilled Trade, Operatives and Elementary has reduced from 36% to 23% and the share of Admin, Caring, Sales and Customer Services has decreased from 42% to 27%.
- Conversely, the share of employment accounted for by over 50's has increased over time. The share for Managers, Professionals and Associate Professionals has increased from 21% in 2007 to 26% in 2018, Admin, Caring, Sales and Customer Service from 18% to 26% and Skilled Trade, Operatives and Elementary from 22% to 31%.

Hours of Employment

The following section looks at hours of employment across occupation, sector, age, education and region as an indicator of the type of employment within the labour market. Hours is an important variable of quality of employment from an employee, enterprise and economy perspective¹⁵.

A higher proportion of Admin, Caring, Sales & Customer Service employment is part-time whereas full-time accounts for a higher share in Managers, Professionals & Associate Professionals and Skilled Trade, Operatives & Elementary profession. The Accommodation and Food Services sector has a relatively high share of part-time employment.

In 2018, there were 540,600 people, or 24% of the total, in part-time employment (0-30 hours per week). 18% of Managers, Professionals & Associate Professionals, 23% of the Skilled Trade, Operatives & Elementary and 40% of the Admin, Caring, Sales and Customer Service worked part-time. Figure 6 displays the proportion of total employment by occupation and usual weekly hours in 2018. Firstly, this shows that approximately 60% of Skilled Trade, Operatives & Elementary and 66% of the Managers, Professionals & Associate Professionals are employed in the standard 30 to 48 hour working week. In contrast to this, only 56% of Admin, Caring and Sales occupation is employed in this hour group. Secondly, while around 14% of Managers, Professionals & Associate Professionals and Skilled Trade, Operatives & Elementary are employed in the 49+ hour interval, only 2% of Admin, Caring & Sales profession are employed on this basis.

Figure 6: Proportion of Total Employed by Profession and Weekly Hours, 2018 Q2

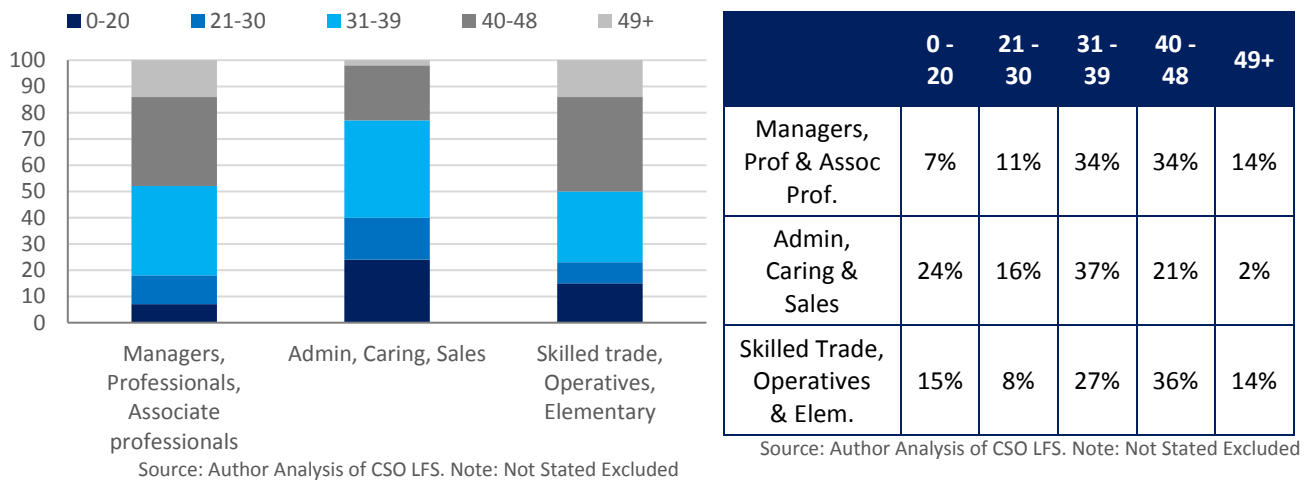
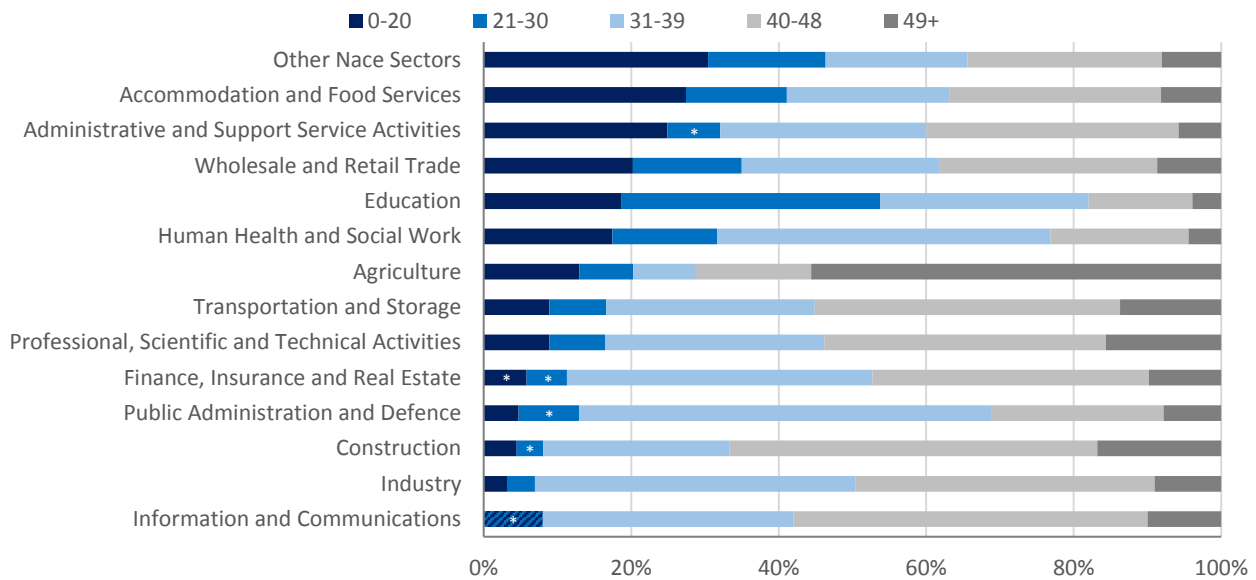


Figure 7 displays the proportion of total employment by sector and usual weekly hours. Firstly, a number of sectors, such as Accommodation & Food (27%) and Other NACE Sectors (30%) have a higher proportion of employment working part-time (0-20 hours per week). Secondly, at the other end of the spectrum, there are a number of sectors such as Agriculture, Construction and Professional, Scientific & Technical Activities working 56%, 17% and 16% respectively in the 49+ hour interval. Thirdly, focusing on the 30 to 48 hour working week gives an insight into the proportion of people who are working hours in line with a standard full time

¹⁵ See Appendix One for note in relation to comparability of data over time.

job. Substantial variation is observed. It is seen that only 24% of people employed in Agriculture and 42% of people employed in Education are working standard hours. This is in stark contrast to sectors such as Construction (75%), Finance, and Insurance & Real Estate (79%), Public Administration and Defence (79%) and Industry (84%).

Figure 7: Proportion of Total Employed in 2018 by Sector and Hour Intervals



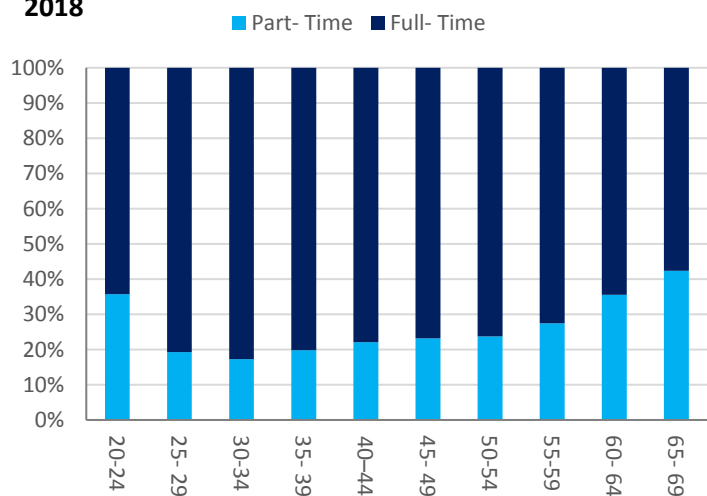
Source: Author Analysis of CSO LFS. Note: 0-30 hours for Informations/Communications. * are based on a small number of sample cells meaning such estimates are considered to have a wide margin of error and should be interpreted with caution. Excludes not stated.

The number of hours across regions reflects the nature of employment in these areas. The proportion of full-time employment is around 74% with the exception of Dublin (78%) and South-East (70%). Secondly, around 12% were working in the 49+ hour category with the exception of Dublin and Mid-East at 9%. Thirdly, only 19% of the people in the Western region work in the 40 to 48 hours interval. This is in sharp contrast to all other regions where more than 26% (or Dublin at 39%) of total employed are in the 40 to 48 hours interval.

Figure 8 shows that 36% of 20-24 year olds worked part-time. This reduces for 25-29 age category by 17 percentage points. Also, part-time hours reduce further as a percentage of total employment until 30-34 and rise gradually until 65-69. As such we can see that a higher proportion of young and old people in employment are on a part-time basis.

Analysis to determine if people wish to work more hours was explored. In 2018, approximately 15% stated that they would like

Figure 8: Proportion of Part-Time and Full-Time by Age, 2018



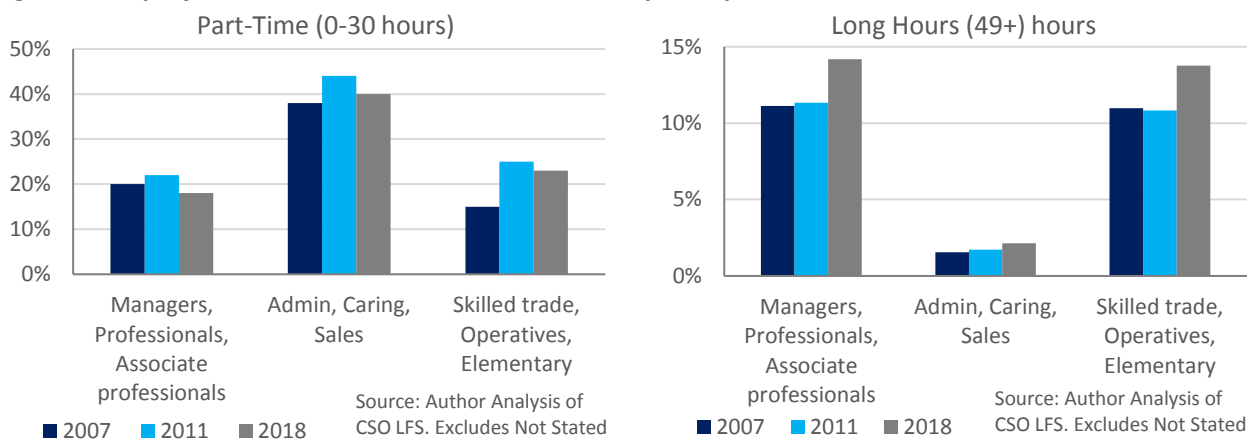
Source: Author Analysis of CSO LFS

to work additional hours. Approximately 64% of these would like to work additional hours within their present job, while 21% through another or different job and 14% in any of the aforementioned ways.

Overall there has been a slight increase in the number of people employed on a part time basis in comparison to 2007. Average weekly hours are increasing across the majority of areas, particularly Managers, Professionals and Associate Professionals, and decreasing in some others.

Overall, the number of people employed on a part-time basis (0-30 hours) is just over 80,000 higher in 2018 than in 2007. However, part-time work as a proportion of the total (excluding not stated) increased from 23% in 2007 to 25% in 2018. For Managers, Professionals & Associate Professionals, the proportion of part-time employed increased by 2 percentage points from 2007 to 2011 while it decreased by 4 points in 2018. For Admin, Caring & Sales roles, the proportion of part-time employed increased from 38% in 2007 to 44% in 2011 to 40% in 2018. For Skilled Trade, Operatives and Elementary, the part-time proportion increased from 15% to 25% in the crisis period before falling to 23% in 2018. On the other hand, an increase in the proportion of Managers, Professionals & Associate Professionals employment with long hours from 11% in 2007, 10% in 2011 and 14% in 2018. For Skilled Trades, Operatives, Elementary, the proportion of employment with longer hours increased from 11% in 2007 to 14% in 2018. However, a negligible increase is noted for Admin, Caring & Sales. Overall, there was a 3 percentage point increase (8% to 11%) between 2007 and 2018 for 49+ hours.

Figure 9: Employment for 0-30 hours and 49+ Hours by Occupation, 2007, 2011 and 2018



It is of interest to consider the change in the average weekly hours between 2007 and 2018. Table 3 displays this analysis. Firstly, average hours in all sectors increased for Managers, Professionals & Associate Professionals. In fact, there is sharp escalations especially in sectors such as Accommodation & Food, Agriculture, Wholesale & Retail Trade and Construction. Secondly, the decline for Admin, Caring & Sales occupation and Skilled trade, Operatives & elementary are negligible (between 0.5 and 1.1 hours). Thirdly, there were large increase for Skilled Trade, Operatives and Elementary workers in Agriculture and Transportation and Storage sector. Fourthly, there were less hours worked in 2018 compared to 2007 in Finance, Insurance & Real Estate, Education and Other NACE Sectors category for Admin, Caring & Sales and Skilled Trade, Operatives & Elementary roles.

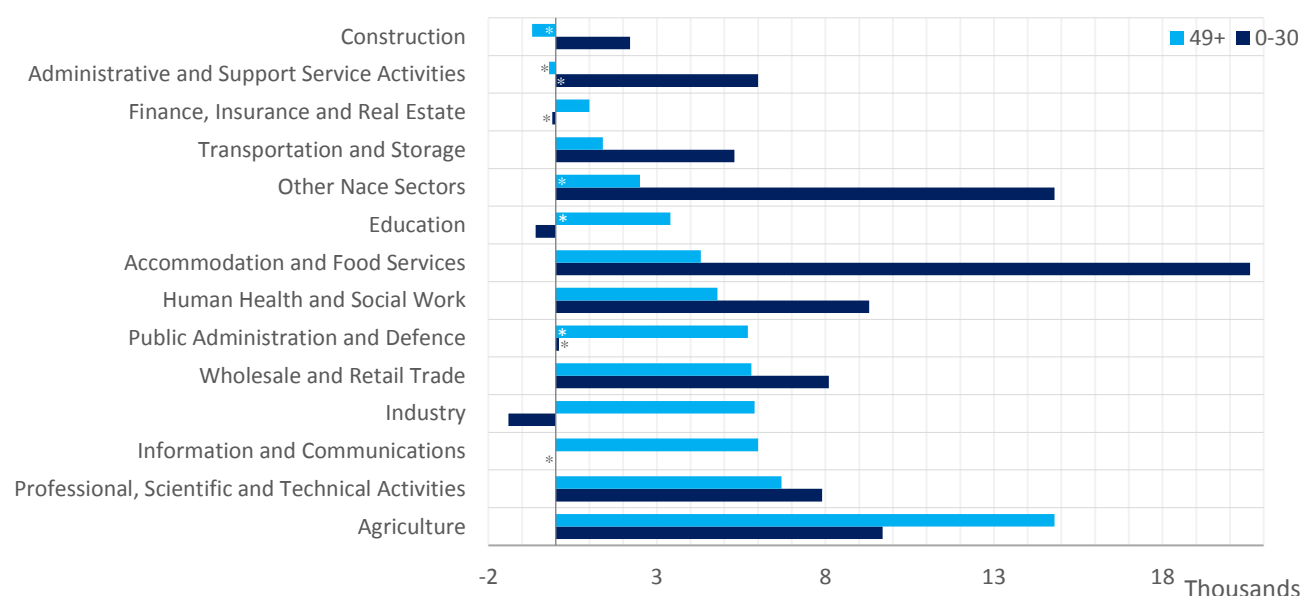
Table 3: Change in Mean Hours by Occupation and Sector from 2007 to 2018

Industry	Managers, Prof. & Assoc. Prof.	Admin, Caring & Sales	Skilled Trade, Operatives & Elem.
Agriculture	6.4	2.7*	14.1
Construction	4.4	3.2*	2.2
Industry	3.4	2.3	0.9
Wholesale and Retail Trade	6.4	0.6	0.5
Information and Communication	3.1	1.0	2.9
Administrative and Support Service Activities	3.0	1.3	3.5
Transportation and Storage	4.4	1.2	4.4
Public Administration and Defence	2.9	1.5	1.8*
Human Health and Social Work	2.3	2.8	0.6
Professional, Scientific and Technical Activities	1.8	1.3	-0.9
Finance, Insurance and Real Estate	2.6	-0.5	*
Education	3.2	-0.8	-0.9*
Other NACE Sectors	5.7	-0.5	-0.8
Accommodation and Food Services	9.4	0.3	-0.4

Source: Author Analysis of CSO LFS. Note: * based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution. ST, O & E in Finance, Insurance and Real Estate excluded due to small sample size.

Figure 10 below focuses on the changes between 2007 and 2018 by sector and people working part-time and long hours. A large variation is seen in the differences in sectors between 2007 and 2018. Firstly, the number of people working part-time in sectors such as Industry, Education and Finance, Insurance & Real Estate has fallen. Secondly, while there is a negligible increase in part-time employment in sectors such as Public Administration & Defence and Information & Communications, large increases are noted in all other sectors, mainly Human Health & Social Work, Agriculture, Other NACE Sectors and Accommodation & Food services. On the other hand, there is a decline in the number of people working long hours in Industry (Electricity & Gas). While there was a decline of 600 people working the 0-30 hour interval between 2007 and 2018 in the Education sector, it is seen that there is a significant increase of 3,400 people working in the 49+ hour interval.

Figure 10: Change in Numbers Employed Part-Time and 49+ Hours by Sector between 2007 and 2018



Source: Author Analysis of LFS. Note: * based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution

For the purpose of this paper, changes in hours worked by region, age and education were also analysed. The findings are as follows;

- Overall, a higher proportion of people worked part-time hours in the Border and South-East region in 2007, 2011 and 2018. Between 2007 and 2011, the proportion of people working part-time increased (between 5 and 9 percentage points) in all the regions. The largest increase of 9 percentage points was observed in the Border and South-East region while the smallest increase of 5 percentage points was seen in West, Dublin, South- West and Mid- East. Between 2011 and 2018, the proportion of people working part-time hours decreased. A decrease of 1 percentage point was concentrated amongst regions such as Midlands and Mid- East while the largest decrease of 6 percentage point was in the Border region.
- Overall, while there is a small difference (except Mid-East) between the proportion of people working long hours between 2007 and 2011, a significant difference exists between the proportion of people working long hours between 2011 and 2018. The proportion of people in Midlands and South- East region increased by approximately 6 percentage points. It is of interest that the proportion of people working long hours in Dublin between 2011 and 2018 remained constant.
- Looking at hours by age, there was a significant increase in the proportion of people working part-time (0-30 hours per week) for those under the age of 30 while a decrease in proportion working part-time was noted for 30-59 year olds between 2007 and 2018. Additionally, there was a significant decrease in the proportion of people working in the 31-39 hour interval across all age groups, predominantly 20-29 age interval. Proportion of total employed working long hours has increased, on average, for 40-59 age group.
- 67% of the people who completed lower secondary education were working over 49 hours per week. This percentage increased to 79% and remained the same in 2018. There is a positive relationship between hours worked in the 30 to 48 hour interval and increasing ISCED education level. The same is observed for 2018. In 2007, the most 0 to 20 hour interval jobs were worked by people who have completed upper secondary level qualifications. Similar trends were observed in 2011 and 2018.

Tenure of Employment

This section focuses on tenure within employment by profession, sector, age and region. Analysis within this area can show the extent to which people are employed on a permanent or temporary basis and how it has changed over time. In general, it is important to note that all the figures and analysis related to tenures focuses on employees which does not include self-employment.

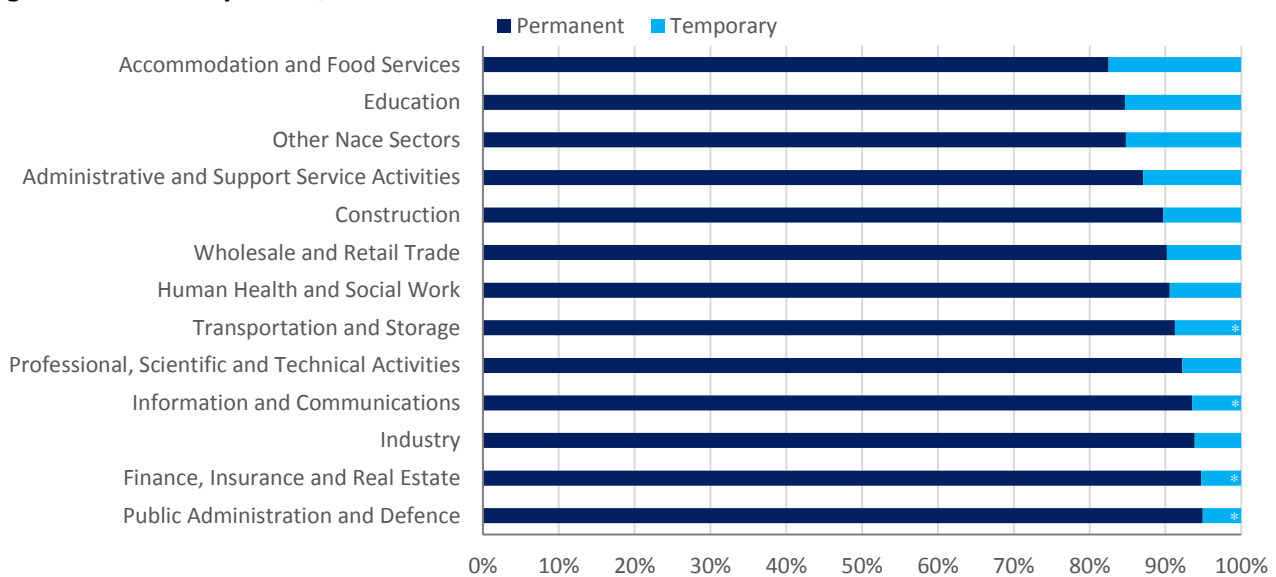
90% of people are employed on a permanent basis. There is some minor variation across occupations with Managers, Professionals and Associate Professionals having the highest proportion (93.3%) and Skilled Trade, Operatives and Elementary (86.7%) having the lowest. Temporary employment is most prevalent in the Accommodation and Food Sector.

In 2018, almost 1.7 million people or 90% of employees held a permanent contract and approximately 191,000 had temporary contracts. 93% of all Managers, Professionals and Associate Professionals are employed on a

permanent contract. Admin, Caring and Sales (88.4%) and Skilled Trade, Operatives and Elementary (86.7%) occupations have a similar amount of permanent contracts. It is evident that there are not large differences in the percentage of temporary contract holders amongst the three professions.

The proportion of permanent or temporary contracts by sector in 2018 is displayed in Figure 11. The chart illustrates the key message that certain industries, namely Accommodation and Food (17%), Education (15%), Other NACE Sectors (15%) and Administrative & Support Service Activities (13%), have a higher proportion of temporary contracts than the national average of 10%. It is notable that a number of sectors have a low proportion of temporary employment including Public Administration and Defence, Finance, Insurance and Real Estate and Industry.

Figure 11: Tenure by Sector, 2018 Q2



Source: Author Analysis of CSO LFS. Note: * based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution. Excludes not stated.

Analysis of tenure in terms of region and age was also carried out. The findings are as follows;

- Majority of regions are in line with the national tenure average of 90% in 2018. The exceptions include Mid-West at 87% and Mid-East at 92%.
- A normal distribution curve is observed for the ages holding a permanent contract in 2018. The peak is around age 35 to 39 which coincides with the highest amount of hours worked in 2018. A 52% increase in the number of permanent contracts is noted between the age bands of 20 to 24 and 25 to 29.
- Reasons for having a temporary contract were also explored. From all those people who reported to having a temporary contract, approximately 40% couldn't find a permanent job while 32% didn't want to be in a permanent contract.

The overall proportion of people employed on a temporary basis increased between 2007 (9.5%) and 2011 (11%) during the recessionary period before decreasing as the labour market recovered (10%). However, the level remains at an increased level in a number of sectors.

Table 4 sets out an analysis by sector for 2007, 2011 and 2018. The proportion of people employed on a temporary basis in each group of sectors increased between 2007 and 2011. In Construction the rate of temporary employment increased from 7% to 14%, Accommodation & Food Services increased from 17% to 20%, and 14% to 18% in Education. While the total number of people employed on a temporary basis in these sectors actually fell in line with the wider adjustment in the labour market, the number employed fell by less than the decline in those employed on a permanent basis.

Table 4: Number and Proportion of Temporary Contracts by Sector for 2007, 2011 and 2018

	2007		2011		2018	
	Temp	% Temp	Temp	% Temp	Temp	% Temp
Industry	13,700	5%	13,700	6%	15,600	6%
Construction	12,900	7%	7,600	14%	9,800	10%
Wholesale and Retail Trade	35,600	13%	27,000	11%	26,200	10%
Transportation and Storage	3,500	5%	6,400	10%	6,900*	9%
Accommodation and Food Services	21,200	17%	20,000	20%	27,400	17%
Information and Communications	4,800	6%	5,100*	7%	6,600*	6%
Finance, Insurance and Real Estate	4,800	5%	4,300*	4%	5,300*	5%
Professional, Scientific and Technical Activities	6,000	7%	8,400	11%	8,200	8%
Administrative and Support Service Activities	9,200	11%	9,400	14%	11,700	13%
Public Administration and Defence	3,900	4%	2,700	3%	5,300*	5%
Education	18,000	14%	23,600	18%	24,300	15%
Human Health and Social Work	24,300	11%	25,600	11%	25,200	9%
Other NACE Sectors	14,700	18%	15,300	20%	13,500	15%
Total	176,200	10%	173,400	11%	193,300	10%

Source: Author Analysis of CSO LFS. Note: Cells with * based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution. Agriculture excluded due to high proportion of self-employment in the sector. % Temp is the proportion of employees on temporary contracts. Self-employed and not stated excluded.

The total in temporary employment increased from 9.5% in 2007 to 11% in 2011 and back to 10% in 2018. Certain sectors such as Other NACE Sectors reduced from 20% in 2011 to 15% in 2018, Education from 18% to 15%, Accommodation & Food Services from 20% to 17% and Construction from 14% to 10%. Most industries either increased or had constant temporary contracts in 2007 and 2018, apart from Wholesale and Retail Trade which reduced from 13% to 10%, Human Health & Social Work which reduced from 11% to 9% and Other NACE Sectors which reduced from 18% in 2007 to 15% in 2018. Changes in tenure for 2007, 2011 and 2018 were also analysed. The findings are as follows;

- Firstly, the percentage of people holding permanent contracts decreased for all region by 0 to 3 percentage points except for Midlands and Mid-East which increased by 1 percentage point from 2007 to 2011. Secondly, it is seen that while all the regions reduced between 2011 and 2018, the Mid-West, South-East and Midlands region increased in the proportion of permanent contract holders by 1 to 4 percentage points. Overall, while the overall national average of permanent contract holders (90%) is the same for 2007 and 2018, it is seen that there was a reduction of 1 to 3 percentage points of permanent contract holders in all regions while a constant proportion of permanent contract was held in the Border region in 2007 and in 2018.

- Analysis of tenure by age shows that while there is a normal distribution curve in 2018, a right-tailed distribution is observed for 2011 and 2007. The peak age of obtaining tenure is 35 to 39 years for 2018, while it is 30-34 years in 2011 and 25 to 29 years for 2007. Secondly, for 2007, 2011 and 2018, temporary contracts drop significantly between the age bands of 20-24 and 25-29. There was a significant increase in the proportion of temporary employment among the 20-24 age between 2007 (16%) and 2018 (28%).

Income from Employment

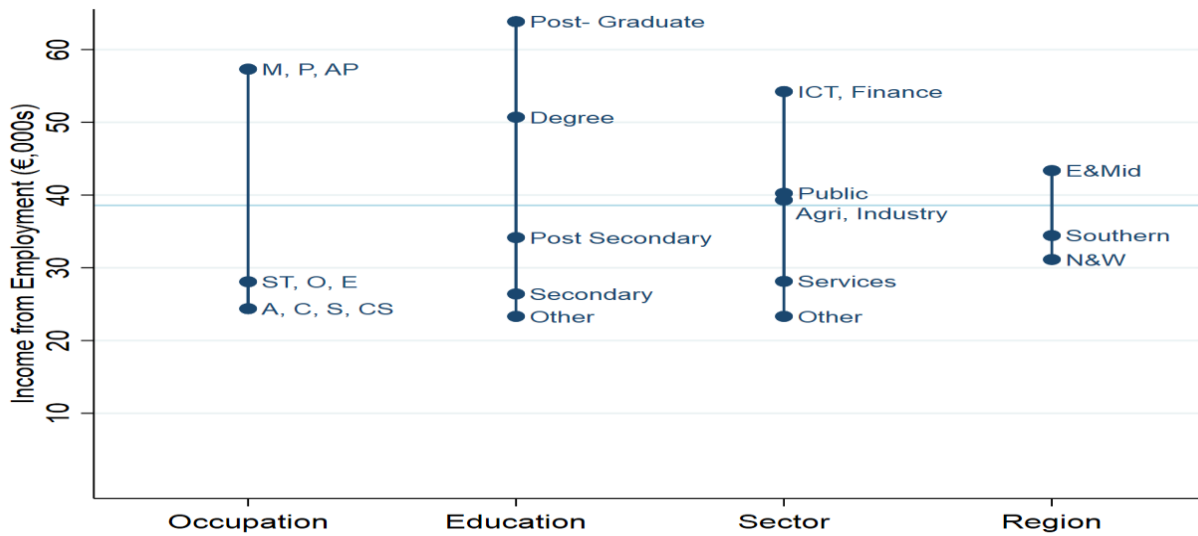
The income of Managers, Professionals and Associate Professionals is double that of other occupation groups. Those with a Post- Graduate qualification earn over double that of people with a Secondary education or below. While the mean income in the ICT, and Finance sector is double that of the rest of the Services sector.

This section looks at the income received from employment across various categories including sector, occupation, tenure and region. Direct income makes up 80% of the average gross weekly income of households, with the remaining 20% from social transfers. Given the focus of this analysis on the quality of employment, this section on income will consider only the income received from employment. Income from employment is therefore considered to be cash or near cash employee income, non- cash employee income, and profits and losses from self-employment. Furthermore, the results have been filtered to include only those who indicated in the survey that they were in employment.

There is substantial variation in the levels of income that people in employment earn within various categories. An overview of this can be seen in Figure 12 below. As this Figure shows, Managers, Professionals, and Associate Professionals have the highest mean income, as well as those working in ICT, Finance, and other Admin and Support Services. Those living in the Eastern and Midland region have a higher mean income than those in other regions, while those with a Post- Graduate qualification earn more than all other occupation groups. The remainder of this section will look into the income of some of the categories in more detail.

Managers, Professionals, and Associate Professionals earn more than other occupations across each of the sectors on both an annual and hourly basis, as can be seen in Figure 13 below. The mean income for Managers, Professionals and Associate Professionals in all sectors is approximately €56,600 annually. Managers, Professionals and Associate Professionals in ICT, Finance and Admin roles have the highest annual income. This sector has the highest mean income overall. When we consider the approximate median hourly income we see that while in Public Admin, Education and Health the mean annual income of a Manager, Professional and Associate Professional is below that in the ICT and Finance sector the hourly income of this group in Public Admin, Health and Education is above that of ICT and Finance.

Figure 12: Mean Income from Employment by Occupation, Education, Sector and Region (2017)

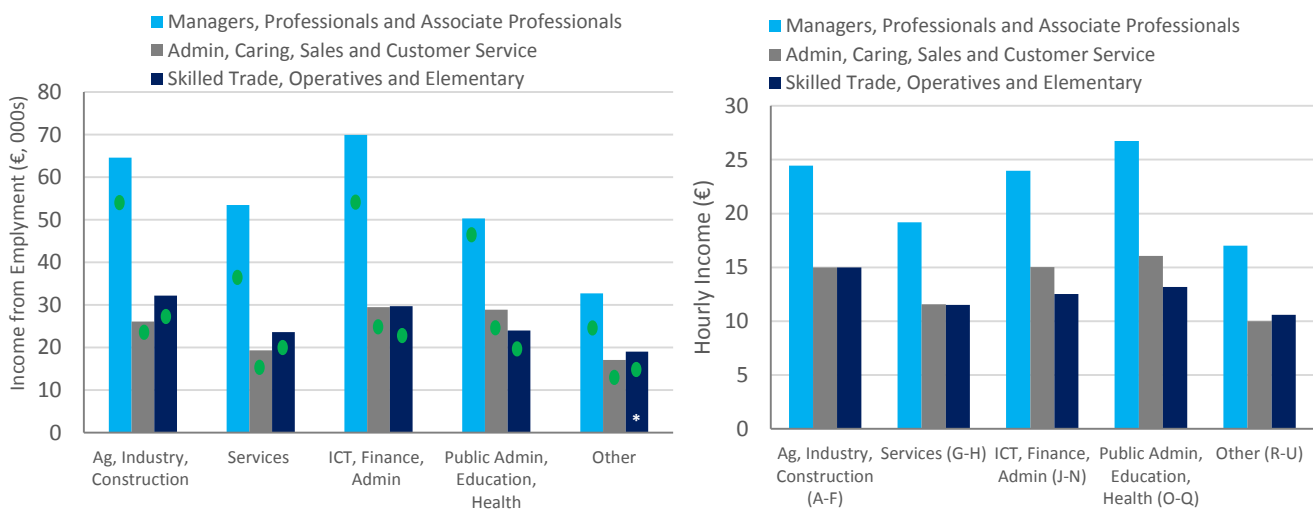


Source: Author Analysis of CSO SILC

Graph Legend

Occupations: M, P, AP- Managers, Professionals and Associate Professionals, A, C, S, CS- Admin, Caring, Sales and Customer Services, and ST, O, E- Skilled Trades, Operatives and Elementary
Sectors: Agri, Industry- Agriculture, Industry and Construction, Services- Wholesale, Retail, Transport and Food Services, ICT, Finance- ICT, Finance and Administration, Public- Public Administration, Education and Health

Figure 13: Mean Income from Employment and Median Hourly Income by Sector and Occupation, 2017



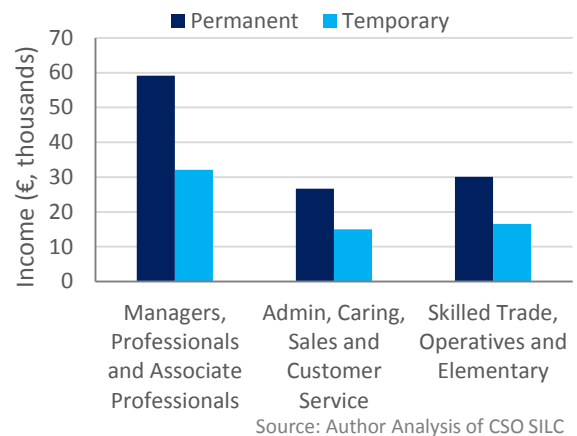
Source: Author Analysis of CSO SILC Data * should be treated with caution due to small sample size., Green dots denote the median income

Source: Author Analysis of CSO SILC

Admin, Caring, Sales and Customer Service is the occupation group with the lowest earnings with an average income from employment of approximately €24,400. This is less than half that of the mean income of Managers, Professionals and Associate Professionals. This difference is less pronounced when we consider the median hourly income, with Admin, Caring, Sales and Customer Service occupations receiving 60% of the median hourly income of Managers, Professionals and Associate Professionals. It is also interesting to note the large difference between the mean and median annual income from employment for Managers and Professionals.

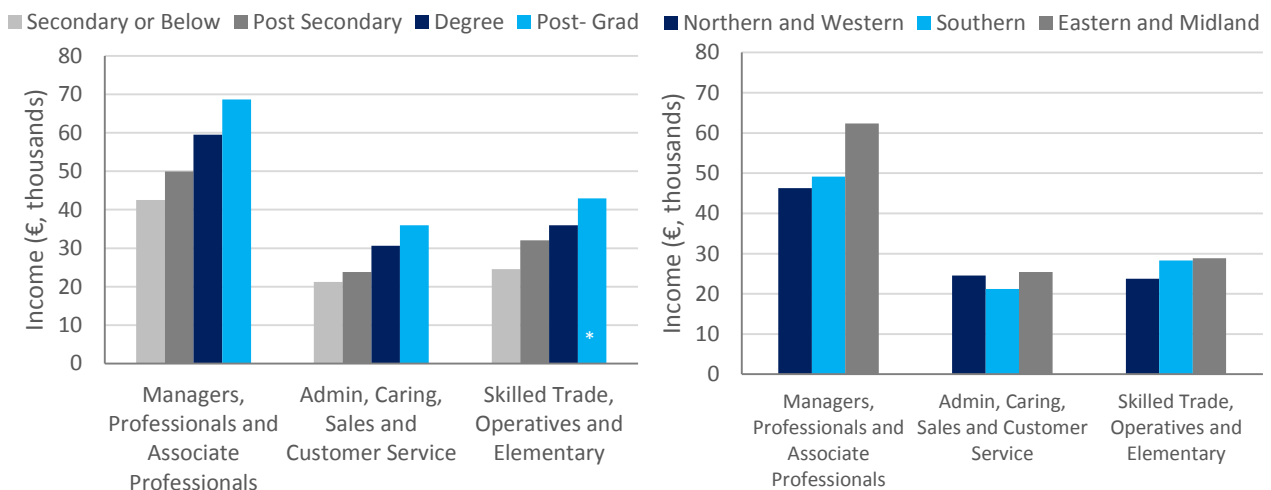
Similarly, Skilled Trade, Operatives and Elementary occupations earn approximately half that of Managers, Professionals and Associate Professionals on an annual basis, with less of a difference when we consider the estimated hourly income. Skilled Trade, Operatives and Elementary working in Agriculture, Industry, and Construction earn more than those with the same occupations in other sectors. The mean income of Skilled Trade, Operatives and Elementary workers is approximately €28,000.

Figure 14: Mean Income by Occupation and Tenure, 2017



Those employed on a temporary basis earn approximately 55% of the income of permanent workers in the same occupation groups. The mean income from employment of Admin, Caring, Sales and Customers Service roles and Skilled Trades, Operatives and Elementary roles employed on a temporary basis was €15,000 and €16,000 respectively, as is illustrated in Figure 15 above.

Figure 15: Mean Income by (a) Occupation Level of Education and (b) Occupation and Region, 2017



Source: Author Analysis of CSO SILC. Note: * based on a small number of sample cells and should be interpreted with caution

Source: Author Analysis of CSO SILC

Looking at the difference in the direct income received from employment across various occupation groups by the level of education it is unsurprising that the income received from employment increases with the level of education in each of the occupation groups, as displayed in Figure 15 (a) above. In 2017, Managers, Professionals and Associate Professionals whose highest level of education attained is secondary or below earn approximately 62% of those with a Postgraduate qualification (this includes those with masters and PhDs). This is the same across each of the occupations and this ratio is similar across each of the occupation groups at all levels of education.

Incomes in the Eastern and Midland region are higher than incomes in the other regions. When regional incomes are considered in terms of occupation, we can see that there are obvious differences in income levels

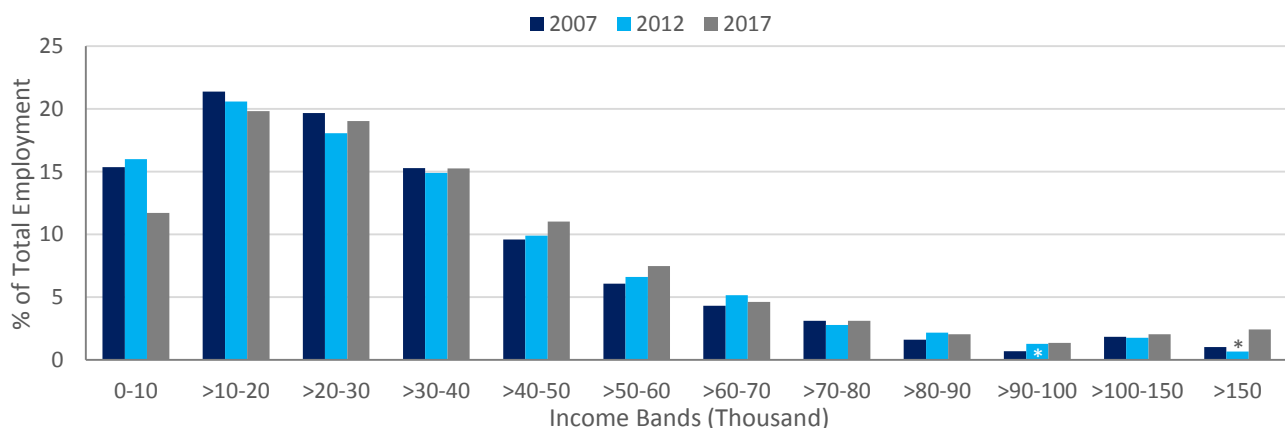
both across different regions, and within regions. This is largely influenced by the composition of employment in the region. As Figure 15 (b) above shows the same trend is observed within regions as is observed at a state level, i.e. Managers, Professionals, and Associate Professionals earn substantially more than other occupations. The difference between the regions is also apparent when we look at the income of Managers, Professionals and Associate Professionals in the Eastern and Midlands who earn between 20% and 30% more than the same occupations in the other regions. Finally, considering some of the other characteristics which are of relevance to this paper such as gender and age, the following points are of note;

- On average, males earn higher than females within each of the occupations. The largest difference between the income of males and females is in Skilled Trade, Operatives and Elementary occupations in which females receive 60% of the income from employment of their male counterparts. Administration, Caring, Sales and Customer Service roles has the smallest gap between the earnings of males and females with females receiving almost 80% of the income of males in the same occupation. The income of males and females appears to have converged somewhat between 2007 and 2017 for Administration, Caring, Sales and Customer Service roles and Skilled Trade, Operatives and Elementary occupations, while the scale of the difference for Managers and Professionals appears relatively constant.
- Considering the direct income received from employment and age we see that income tends to increase up to the 45 to 54 age category and then falls slightly for older age groups. This is similar across each of the various occupation groups, and over time.

Overall the mean income from employment remained relatively constant between 2007 and 2012, increasing by 16% between 2012 and 2017. The income of Managers, Professionals and Associate Professionals has increased at the greatest rate, resulting in a growing divergence between the incomes received across occupation groups.

The remainder of this section will consider how the income received from employment has changed over time. Overall, the mean income from employment remained relatively constant between 2007 and 2012, increasing by 16% between 2012 and 2017.

Figure 16: Percentage of those in Employment by Income Band (2007, 2012, 2017)

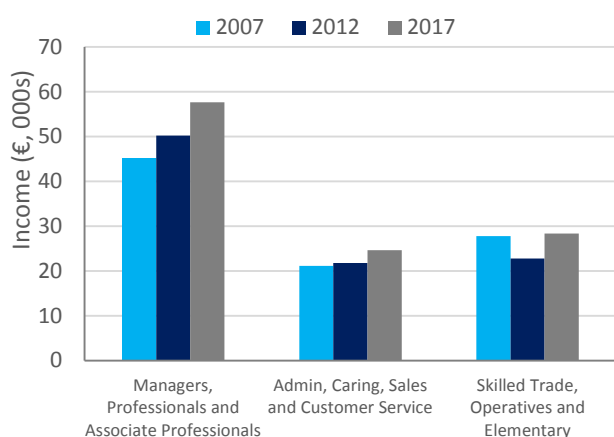


Source Author Analysis of CSO SILC * based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution

Approximately 50% all those in employment received €30,000 in income from employment or below in 2017, while 34% earn between €30,000 and €60,000. The remaining 15.5% earned over €60,000. As Figure 17 above shows, the proportion of people in the lowest income bands earning up to €10,000 annually fell by almost four percentage points between 2007 and 2017, with a reduction also observed in the €10,000 to €20,000 income band. An increase of approximately 1.5 percentage points can be seen in the €40,000 to €50,000 income band, the €50,000 to €60,000 income band and in those earning over €100,000.

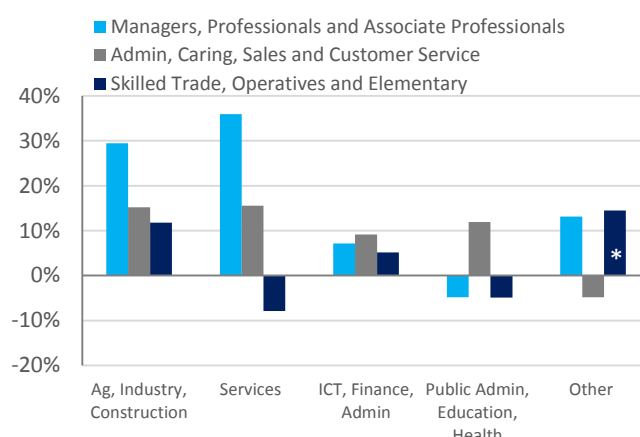
Figure 17 shows the mean income from employment has increased across all occupation groups. Managers, Professionals and Associate Professionals has increased to the greatest extent while the other occupation groups have experienced relatively smaller increases in their mean income since 2007.

Figure 17: Mean Annual Income from Employment by Occupation 2007, 2012, 2017



Source: Author Analysis of CSO SILC

Figure 18: Percentage Change in the Median Hourly Income (2007- 2017)



Source: Author Analysis of CSO SILC. * based on a small number of sample cells meaning such estimates are considered to have a wider margin of error and should be interpreted with caution

Considering how the mean income from employment by occupation and sector has changed over time within different sectors and occupations the following point are of note;

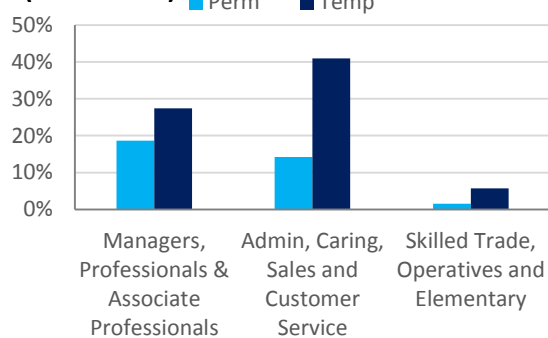
- Managers, Professionals and Associate Professionals have seen their direct income from employment increase between 2007 and 2017, though at different rates in different sectors. The largest increase was seen in Agriculture, Industry and Construction which saw an increase in direct income from employment increase by approximately 83% over this period. This is reflected in Figure 19 which shows that the hourly income of this cohort increased by almost 30%
- Managers, Professionals and Associate Professionals working in ICT and Finance saw their direct income from employment increase at the lowest rate, and this was the only sector in which Managers, Professionals and Associate Professionals experience a reduction in their mean income between 2007 and 2012 (a reduction of 14%), increasing again between 2012 and 2017.
- Admin, Caring, Sales and Customer Services have seen a net increase in direct income between 2007 and 2017 in all sectors, though to a lesser extent than the increases experienced by Managers, Professionals

and Associate Professionals. The sector which saw the largest increase in the direct income of those in Admin, Caring, Sales and Customer Service roles was in Public Administration, Education and Health which saw direct income from employment increase by almost 20%. All other sectors saw increases of between 9% and 16%.

- Skilled Trades, Operatives and Elementary workers experienced an increase in mean direct income from employment of approximately €2,000 between 2007 and 2017. At a sectoral level we can see differences emerge. Skilled Trades, Operatives and Elementary workers in ICT, Finance and Administration saw an increase of approximately 20%, in the services sector which includes Wholesale, Retail, Transport, etc. direct income from employment has fallen by approximately 10%. This is in contrast to all other occupation groups that have seen increases in their mean direct income from employment. This is reflected in Figure 18 which shows the median hourly income of this group falling by 8% over this period.

Between 2007 and 2017 the direct income received by those employed on both a temporary and permanent basis has increased. Although the mean income from employment of those employed on a temporary basis remains well below that of permanent workers the mean income of temporary employees increased at a greater rate between 2007 and 2017, as can be seen in Figure 19. Differences between the rates of change for different occupations can also be observed in Figure 20.

Figure 19: Percentage Change in Mean Income from Employment by Tenure (2007- 2017)



The mean direct income received from employment has increased between 2012 and 2017 across all regions. Looking at how incomes have changed over time for the various occupation groups across the regions the following points are on note;

- The mean income from employment in the Eastern and Midland region for Managers Professionals and Associate Professionals increased by approximately 17%, compared to approximately 10 -11% in the rest of the country.
- Those in Admin, Caring, Sales and Customer Service roles in the Northern and Western region saw their direct income from employment increase by approximately 26% between 2012 and 2017, while the increase in other regions was between 8 and 9%.
- Finally, the income from employment of those in the Southern and Eastern and Midlands has increased by between 23% and 26% for those Skilled Trade, Operative and Elementary roles while those in similar occupations in the Northern and Western region saw an increase of approximately 16%.

The mean income received from employment has been increasing over time for all levels of education. In 2012 Managers, Professionals and Associate Professionals with Secondary education or below earned 60% of those

of the same occupation who held a post-graduate qualification or above. However, Admin, Caring, Sales and Customer Service occupations and Skill Trade, Operative and Elementary occupations earned 73% and 98% respectively within the same occupation groups for the highest level of education, this suggests an increasing gap in income in this group based on the level of education.

7. Findings and Discussion

Overall Change in Employment

There have been some shifts in the nature of employment in Ireland over time. Following a decrease from 2.2 million people employed in 2006 to 1.85 million in 2011 the labour market recovered reaching a new peak of 2.3 million employed in 2018. As part of these developments, the type of employment in Ireland has changed compared to the last time the economy was at full employment. Based on the analysis carried out in this paper it would appear that there has been a change in the types of jobs in the Irish labour market. At an aggregate level we can note the following;

Occupation	There has been a shift towards employment in Manager, Professional and Associate Professional roles over time. These jobs, located in both the public and the ICT, Finance, Admin sectors, have been one of the main sources of employment growth in recent years. Of the people employed as a Manager, Professional or Associate Professional, there is a relatively high level of education, slightly more males and a larger relative proportion of those aged between 30 and 50.
Hours	Approximately a quarter of total employment is on a part-time basis. The proportion of part-time workers has increased slightly between 2007 and 2018. Part-time work is prevalent in sectors such as Accommodation & Food and amongst 20-24 and 60+ age category. On the other hand, proportion of people working 49+ hours per week has increased. This is mostly prevalent in sectors such as Agriculture, Construction and Professional, Scientific & Technical activities. Also, around 15% of people stated they would like additional hours of work. Out of these, 21% would like through another or different job while 64% would like to work additional hours within their present job.
Tenure	The rate of temporary employment increased during the economic crisis from 9.5% in 2007 to 11% in 2011 before reducing during the recovery back to 10% in 2018. It is noted that sectors such as Accommodation & Food and Education have almost returned to their pre-crisis proportion of temporary contracts. Also, of those with temporary contracts in 2018, 40% had them because they couldn't find a permanent job while, 33% had because they didn't want a permanent job.
Income	Between 2012 and 2017 the mean income from employment increased by 16%. This followed a period with little or no growth after the economic downturn. Income from employment is highest in the Eastern & Midland region. Those with a Post- Graduate qualification earn more than double those with a secondary level education or below. Males earn higher than females. The scale of the difference varies by occupation with the largest gap observed in Skilled Trades, Operatives and Elementary workers.

Employment Trends by Occupation

As demonstrated through this analysis there are significant differences in the nature of employment between occupational groups. As such it is useful to observe the differences between these groups and the following table highlights these key findings.

Table 5: Key Findings from Analysis by Occupation

	Key Findings – Managers, Professionals and Associate Profs.	Key Findings – Admin, Caring, Sales and Customer Service	Key Findings – Skilled Trade, Elementary and Operatives
Occupation	<ul style="list-style-type: none"> • 41% of those in employment in this occupation group. This has increased from 33% in 2007. • Increase in number of jobs for this group has been in ICT, Finance and Admin Sector and Public Sector. • High relative levels of education with around 4 in 5 having a degree or higher. • Higher proportion of this employment in Dublin. • Slightly more males in employment in this group (53%). 	<ul style="list-style-type: none"> • Accounts for around a quarter of employment and this has remained relatively constant over time. • Health sector accounts for most additional job growth within this group. • 36% have a degree or higher. • Large proportion are female (74%) and slightly higher proportion of younger workers. 	<ul style="list-style-type: none"> • One third of those in employment are in this group. This is down from 41% in 2007. This is due to decreases in the construction and industry sectors. • Despite the overall decline there are more jobs of this type in the Accommodation and Food Service sector. • Comparatively low levels of education (78% Post-Secondary and below). • Larger proportion of males (78%) and older workers.
Hours	<ul style="list-style-type: none"> • 18% of those in employment in this occupation group work part-time. This is below the 2007 (19%) and 2011 (22%) levels. • 14% of people in employment in these roles worked 49+ hours a week, a significant increase over time. • Average hours increased for all sectors for this group from 2007 to 2018. Roles in the Agriculture, Wholesale, Retail & Trade and Accommodation & Food sectors increased dramatically. 	<ul style="list-style-type: none"> • This group has the highest proportion in part-time work at 40%. This is a slight reduction on 2007 levels. • In 2018, 2% of this group worked 49+ hours. • Average hours between 2018 and 2007 increased for sectors such as Human health & Social work and Construction and decreased negligibly for sectors such as Education, Finance, Insurance & Real Estate and Accommodation & Food. 	<ul style="list-style-type: none"> • 23% of those in employment in this occupational group are working part-time. This is the same level as in 2007 but was slightly higher (25%) in 2011. • The proportion of this occupational group working longer hours reduced from 16% in 2007 to 11% in 2011 before increasing to 14% in 2018. • Average hours between 2007 and 2018 shows significant increases especially in the Agriculture and Transportation & Storage sectors.
Tenure	<ul style="list-style-type: none"> • In 2018, 93% of Managers, Professionals & Associate Professionals hold a permanent contract. • This has remained relatively constant throughout the time periods analysed. 	<ul style="list-style-type: none"> • 88.5% of this occupational group hold a permanent contract in 2018 • This proportion was slightly less, approximately 87%, in both 2007 and 2011 and as such temporary employment has become slightly less prevalent among this group. 	<ul style="list-style-type: none"> • In 2018, 87% of this occupational group had a permanent contract. • This was four percentage points higher in 2007 and the same as 2018 in 2011. As such, there is a higher proportion of temporary employment.
Income	<ul style="list-style-type: none"> • This occupation group earn approximately double that of the other occupation groups. Earning approximately €20,000 over the national mean income from employment. • The income of this occupation group has increased at a greater rate than other occupations resulting in a growing divergence between the incomes received across occupation groups. 	<ul style="list-style-type: none"> • This occupation group receive the lowest mean income from employment, receiving approximately €14,000 less than the mean income. • The sector which saw the largest increase in the direct income from this occupation between 2007 and 2017 was in Public Administration, Education and Health which saw an increase of almost 20%. All other sectors saw increases of between 9 and 16%. 	<ul style="list-style-type: none"> • This occupation group earn approximately €10,000 below the mean income from employment • Overall this occupation has seen a relatively small growth in the income which they receive from employment between 2007 and 2017 with some variation across sectors.

Discussion

This paper has provided an initial analysis of the concept of job quality and some trends in relevant indicators. As demonstrated there is no one definition of the quality of employment which provides issues in relation to measurement. Quality can be viewed from a variety of perspectives including the economy, enterprise policy and employment. There has been an increased policy focus on this area following significant employment growth in recent years.

Given the level of supports and resources that are focused on developing both the enterprise base and labour supply and the policy focus on this issue, it is important that objectives related to quality are well developed. While naturally more difficult to define than a target for an increased level of employment, assessing progress in developing the quality of employment mean that this requires consideration.

Consideration should be given to the level and composition of supports which are in place and how they can be best targeted to support enhanced productivity and job quality. In recent years, policy and supports have been focused on increasing the level of employment and it would be of use to assess the extent to which the levers need to adjust given the focus on job quality. In considering supports that are in place it would also be necessary to be cognisant of a variety of issues including Brexit and the cyclical position of the labour market.

Further research assessing the determinants of high quality of employment would be of significant benefit to policy development. This could include econometric analysis of relevant facets of employment quality to establish further links. Furthermore, the link between the nature of employment and the productivity of enterprises should be analysed. Understanding the type of employment that exists within different sectors of the economy (e.g. SMEs or MNCs) would provide further evidence to understand the link between the enterprise base and the labour market. Finally, detailed analysis of gross income levels associated with different types of employment would be of use given the necessary role that Ireland's tax and welfare system plays in adjusting inequality levels.

Appendix One: Further Notes for Labour Force Survey Analysis

The analysis of the recent trends in the working age population, labour force and inactive population carried out in this paper is limited to the period 2007 Q2 to 2018 Q2 (mainly Q2 2007, Q2 2011, Q2 2018). Due to methodological changes associated with the Labour Force Survey (LFS), which has replaced the Quarterly National Household Survey (QNHS), the data prior to Q3 2017 cannot be directly comparable to data Q3 2017 onwards. In order to minimise the effect of this change, the historic data (from 2017 Q2 backwards) has been adjusted to the level of the new LFS to some key indicators included in this paper such as NACE Sectors, Age, Education, Occupation).

However, there are two areas where the break in series are more relevant to the analysis presented in this paper. First, there data on hours is not adjusted in the same way as the variables mentioned above. Also, there were changes to the composition of the NUTS3 regions which came into force from Q1 2018 e.g. County Louth moved from the Border to the Mid-East region and what was formerly South Tipperary moved from the South-East to the Mid-West region. The new groupings are reflected in the LFS data from Q1 2012 onwards. As a result, the NUTS3 regions pre and post Q1 2012 are not directly comparable and may observe breaks in series for some regions. Therefore, the findings must be interpreted with this caveat in mind.

Quality Assurance Process

To ensure accuracy and methodological rigour, the author engaged in the following quality assurance process.

- ✓ Internal/Departmental
 - ✓ Line management
 - ✓ Peer review (IGEES network, seminars, conferences etc.)
- ✓ External
 - ✓ Other Government Department
 - ✓ Quality Assurance Group (QAG)



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