Roinn an Taoisigh
Department of the Taoiseach

IGEES
Irish Government Economic & Evaluation Service

Staff Paper

Compositional Analysis of Labour Force and Inactive Working Age Population

Irish Government Economic and Evaluation Service
March, 2018
Eric Doyle
Economic Policy Unit
Department of An Taoiseach

Executive Summary

Despite the recovery and the return of the labour force to pre-recession levels, the number of persons classified as inactive continues to rise. The number of people classified as inactive increased by over a quarter of million between 2007 and 2017. Males accounted for almost two-thirds of this increase.

The main driver of the increase in inactivity has been the ageing of the labour force. Labour force projections indicate that this trend is likely to continue for the foreseeable future. When the 65 year old and older cohort is excluded from inactivity numbers, the main driver of the increases in recent years was the 15 to 24 year old cohort. The largest increases in inactivity amongst this cohort occurred during the recession period amongst males.

Analysis of QNHS data on inactivity sub-categories indicated that in the recession years most inactive males were in the *Student* category. In the post-recession period the *Retired from employment* accounted for the majority of the increases for both genders. However, there has been growing numbers of males in the *Other* inactivity category since 2013, indicating structural as well as cyclical factors driving inactivity.

Furthermore, this inactivity trend since 2013 has occurred despite the recovery in labour market. Analysis of the annual changes in inactivity by age indicated that young males in particular were at risk.

Female labour market activity has performed better. While females represented the majority of inactive working age adults, the number of females in the labour force has been consistently increasing over the last decade and there were more females than ever before in the labour force in Q3 2017. This corresponded with significant declines' in the numbers of inactive females in the *Engaged in home duties* category of inactivity.

Glossary

CSO – Central Statistics Office

DPER – Department of Public Expenditure and Reform

ESRI – Economic and Social Research Institute

EU – European Union

ILO – International Labour Organisation

LFS – Labour Force Survey

NEI – Non-Employment Index

QNHS – Quarterly National Household Survey

Short note on data sources:

The analysis of the recent trends in the working age population, labour force and inactive population is limited to the 10 year period Q2 2017 to Q2 2017. Due to methodological changes associated with the Labour Force Survey (LFS), which has replaced the Quarterly National Household Survey (QNHS), the data for Q3 2017 is not directly comparable to the earlier data. In particular, a breakdown of principle economic status by specific age cohorts is currently not available through the LFS for the pre-Q3 2017 period. Therefore the findings must be interpreted with this caveat in mind.

1. Introduction

This paper analyses the recent growth trends in the working age population, the labour force and the numbers of working age persons outside the labour force classified as inactive. In the next section, it sets out the current labour market context and how Ireland compares against peer economies; in the third section examines the recent trends in the labour force compared to the working age population; in the fourth section, it explores the composition and recent trends concerning the inactive working age population. In section five, it contextualises the recent trends in inactivity by examining the trends for each of the four sub-categories of inactivity. Finally it draws out some key messages for policy.

2. Labour Market Context

Since the recovery took hold, there has been significant expansion in the labour market. The number of persons in the labour force in Q4 2017 was 2,375,200 representing an annual increase of 43,400 (+0.5%) over the year. The number of persons not in the labour force was 1,443,000, representing an increase of 10,700 (+0.7%) over the year. In addition, the number of people outside the labour force classified as in the potential additional labour force was 111,100[1]. Historically, the highest number of people in the labour force was 2,390,700 in Q3 2008.

The seasonally adjusted participation rate peaked in Q1 2007 at 66.7% before falling to a low of 61.4% in Q4 2012. Since then, the participation rate has remained largely static. Despite rising to 62.5% in Q2 2016, the participation rate declined back to 61.7% by Q2 2017. Since then it has risen to 62.4% in Q4 2017. In comparison, the participation rates for the EU 28 and the Euro Area in Q4 2017 was 58.2% and 57.3% respectively.

On a seasonally adjusted basis, employment peaked at 2,237,300 in Q3 2007. During the crisis years employment levels fell to a low of 1,875,600 (a decline of -16.2%) in Q3 2012. Since then employment (seasonally adjusted) levels have recovered to 2,225,100 (an increase of 18.6%) as of Q4 2017. This represents an increase of 29,100 (+1.3%) over the quarter and increased by 66,500 (+3.1%) year-on-year. In addition, the number of females in employment is at an all time high of 1,021,400, while male employment levels, 1,204,400 in Q4 2017, have yet to reach the last peak of 1,268,400 in Q3 2007.

Seasonally adjusted monthly unemployment reached an all time low of 3.9% in April 2001. Over the next seven year period to April 2008, monthly unemployment would average around 4.8%. Over the course of the economic crisis, unemployment rose to a peak of 16% in January 2012. Since then the

---

[1] The potential labour force consists of persons seeking work but not currently available due to limited labour market opportunities and persons available for work but not currently seeking work due to limited channels to seek employment (ILO Definition).

unemployment rate has declined significantly. In February 2017, unemployment was 6% down from 6.1% in January.

On a seasonally adjusted basis, the number of working age people outside the labour force was 1,438,500 in Q4 2017. This represents a decline of 11,300 (-0.8%), when inactivity peaked at 1,449,800.

Figure 1: Working Age Population by Labour Force Status and Participation Rate, Q1 2016-Q4 2017
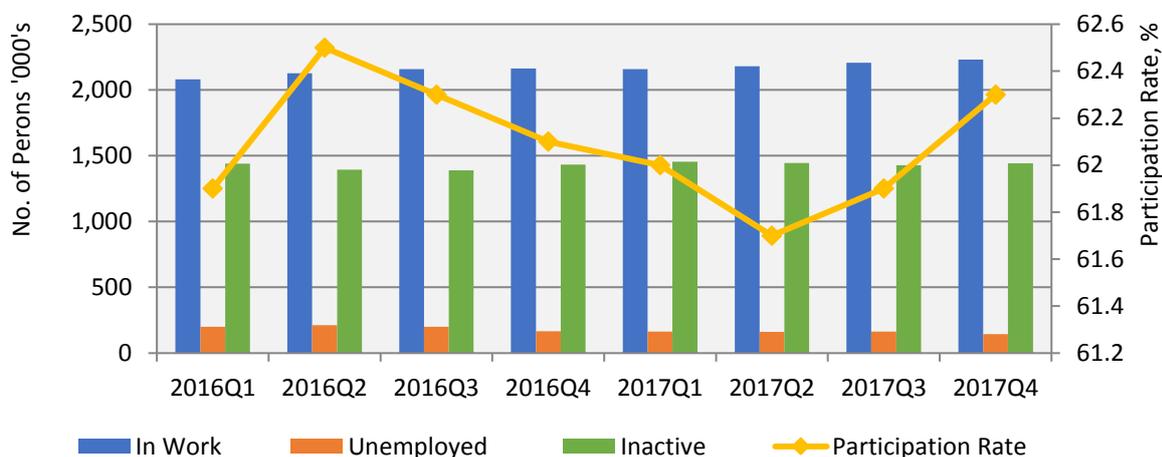
Source: CSO LFS

Figure 2 presents the participation rate by age cohort and gender in Q4 2017. As is shown, the participation rate is over 80% for the age cohorts aged between 25 and 44 years old, the highest rate was found for the 25 to 34 year old cohort at 85.5%. The lowest participation rate was 11.8% for the 65 years or older cohort. When examined by gender, males have a consistently higher participation rate than females across all age cohorts. Amongst males the participation rate was highest for the 35 to 44 year old cohort at 91.9%. The highest female participation rate, 80.8%, was in the 25 to 34 year old age cohort. Similarly the lowest participation rates for males and females were for the 65 year old or older cohort at 18.5% and 5.9% respectively.

The gap between male and female participation rates was greatest in the 45 to 54 year old cohort as male participation was 17.8 percentage points higher than females. The smallest difference between males and females was 4 percentage points in the 15 to 24 year old age cohort. These trends indicate females have a higher propensity to be outside the labour market than males as they grow older.

Figure 2: Participation Rate (Unadjusted) by Age Cohort and Gender, Q4 2017
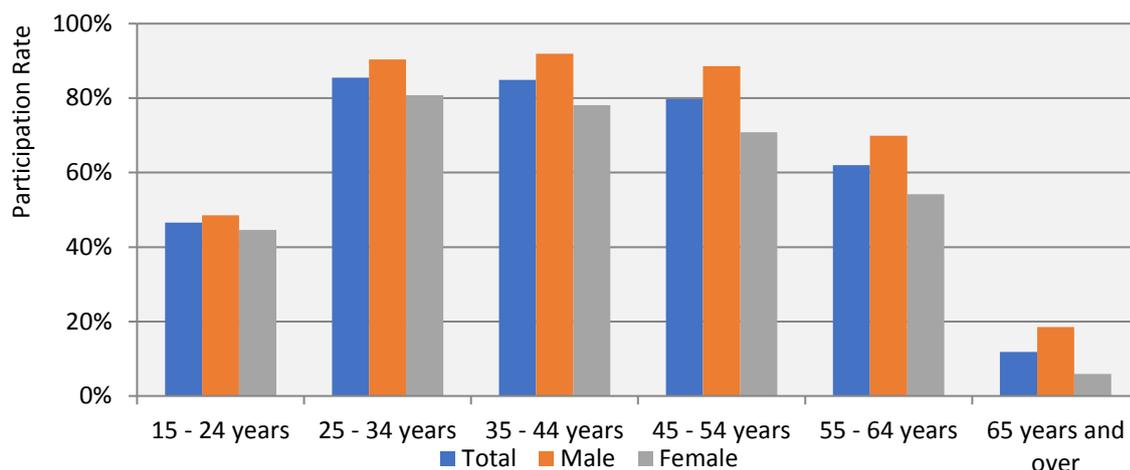
Source: CSO LFS

Figure 3 details the evolution of participation rates by gender since before the recession in Q1 2007 up to Q4 2017. It includes the overall participation rate by gender and the participation rate amongst the 15 to 24 year old cohort by gender. As noted above, the 15 to 24 year old age cohort had the lowest participation rates after the 65 year old or older cohort. Given that the 65 year old or older cohort equates to retirement age it is not surprising that the participation rate is low, however, it is useful to examine how the recession affected labour market participation amongst the youngest age cohort and establish how representative the current participation rates are.

As shown in Figure 3, in the period, Q1 2007 to Q4 2012, the overall participation rate fell from 66.6% to 61.4%, where it has hovered since, climbing to 62.2% in Q4 2017. This trend has been replicated for both genders. The female participation rate peaked at 57.2% in Q4 2007. It then fell to a low of 54.6% by Q2 2012 and had only recovered to 55.9% by Q4 2017. No change over the quarter but up from 55.5% year-on-year. The male participation rate has not recovered since the crisis. After it peaked in Q1 2007 at 76.8%, the male participation rate has been static at just under 70%. In Q4 2017 it was 68.8%, down from 69.2% over the quarter but up from 68.6% year-on-year.

Before examining the participation rates of the 15 to 24 year old cohort, it is important to briefly explain the greater quarter to quarter variation in the rates compared to the overall rate. The 15 to 24 year old age cohort are more likely to be in full-time education than the other age cohorts. As a result, the numbers of young people available and searching for employment fluctuates seasonally in line with the academic calendar.

The participation rate amongst the 15 to 24 year old cohort was 67.4% in Q1 2007, which was 1.2 percentage points higher than the overall participation rate at the time. Regarding gender, while the 15 to 24 year old male participation rate was 73.5%, about 2.7 percentage points lower than the

overall male participation rate, the 15 to 24 year old female participation rate was 4.9 percentage points higher than the overall rate for females. As the recession took hold however, the participation rates amongst the 15 to 24 year old age cohort declined much more than the overall rate.

Between Q1 2007 and Q1 2016, the 15 to 24 year old participation rate declined steeply to a low of 44.7%. Since then, the participation rate has improved marginally to 46.6% in Q4 2017. Down from 47% over the quarter and down from 49.4% year-on-year. This pattern is replicated for when examined by gender. Male participation fell to a low of 45.7% in Q1 2017 and has since improved marginally to 48.5% in Q3 2017. Down marginally from 48.7% over the quarter and down from 50.3% over the year. Female participation rates amongst 15 to 24 year olds declined to a low of 41.8% in Q1 2016 and had recovered to 44.6% as of Q3 2017. Down from 45.2% over the quarter and down from 48.5% over the year.

This difference between the overall participation rate and the rate for 15 to 24 year olds suggests that the younger cohorts had been disproportionately impacted by the recession. While participation overall levelled off in 2012 which is when the initial signs of economic recovery began, the participation rate for 15 to 24 year olds continued to decline only stabilising in 2016, or 2017 in the case of males.

However, when interpreting this it is also important to acknowledge age specific factors that could distort labour market participation amongst 15 to 25 year olds. In 2007, young people may have found it more lucrative to enter the labour force as soon as they left secondary school (or even before school leaving age) because of the abundance of employment opportunities as relatively generous wages available. In 2007, the economy was growing strongly and labour shortages in particular sectors were contributing to high wage increases. This in turn may have inflated labour market participation higher than it would have been otherwise. Similarly, as the recession took hold the employment opportunities dried up which in turn may have encouraged young people to exit the labour force and enter full-time education or delay entry into the labour market to up-skill and wait out the recession. These factors are likely to have been more influential on younger people given that younger people have a higher propensity to be in full-education anyway.

On the other hand, since 2012 the economy has recovered as demonstrated by the increased employment and unemployment rates highlighted earlier. In this context, the persistently lower and falling participation rates amongst 15 to 24 year olds, of both genders, suggest there may also be structural as well as cyclical factors influencing labour market participation.

Figure 3: Participation Rates (Unadjusted), Q1 2007 to Q4 2017
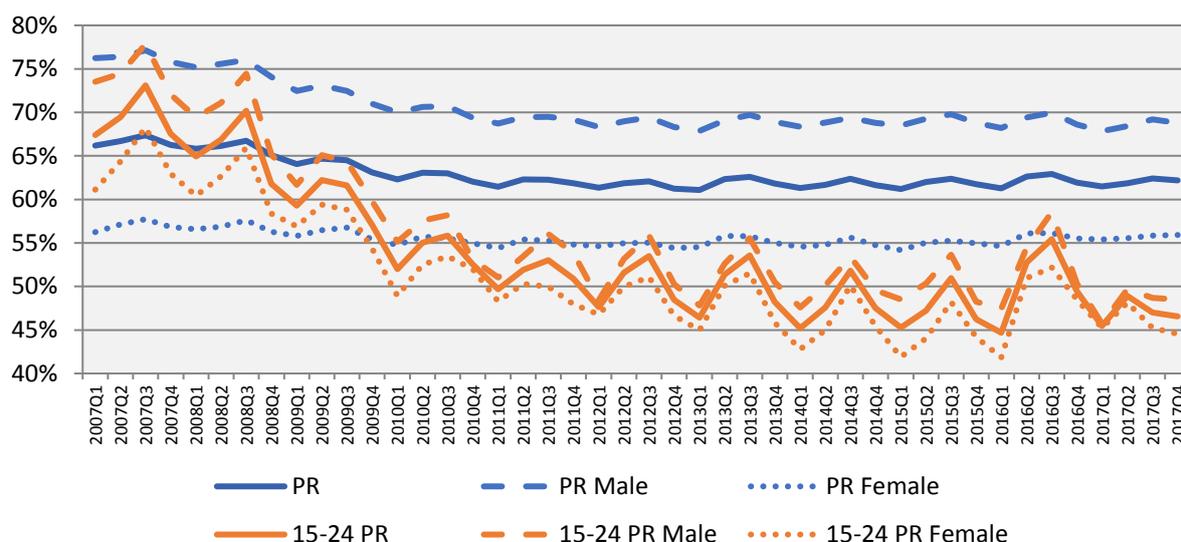
Source: CSO LFS

This section examines how Ireland performs relative to its European peers in terms of activity rates. Activity rates equate to the CSO's participation rate. The main difference is that the participation rate as measured by the CSO concerns all working age people aged 15 years and older, whereas the activity rate used by Euro Stat is often specific to particular age bands, such as 15 to 64 year olds.

Figure 4 compares the activity rates for the 15 to 64 age cohort by select jurisdictions. It shows that the highest activity rates in the EU in Q3 2017 were in Sweden both in terms of the overall rate (82.5%) and the activity rate amongst females (80.7%). In contrast, the lowest in both regards was Italy with an overall activity rate and female activity rate of 62.8% and 56.4% respectively. Ireland's overall activity rate was 72.6%, just under the EU28 average (73.5%) and the Eurozone average (73.2%). In comparison the UK activity rate was 77.4%. A similar trend applied to the female activity rates. Ireland's was 66.6% compared to 68% for the EU 28, 67.8% for the Eurozone and 72.9% in UK.

It is also instructive to compare the 15 to 24 year old activity rates. In Q3 2017, the activity rate of 15 to 24 year olds was 47% in Ireland compared to 42.9% for the EU as a whole and 41% for the Eurozone. Meanwhile the UK activity rate for the 15 to 24 year old cohort was 58.7%.

Figure 4: Activity Rates in Comparison, Q3 2017
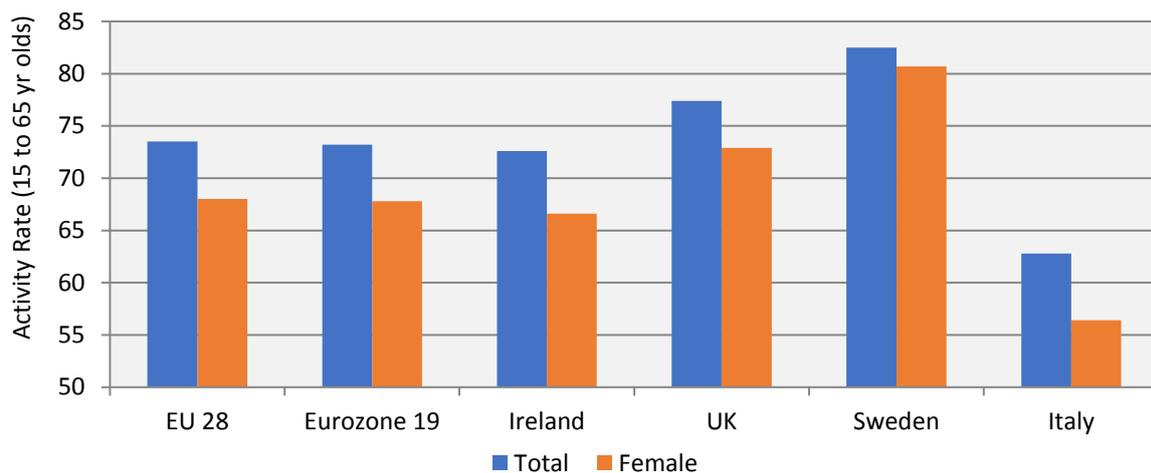
Source: Euro Stat

3. Labour Force and Working Age Population

In Q4 2017, there were 1,085,300 females and 1,289,900 males in the labour force at a ratio of about 46.2% to 53.7% respectively. This represents an all time high for the number of females in the labour force. In contrast the number of males in the labour force peaked at 1,348,700 in Q3 2008.

In terms of age profile, the majority of the labour force is composed of persons of prime working age. As shown in Figure 5, the majority of persons in the labour force, 71.6%, are aged 25 to 54 years old. Younger people aged 24 years old or younger represented 11.4%, while the age group aged 55 years old and older were 17%. This distribution is broadly similar between genders.

Figure 5: Labour Force by Age and Gender, Q4 2017 (Persons '000's)
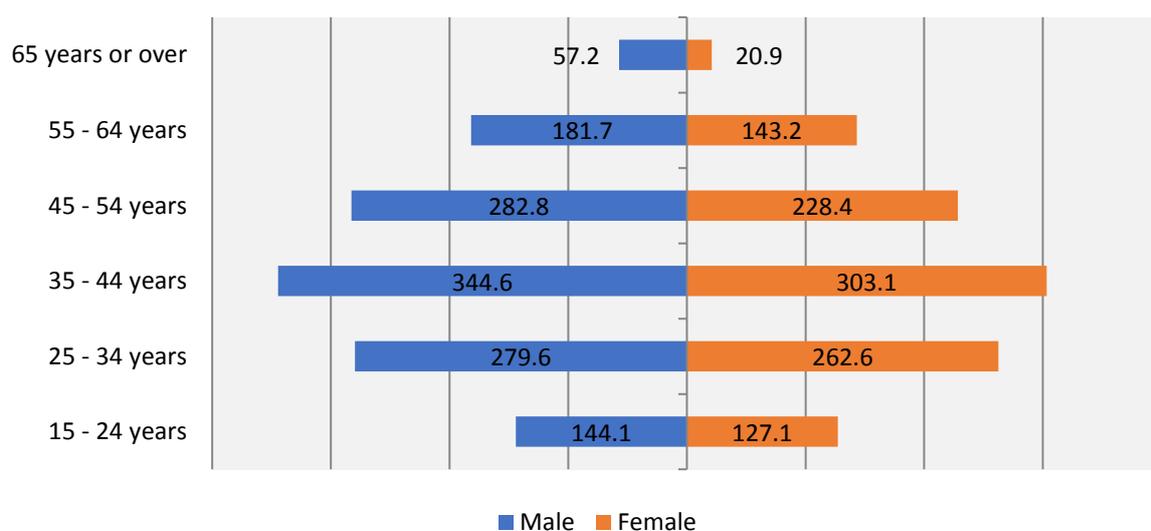
Source: CSO LFS

However, over the last 10 year period there has been a notable aging trend in the labour force. As shown in Figure 6 below, the cohorts aged 15 to 34 declined while each of the age cohorts 35 and above have all increased between Q2 2007 and Q2 2017. This pattern is also evident when decomposed by gender. However, the declines in the number of younger males in the labour force were greater than females, while the increases in older females in the labour force were greater than amongst older males with the exception of the 65 years or older age cohort.

Figure 6: 10 Year Change in Labour Force by Age Cohort and Gender, Q2 2007 to Q2 2017
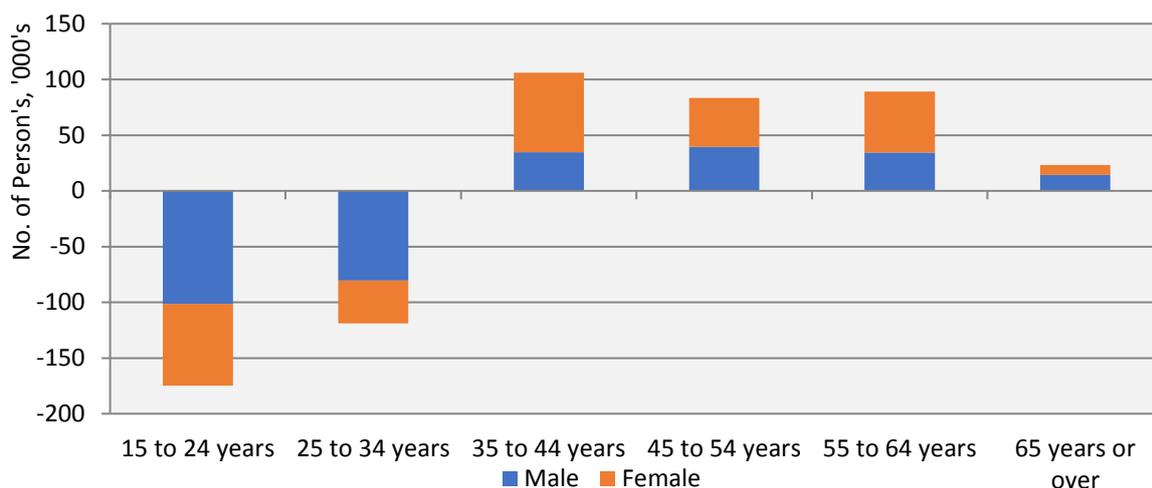
Source: CSO LFS

The ageing effect in the labour force corresponds to the ageing trend in the working age population. Table 1 below details this trend in terms of the percentage point change over the ten year period to Q2 2017. In the first column, concerning the working age population, the percentage point change in the size of each age cohort as a proportion of the total working population over the ten year period is shown. It is evident that youngest age cohorts diminished in size relative to the older age cohorts. In the second column, concerning the percentage point change in the size of each age cohort as a proportion of the total labour force over the ten year period, the ageing trend is replicated.

The declines in the under 35 year old age cohort are troubling when compared to the increases in the older age cohorts, especially the 55 to 64 year old age cohorts. It suggests that the rate of replacement of retiring workers with new entrants to the labour force is likely to decrease in the medium term as there are less younger people to backfill the vacancies created by the retiring workers.

Table 1: 10 Year Population Change by Age Cohorts, Q2 2007 to Q2 2017 (Percentage points)

	Working Age Population	Labour Force
15 to 24 years	-4.2%	-7.5%
25 to 34 years	-3.5%	-5.2%
35 to 44 years	2.7%	4.4%
45 to 54 years	2.0%	3.5%
55 to 64 years	2.2%	3.8%
65 years or over	0.9%	1.0%

Source: CSO, LFS and Census 2016

The ageing trend is forecast to continue into the medium to long term. According to the CSO, over the period 2016 to 2031, the proportion of older people in the population is expected to grow significantly. Detailed in Figure 7 below, select CSO forecasts based on Census 2016, show the number of working age people aged 55 years old or older are expected to increase by between 45.4% and 47.9%. The number of younger people aged between 15 and 24 years old are also expected to increase but at about half the rate of the 55 years plus cohort; forecasts range from 22.9% to 28.9% by 2031. In contrast the prime working age cohort, those aged between 25 and 54 years old are forecast to experience much smaller increases or even experience a decline, as forecasts range from a drop of -1% to an increase of 10.4%.

Figure 7: Population Forecasts by Age Cohorts, 2016 to 2031
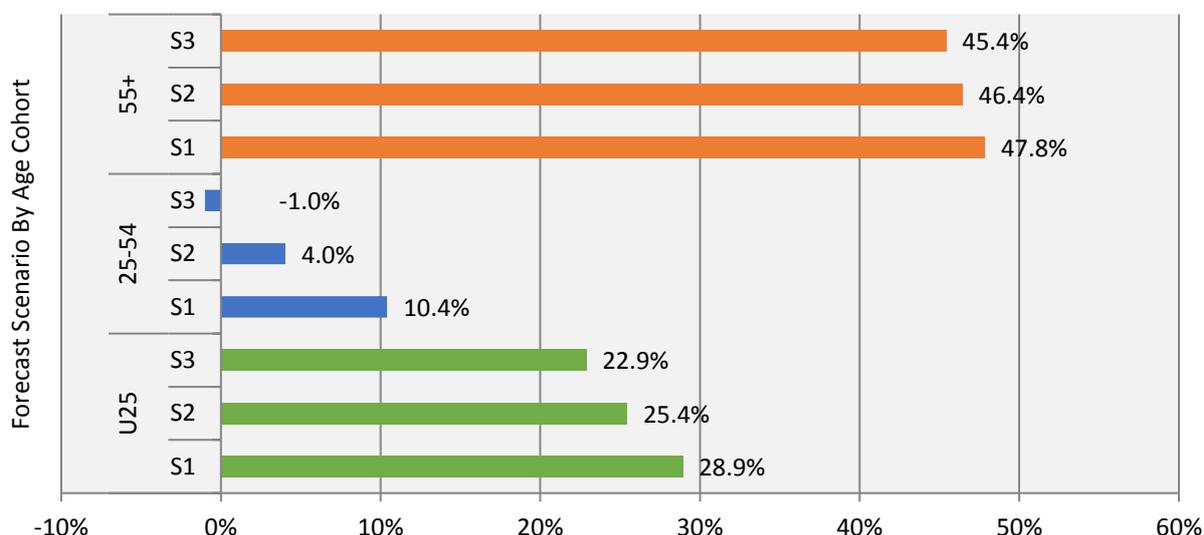
Source: CSO, Population and Labour Force Projections

While the working age population (15 years and older) has been expanding, this has not translated into a similar expansion in the labour force. Over the 10 year period, Q2 2007 to Q2 2017, the total number of working age people in Ireland increased by 287,300 (+8.2%). Over the same period the number of people in the labour force declined from 2,333,500 in Q2 2007 to a low of 2,209,400 in Q1

2013, before increasing to 2,341,600 as of Q2 2017. However, over the same 10 year period, the number of people outside the labour force increased by 279,200 (+24%). Year-on-year to Q2 2017, this trend continued with the number of inactive working age people increasing by 48,400 (+3.5%), although over Q3, the rate of inactivity has declined by 10,000 (-0.7%).

Table 2: Change in Working Age Population by Composition, Q2 2007 to Q2 2017

	Q2 2007		Q2 2017		Change	
	000's	*%*	*000's*	*%*	*000's*	*%*
Labour Force	2,333.5	66.7%	2,341.6	61.9%	8.1	0.3%
Inactive	1,164.7	33.3%	1,443.9	38.1%	279.2	24%
Working Age	3,498.2	100.0%	3,785.5	100.0%	287.3	8.2%

Source: CSO

Figure 8 summarises the recent trends by indexing the quarterly trends over the period Q1 2007 to Q4 2017. It is clear that inactivity rates have been increasing ahead of the increases in the working age population and the labour force. This data resonates with previous analysis undertaken by Department of Public Expenditure and Reform (DPER) which found that over the past decade the number of non-participants has been growing ahead of the growth in the labour force[2]. More recently, a new labour utilisation estimate, the Non-Employment Index (NEI), produced by Central Bank has estimated that non-employment rate, i.e. under-utilisation in the labour force, was 9.4% in Q4 2016.

Figure 8: Index of Quarterly Change in Working Age Population, Base Period=Q1 2007
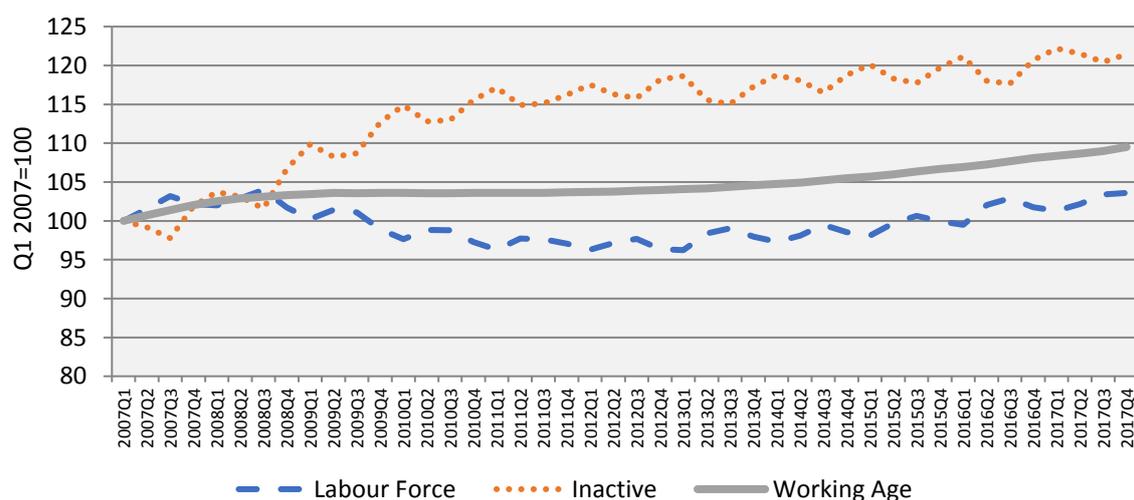
Source: CSO, LFS and Authors Calculations

---

[2] Labour Force Developments Note April 2017, DPER.

4. Inactivity Trends

Inactivity levels have been increasing in absolute terms quarter on quarter over the last ten years. In Figure 9 below indexes the quarterly change in inactivity levels to the base period Q1 2007. It is clear that inactivity has been on an upward trend. The trend is most pronounced for males, increasing ahead of the overall rate since 2007. However, despite this trend, female inactivity is still higher then male inactivity. As of Q2 2017, there were 857,300 females and 586,500 males classified as inactive, representing 59.3% and 40.6% of the total inactive population respectively.

Figure 9: Index of Quarterly Change in Inactivity by Gender, Base Period=Q1 2007
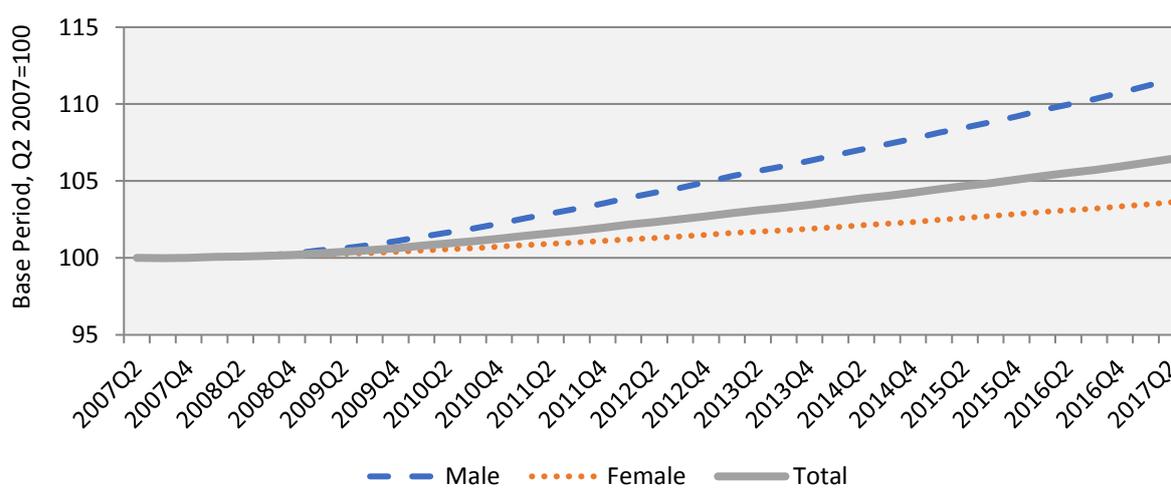
Source: CSO and Authors Calculations

In Figure 10 below, inactivity is decomposed by age and gender. It is evident that there are more females classified as inactive across each age cohort. That said amongst the 15 to 24 year old cohort, the gender difference is marginal. It is also evident that the 65 years and older cohort are the largest group for both genders, accounting for 582,400 people or 40.3% of inactivity. The next largest group was the 15 to 24 year old cohort, accounting for 298,700 people or 20.7% of inactivity.

Figure 10: Inactivity by Age and Gender, Q2 2017 (Persons '000's)

Age group	Male	Female
65 years or over	255.7	326.7
55 to 64 years	75.1	119.6
45 to 54 years	37.6	97.1
35 to 44 years	34.2	93.5
25 to 34 years	34	71.7
15 to 24 years	150	148.7

■ Male ■ Female
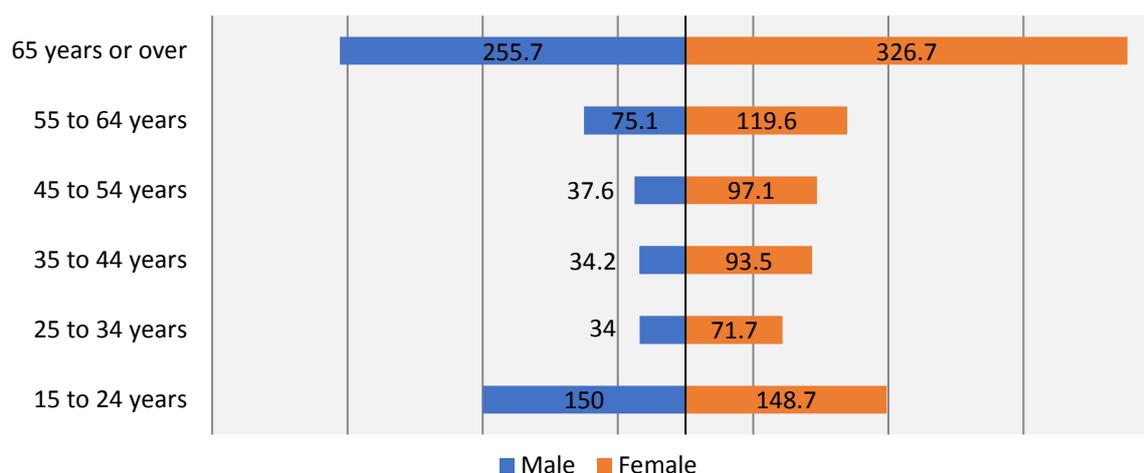
Source: CSO

This distinct age group pattern is also evident when the change since Q2 2007 is examined. In Figure 11 below, the change in inactivity levels is decomposed by age and gender. As shown, the largest overall increase was in the 65 year old and older cohort, increasing by 154,400, about +36.1%. The increase was greater amongst males, rising by 78,700 (+44.5%) compared to an increase of 75,800 (+30.2%) in female inactivity. The next largest increase was in the 15 to 25 year old cohort, which increased by 95,900, about +47.3%. When examined by gender, male inactivity increased by 64,300 (+75%) compared to female inactivity which increased by 31,700, about +27.1%. The 25 to 34 year old cohort experienced a net decrease of 3,200 (+2.9%) driven by a decline in female inactivity. The remaining age cohorts all experienced increases over the period.

Figure 11: 10-Year Change in Inactivity by Age Cohort and Gender, Q2 2007 to Q2 2017

■ Male ■ Female
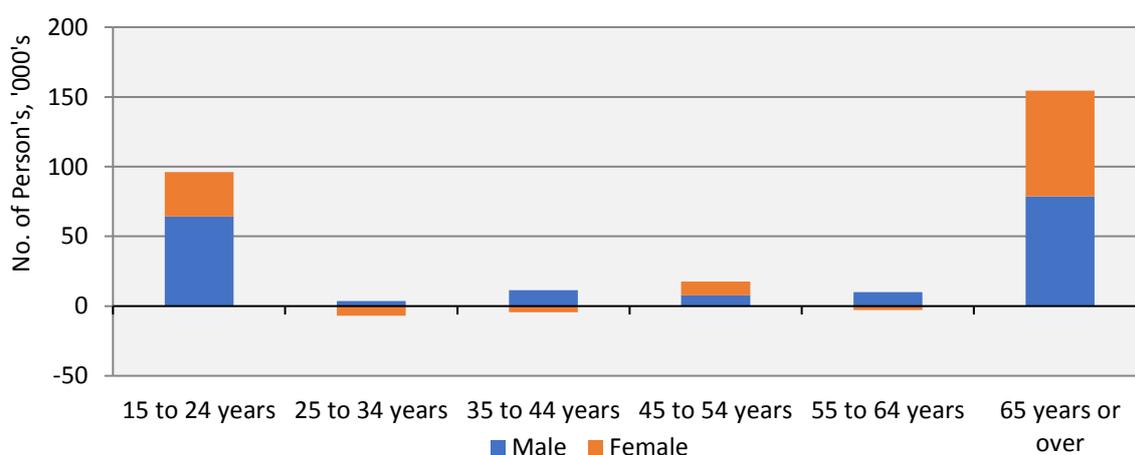
Source: CSO and Authors Calculations

When the annual change is examined for each year between 2007 and 2010, it is evident that changes in the numbers of people in the 65 year old or older cohort and the 15 to 24 year old cohort were

responsible for most of the change in inactivity from year to year. As shown in Figure 12 below, in the case of the 65 year old or older cohort, the numbers increase every year. In the case of the 15 to 24 year old cohort, there is an increase for each period except between 2011 and 2012 and between 2015 and 2017. In addition while the annual change in the number of people aged 65 or older remains generally consistent from year to year, with an average annual increase of 15,000, the change in the 15 to 24 year old cohort fluctuates. For example, between 2009 and 2010, the numbers of people aged 15 to 24 classified as inactive increased by 31,700. In the following 12 month period 2010 to 2011, the increase was 1,700.

Figure 12: Annual Changes in Inactivity by Age Cohort by Year, Q2 2007 to Q2 2017
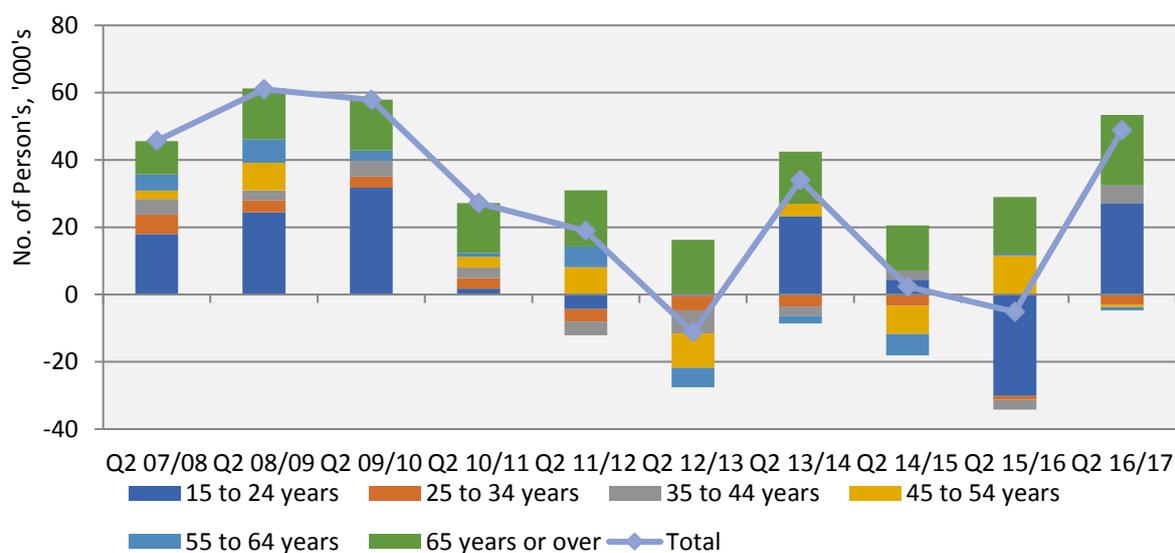
Source: CSO and Authors Calculations

While the increase in the 65 year old and older cohort can be understood as part of the ageing of the workforce, the change to the 15 to 24 year old cohort requires further examination. In particular, the impact of the recession needs to be accounted for. Given the 15 to 24 year old age group is when most people enter the labour market, the limited employment opportunities of the recession years, 2007 to 2011, would have had a disproportionate impact on this cohort. To unpack this, Figure 13 explores the percentage annual change in inactivity amongst the 15 to 24 year old cohort by gender. For reference it includes the annual percentage changes in the overall inactivity rate by gender as well.

As can be seen, the change in overall inactivity rates amongst the 15 to 24 year old cohort fluctuated year-on-year. In contrast the change in the overall inactivity rate, excluding the 65 and older cohort, was generally consistent year to year, averaging about +3%. For the most part male and female rates closely follow the main rates. However in the period 2007 to 2010, the male inactivity rate amongst 15 to 24 year olds increased year-on-year ahead of the trend. Between 2007/08 male inactivity levels increased by +13%, double the female rate (+6%), and ahead of the average +8.9%. This trend

continued in 2008/09 and 2009/10 when male inactivity increased +16.9% and +15.4% respectively compared to +6.5% and +10.85 for females and +11.1% and +12.9% overall. In contrast this trend is not evident in the overall rate of inactivity.

Between 2010 and 2013, there is no significant annual changes in the inactivity rates, however between 2013 and 2014, the inactivity rate for the 15 to 24 year old cohort increases by +8.5%. The next significant annual change occurs between 2015 and 2016, when inactivity rates decline. The male inactivity rate decreases by -8.1%, the female inactivity rate declines by -11.7% and the overall rate falls by -10%. This however is followed by significant increases in the period 2016 to 2017, when the overall inactivity rate increases by +10%; the male inactivity rate increases by +12.6% and the female inactivity rate increases by +7.5%.

Figure 13: Annual Percentage Changes in Inactivity amongst 15 to 24 year olds, by Gender, Q2 2007 to Q2 2017
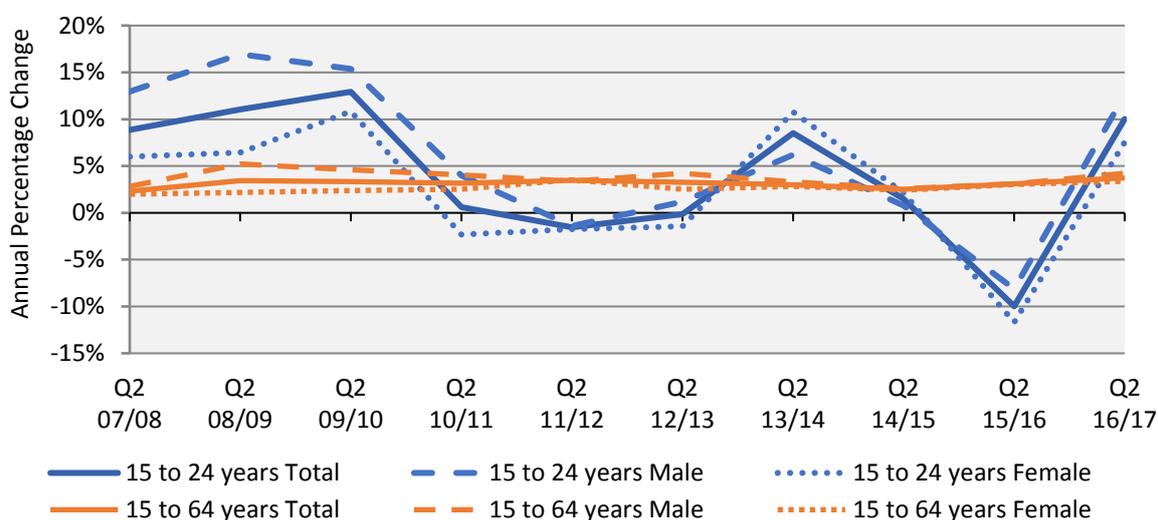
Source: CSO and Authors Calculations

Over the period 2007 to 2010, the inactivity rate experienced the largest annual increases. This period also saw the labour market experience a sharp contraction in response to the economic crisis. This was most pronounced among young males. Furthermore, in the periods where inactivity levels declined, female inactivity declined more than male inactivity. Together this suggests that 15 to 24 year old males were more likely to exit the labour market and found it more difficult to re-enter than females. Moreover, the smaller size of the declines in inactivity amongst 15 to 24 year olds compared to the increases, as well as the more recent annual increases in inactivity rates indicates that the economic cycle is not the only driver of inactivity amongst younger people. To interrogate this, the next section looks at the destinations of people in inactivity in more detail.

5. Inactivity by Sub-Category

It is also useful to decompose inactivity into its sub-categories in order to understand how the changes in the labour market impacted the inactivity levels. However, due to recent methodological changes associated with the launch of the LFS, it is not possible to directly compare Q3 2017 data with the historic inactivity time series from the now decommissioned QNHS. That said it is still instructive to look at the breakdown of inactivity for an indicative sense of the recent trends and help contextualise the data from the LFS.

Table 3 below details the proportionate breakdown of inactivity by sub-category. In Q2 2007 the largest sub-category of inactivity was the *Engaged in home duties* category followed by the *Student* category, *Retired from employment* and *Other* categories respectively. By Q2 2017, the *Retired from employment* category had surpassed all others to be the largest, followed by *Engaged in home duties, Student* and the *Other* category.

Examining by gender, there were notable differences between males and females. For example while the numbers of females *Engaged in home duties* declined by over 20% over the period; there was a marginal increase in the number of males in this category. Similarly, the increase in the number of females *Retired from employment* was twice that of the number of males. Regarding *Students*, the increase in the number of males was almost three times the increase in the number of females.

Table 3: Inactivity Rates by Sub-Category by Gender, Q2 2007 and Q2 2017

	Student		Engaged on home duties		Retired from employment		Other		Total	
Q2 2007	321.7		526.3		299.1		124.3		1271.4	
Male		*141.7*		*6.6*		*215*		*78.9*		*442.2*
Female		*180.1*		*519.7*		*84.1*		*45.4*		*829.3*
Q2 2017	408.5		422.6		482.6		176.6		1490.3	
Male		*205.3*		*10.4*		*277.6*		*101.2*		*594.5*
Female		*203.2*		*412.2*		*205*		*75.4*		*895.8*
Change	+86.8		-103.7		+183.5		+52.3		+218.9	
Male		*+63.6*		*+3.8*		*+62.6*		*+22.3*		*+152.3*
Female		*+23.1*		*-107.5*		*+120.9*		*+30*		*+66.5*

Source: CSO, QNHS

It is also useful to look at the annual changes to capture time specific factors. The period in question covers the recession as well as the recovery. Therefore, it is important to contextualise the aggregate changes by examining the changes year-on-year. The following Figures detail the annual changes in each inactivity sub-category over the period Q2 2007 to Q2 2017.

First, Figure 14 outlines the overall trends. It is apparent that over the period 2007 to 2013 that much of the annual increases are accounted for by the *Student* and *Retired from employment* categories. It

can also be seen that from 2009 onwards, the numbers of people classified as *Engaged in home duties* declined year-on-year. Another evident pattern is that from 2013 onwards the *Student* category accounted for almost none of the annual change in inactivity levels. Indeed the increases from then on are driven essentially by *Retired from employment* and the *Other* category of inactivity.

Figure 14: Annual Change in Inactivity Sub-category, Q2 2007 to Q2 2017
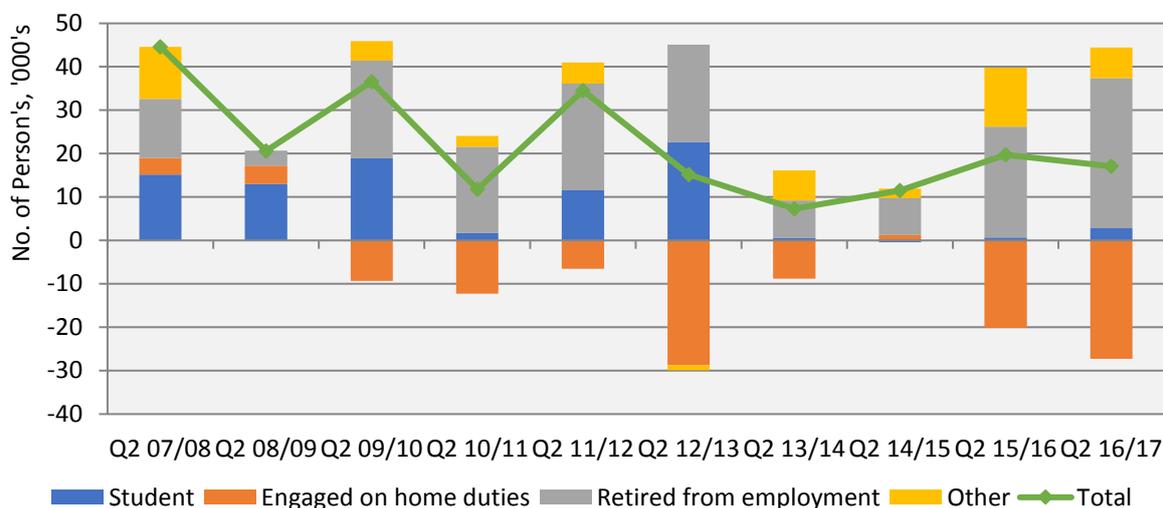
Source: CSO, QNHS and Authors Calculations

Figures 15 and 16 disaggregate the annual changes by gender. One of the first findings is that the female pattern of annual change in Figure 16 is very similar to the overall pattern in Figure 14. It is also evident that the reductions in the *Engaged in home duties* category are largely accounted for by females, which has also netted out the increases in the *Retired from employment* category amongst females. In Figure 14, it is shown that the majority of the increases in *Student* status in the period 2007 to 2013 are driven by males.

The changes from 2013 onwards are driven mainly by *Retired from employment* and the *Other* categories of inactivity. However, unlike the female inactive cohort which has seen the rate of annual increase decline due to large numbers leaving inactivity, males have seen the annual change in inactivity increase year-on-year since 2013. This has contributed to more males entering inactivity than females: the number of inactive males has grown by 40,600 compared to 14,900 females.

While retirements constituted the largest share of the increase in inactivity since 2013 for both males and females, the number of females in the *Retired from employment* category was more than double that of males in the period. In contrast, the number of males entering the *Other* category was 17,800 compared to 11,900 females. This indicates that in recent years males have been more likely than females to become disengaged from the labour market.
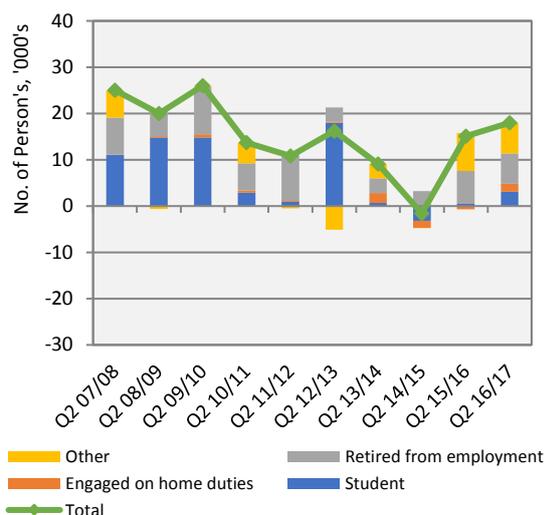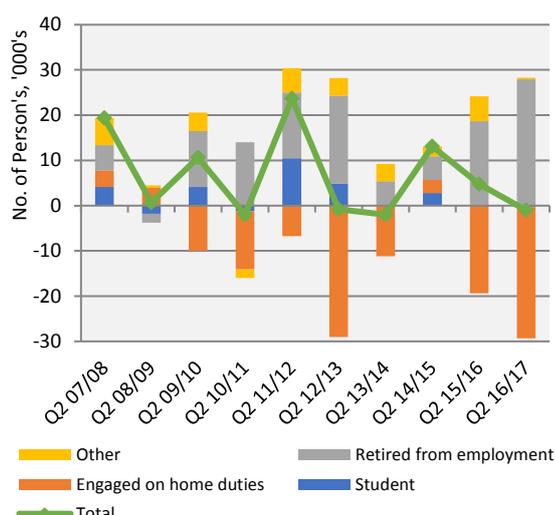
Source: CSO, QNHS and Authors Calculations

6. Conclusions

Despite the recovery and the return of the labour force to pre-recession levels, the number of persons classified as inactive continues to rise. This goes some way to explaining why the participation rates have remained static since the recovery. A significant factor in the increase in inactivity numbers is the ageing of the labour force. As detailed in the analysis of the age profile of the labour force and the inactive population, the largest increases were amongst the older age cohorts. This corresponds to the large increase in the *Retired from employment* sub-category of inactivity.

Other aspects of the inactivity trends indicate that the experience of the recession affected different age groups and genders differently. For example, when the 65 year old and older cohort is excluded, the largest increases in inactivity were amongst the 15 to 24 year old cohort, especially males. Furthermore, the larger share of the increase occurred over the period 2007 to 2013, the recession years. Analysis of the inactivity sub-categories, showed that the larger share of the annual change in inactivity amongst males was accounted for by the *Student* category. In other words, young males deferred entry into the labour market and chose to remain on in education.

The period also saw significant declines in the number of females classified as *Engaged in home duties*. This trend also netted out the effect of large increases in the *Retired from employment* category amongst females over the same period. This resonates with the notable increases in females in the labour force noted earlier and may reflect improving employment opportunities for females.

In the last three years, the main drivers of increases in inactivity for both males and females have been the *Retired from employment* and the *Other* categories, although much of the increases in the *Retired*

from employment category for females continued to be netted out by large decreases in females *Engaged in home duties*. In addition, the changes in *Student* numbers seem to have had a marginal impact for both genders since 2013.

However, there are two troubling trends emerging for males since 2013. First, the number of inactive males has been rising despite the economic recovery. This indicates that the economic cycle is not the only driver of inactivity and that there may be underlying structural factors that need further attention. Second, males have had a higher propensity to be classified in the *Other* category, which may suggest a greater probability of disengagement from the labour market.

In terms of future labour supply policies, there are three main issues to consider. First, while the increasing numbers of inactive working age adults suggests there is still a pool of labour available, it should be noted that the main driver of this has been ageing. Labour force projections indicate that this trend is likely to continue for the foreseeable future. This indicates that greater focus on older working age people will need to be part of future labour supply measures. The second issue concerns the recent increases in the *Other* inactive category, especially amongst males. The *Other* category is particularly problematic as it may reflect disengagement from the labour market. Given that activation measures are largely focused on the unemployed who are still in the labour market, activating individuals outside the labour market will require a new approach. Furthermore, the recent increases in the *Other* category despite improving employment opportunities may indicate wider structural issues. These may include issues around replacement rates and poverty traps associated with labour market and other welfare schemes as well as the type and quality of employment on offer. The third issue concerns recent international evidence which has identified the growing automation of routine occupations as drivers of prime age male unemployment in most advanced economies[3]. This is likely to become an increasing challenge for policy makers in future as automation changes the structure of labour market demand in the coming decades.

These issues are likely to become more acute in the medium term as the economy approaches full capacity. However, ageing and increasing automation are also likely to drag on participation rates over the long term. It is therefore advisable that policymakers ensure that institutional and regulatory framework is appropriately aligned to maximise the labour supply going forward.

---

[3] IMF 2018, See link: https://www.imf.org/en/Publications/WEO/Issues/2018/03/20/world-economic-outlook-april-2018#Chapter%202