



Understanding Irish Labour Force Participation

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Abstract

This letter explores developments in the labour force participation rate in Ireland, which has fallen from a pre-recession peak of 64 per cent to approximately 60 per cent today. Given the important role of labour supply in explaining Irish economic growth, we aim to identify the relative influence of structural and cyclical factors in the recent dynamics of Irish labour force participation. We find that the recent decline in female participation is entirely a response to the stage in the economic cycle given the weaker labour market, whereas the fall in male and overall participation also reflects the influence of some structural factors. Accordingly a rise in the participation rate is to be expected in the near term as the economic recovery continues, but in the longer term structural factors will likely constrain further increases in participation.

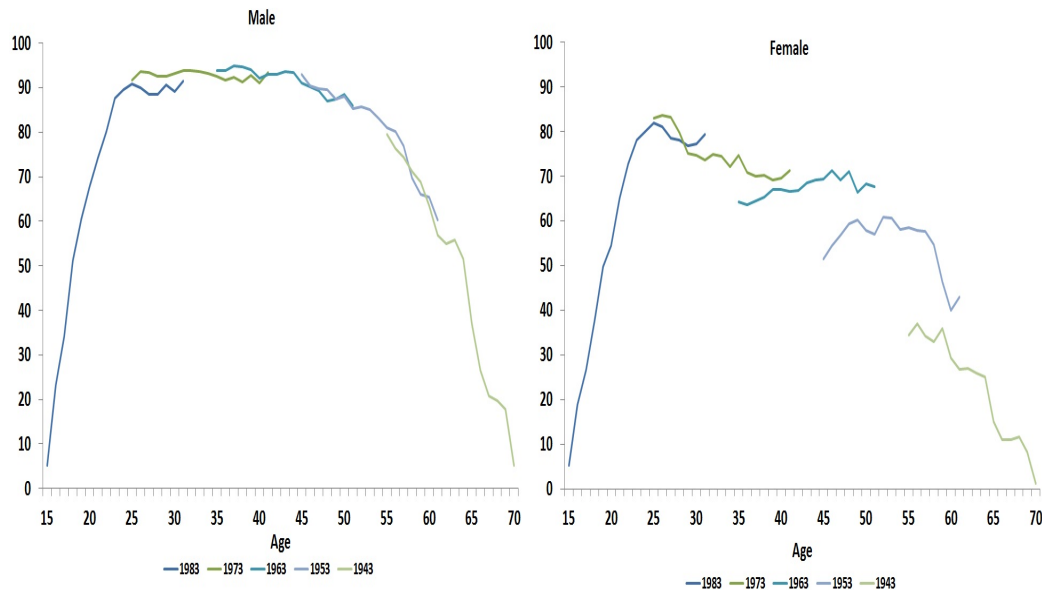
1 Introduction

Despite being a persistent feature of the Irish growth story in the decades preceding the financial crisis, the proportion of the working-age population actively engaged in the labour market - the labour force participation rate (LFPR) - has not recovered in line with the wider improvement in the economy of recent times. From a policy-making perspective it is important to understand whether the decline in the LFPR from its peak of 64.1 per cent in 2007 to 60 per cent in 2015 is explained

by structural factors consistent with population ageing and changes in the attachment of particular age group to the labour market, or whether it is a cyclical response to the downturn in the economy. If the decline is cyclical, then a continued recovery in the economy will in and of itself reverse the decline in the LFPR. If however the decline is structural in nature, one might expect that the LFPR will be lower for an extended period of time. A structural or trend decline in LFPR would be reflected in lower actual and potential economic growth

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Figure 1: Labour Force Participation Rate by Age and Birth Year Cohort



over the medium term.

In a recent research paper ², we take a number of approaches to answering this question. First, using data from the *Quarterly National Household Survey*, we examine the key demographic groups driving the development of the LFPR since the start of the century. Second, we look at the role of these fundamental demographic and other personal or household characteristics in determining the probability that an individual transitions in/out of the labour force and whether the affect of these factors changes through the economic cycle. We then estimate a cohort-based model of the LFPR which encompasses the effect of being a particular age, and of being born in a particular year, on labour force participation. These estimates reflect the structural or trend LFPR. Age effects encompass the impact of life-cycle factors on the LFPR - the tendency to be in education at younger ages or retired at older ages or family formation and caring for dependents. Birth-year cohort effects capture the impact of changing social norms and institu-

tions through time, such as higher levels of educational attainment, legislation on equality of opportunity and pay in the labour market between the sexes, etc. We augment the cohort-based model with factors such as the unemployment rate and the returns to participation (wages and unemployment benefits) to estimate the cyclical drivers of the LFPR. Combining the cohort-based model results with various scenarios for the working-age population over the next decade we conclude by discussing the longer-term outlook for the LFPR.

2 Main findings

A number of findings emerge in the paper; first, the rise in the LFPR in the mid-2000s was almost entirely due to the enlargement of the labour force through immigration from the new EU Member States and masked an underlying decline in the participation rate of native Irish. While increases in female participation had been important in the overall rise of the LFPR prior to 2000, their participation rate

²Byrne, S & Martin D. O'Brien (2016). *Understanding Irish Labour Force Participation*, Central Bank of Ireland Research Technical Paper, 01RT16. The paper includes a full list of references and discussion of the relevant literature.

has remained below that of males for all age groups.

Second, the structural gains in female participation evident over recent decades appear to have been fully achieved and were driven by strong birth-year cohort effects, reflecting the changes over time of social norms, institutions and legislative frameworks. Figure 1 illustrates this point using QNHS micro-data, where the periods of overlap mostly indicate the relative impact of being born in a particular year on the individuals tendency to participate in the labour market. The effect over time of issues such as equal pay legislation and higher educational attainment meant that the participation rate of females born in the 1950's was much higher than those born in the 1940s, with further gains witnessed for those born in the 1960's. No such cohort gain is seen for male participation, and it appears that the cohort gain for females is no longer evident for those born in the 1980's.

Third, the impact of key individual and household characteristics, such as gender, educational attainment, number of children, marital status, on the probability of moving in/out of the labour force does not appear to differ given the stage of the economic cycle. While the cycle itself is important in determining the probability that an individual moves in/out of the labour force, we do not find any evidence of a secondary impact of the cycle through changes in the relative importance of gender, nationality, educational attainment, etc.

Fourth, the decline in the female LFPR since the onset of the domestic financial crisis is entirely due to a cyclical response to the weaker labour market, whereas the decline in the male LFPR also reflects a fall in the trend arising from structural age and cohort effects (Figure 2 and 3). This in part reflects a lower tendency of younger cohorts to participate in the labour market as well as a decline in the relative share of younger workers (those under 35 years of age) in the population. From 2008 to 2015 the number of individuals in the State age 15-

34 years of age fell by approximately 280,000, half of which can be attributed to emigration and half of which can be attributed to the decline in birth rate evident in the 1980's. The impact of the latter in particular was bound to happen irrespective of the financial crisis of the mid/late-2000's, and will continue as a feature of the LFPR for the coming decades. Combining the male and female results, the overall decline in the LFPR in recent years is dominated by cyclical effects, with the actual LFPR being below the estimated trend, but structural factors are also beginning to weigh on the overall LFPR.

Figure 2: Cohort model with cyclical effects - Female

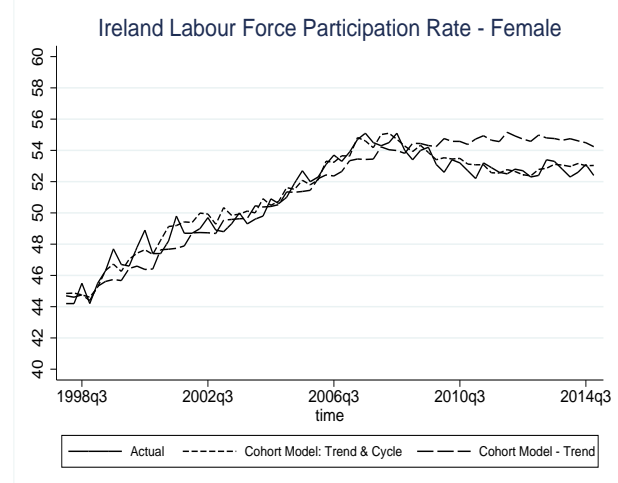
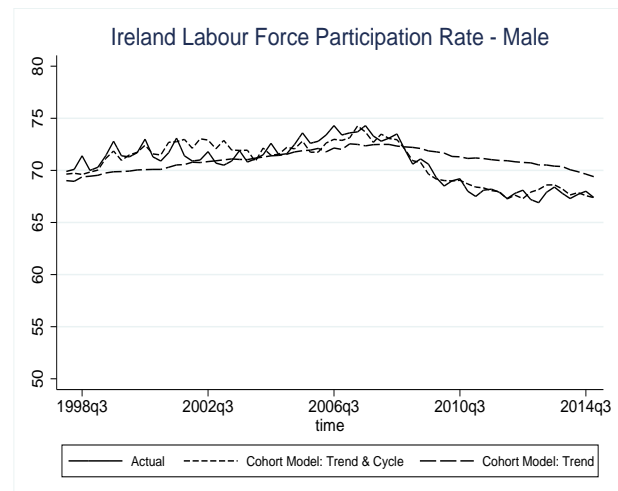


Figure 3: Cohort model with cyclical effects - Male



3 Potential future trends for the LFPR

Combining population projections and our estimates of the trend LFPR from the cohort-based model suggests that a further decline in trend LFPR is to be expected over the next decade, particularly for males (Table 1). Female participation is particularly sensitive to common age effects and typically falls from the late-20's/early-30's due to family reasons. We simulate the potential impact of policies aimed at increasing female participation in the age groups sensitive to these effects using the results of the cohort-based model by making the female age effect match the male age effect. Our results suggest that policy measures designed to increase the female LFPR while being beneficial will not in and of themselves be successful in offsetting the demographic and other structural factors driving the lower trend LFPR over the next decade. Only population scenarios which foresee much higher levels of immigration are likely to offset the decline in trend LFPR in the medium term.

This should be taken into account when when designing counter-cyclical policy and may require a number of alternative policy responses in and of itself.

4 Conclusion

The rise in the LFPR, particularly for females, was an important feature of Irish economic growth in past decades. Our research suggests that the decline in the LFPR since the onset of the domestic financial crisis and recession has been mostly due to cyclical factors - people responding to the weaker labour market - and the current actual LFPR lies below its trend. This has implications for the near-term outlook and discussions of the amount of spare capacity in the economy. A recovery that continues along a similar trajectory to what has been seen in the most recent years will ultimately be reflected in a higher LFPR which will help underpin both actual and potential economic growth. However our findings also suggest that over the longer term structural factors will likely constrain increases in the LFPR.

Table 1: Trend Participation Rate With Alternative Population Assumptions

	Female			Male			Total		
	2015	2020	2025	2015	2020	2025	2015	2020	2025
Eurostat 2013 Main	54.8	53.3	51.6	68.8	64.8	61.1	61.4	58.7	56.1
Eurostat 2013 No Migration	54.8	53.8	52.5	68.9	65.6	62.6	61.5	59.4	57.2
Eurostat 2013 Higher Life Expectancy	54.8	53.3	51.5	68.8	64.7	61.0	61.4	58.7	56.0
Eurostat 2013 Reduced Migration	54.8	53.4	51.8	68.8	64.9	61.4	61.4	58.9	56.3
CSO 2011 No Net Migration (M0)	54.9	53.8	52.3	68.9	65.4	61.9	61.5	59.2	56.8
CSO 2011 High Net Immigration (M1)	54.8	54.0	53.3	68.8	65.5	63.0	61.5	59.4	57.8
CSO 2011 Low Net Immigration (M2)	54.8	53.7	52.5	68.8	65.2	62.0	61.4	59.1	56.9
CSO 2011 Low Net Emigration (M3)	54.8	53.3	51.7	68.8	64.8	61.0	61.4	58.7	56.1
Average	54.8	53.6	52.1	68.8	65.1	61.7	61.4	59.0	56.7
Female Age Effect Counterfactual	55.2	54.0	52.6	68.8	65.2	62.0	61.6	59.3	57.0

Source: Author's calculations, CSO 2016-2046 Population Projections (2011) and Eurostat Population Projections (2013). Projections used from the CSO have a common total fertility rate assumption of 2.1 alongside a gradual reduction in mortality rates. See the CSO publication for more details on these and the M0, M1, M2 and M3 migration assumptions. Projections from Eurostat have a common total fertility rate assumption of 2.01. The Main Eurostat projection also assumes a mortality rate of 0.0054 by 2025 and net migration remaining negative out to 2025. The Eurostat Higher Life Expectancy scenario assumes a mortality rate of 0.0052 by 2025, whereas the Reduced Net Migration scenario assumes net emigration being twenty per cent lower than the Main scenario. The Female Age Effect Counterfactual sets the age effect for females from 25-55 years of age to be proportionate to the male effect for these age groups (see Figure 14) and uses the M2 CSO scenario for the population projections.