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POVERTY, INCOME INEQUALITY AND LIVING STANDARDS IN IRELAND: FIRST ANNUAL REPORT

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This report has been peer-reviewed prior to publication. The authors are solely responsible for the content and the views expressed.

FOREWORD

The Community Foundation for Ireland is proud to partner with the ESRI to produce this important piece of research that will help inform public debate and policy at a key time for communities.

It is a partnership which fits with our role as a philanthropic foundation which has for 21 years worked with over 5,000 partner organisations on the ground to promote equality for all in thriving communities.

This research comes at an important time for our country as we emerge from the Covid-19 pandemic, continue to respond to climate change and grapple with the future course for our island post-Brexit. Our response to each of these has the potential to impact on equality.

The insights provided in this document and the development of harmonised indicators income growth, inequality, poverty and deprivation offer the opportunity to make informed decisions.

As a foundation which for over 21 years has worked with donors to invest over €75 million into communities we believe it is particularly important that this report is not a stand-alone piece of work.

Our partnership with the ESRI does not stop here. Follow up reports over the next two years will offer the opportunity to track change. They will also have the flexibility to deliver findings on emerging issues. We will be able to offer insight on how people, families and communities are being impacted over this important period.

This will be particularly important in the area of young people. It is they who will be most impacted, making it all the more important that as a country we have research, evidence and facts to make informed choices and decisions.

I want to also acknowledge the commitment of the Director of the ESRI Professor Alan Barrett and researchers Barra Roantree, Bertrand Maître, Alyvia McTague and Ivan Privalko to this work and our partnership going forward.

Denise Charlton,
Chief Executive,
The Community Foundation for Ireland

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ABBREVIATIONS

ESRI	Economic and Social Research Institute
CSO	Central Statistics Office
LIIS	Living in Ireland Survey
SILC	Survey of Income and Living Conditions
LFS	Labour Force Survey
RMF	Researcher Microfile Data

EXECUTIVE SUMMARY

KEY FINDINGS

This report is the first from a new ESRI research programme funded by The Community Foundation for Ireland which seeks to address gaps in our knowledge and understanding of poverty, income inequality and living standards in Ireland. It presents a new harmonised set of indicators derived from large-scale household surveys covering the period 1987 to 2019 that can be used by policymakers, academics and the wider public to inform discussions around these pressing issues and the appropriate policy response.

The main findings of our research are as follows:

Income growth and inequality

- Average disposable incomes – after taxes, welfare payments and pensions – grew by around 3 per cent per year between 1987 and 2019 adjusting for inflation and changes in household composition. Despite a lost decade between 2007 and 2017 which disproportionately affected lower-income households, growth over the period as a whole was broad-based and progressive, stronger for those in the bottom half of the income distribution than the top.
- As a result, measures of disposable income inequality have fallen substantially over time. In 2019, both the Gini coefficient and 90:10 ratio – two common such measures – stood at their lowest recorded levels in more than three decades. Other measures also tell a consistent story of declining inequality in disposable incomes, with any increases seen over the latter years of the Great Recession reversed by the recovery up to 2019. This experience differs to that of most other OECD countries, where increasing inequality has been the norm over a similar horizon (Piketty and Saez, 2003; Atkinson, 2015).
- However, while growth in market incomes – before taxes, social welfare payments and pensions – has also been robust, this growth has been less broadly shared than that in disposable incomes. Declines in key measures of inequality of market income over the 1990s were reversed in the early 2000s with the Great Recession leading to a further rise. Although the recovery in the labour market since 2014 has meant that market income inequality had almost regained its pre-crisis level by 2019, this is likely to be undone by the sharp falls in employment wrought by the ongoing COVID-19 pandemic.

Income poverty and material deprivation

- Over the full horizon our data cover, rates of income poverty and material deprivation – key indicators of low living standards – have also declined substantially across the population as a whole: by a quarter and by a half respectively between 1994 and 2019.
- However, measures of income poverty and material deprivation both point to the consistently high incidence of low living standards among lone parents, their children, and those of working age in households without anyone in paid work. This pre-dates the Great Recession and has been an enduring feature of Irish society since at least the early 1990s.
- Unlike in some other countries (e.g. Britain), the incidence of income poverty and material deprivation remains closely linked to the absence of anyone in paid work, both in single- and multi-adult households. This suggests that the social welfare system may provide a more targeted and effective tool for addressing low living standards than policies to increase low hourly wages. However, it should also give rise to concerns about the impact of COVID-19 related job losses, particularly if those who have lost work are unable to return to their previous positions or find new ones for an extended period of time.

Intergenerational inequality

- Young adults have been disproportionately hit by job losses in 2020, in part as they were much more likely to work in sectors like hospitality, arts and leisure that were most exposed to the public health measures required to suppress the spread of the virus.
- While concerning in and of itself, such patterns of job losses could compound the still lingering effects of the Great Recession, which left not in employment, education or training (NEET) rates for those age 20-24 almost a third higher on the eve of the pandemic than they were in 2007. This amounts to around 30,000 more 20-24 year olds NEET than one would expect had the labour market fully recovered for this age group.
- High and sustained levels of economic inactivity have been shown to have persistent negative effects on later life outcomes for young adults entering the labour market (von Wachter, 2020). We find early evidence consistent with (and suggestive of) such ‘scarring’ for those born in the 1990s whose average weekly earnings adjusted for inflation were no higher than those born in the 1960s at age 20 to 22, and have by age 26 yet to surpass the average earnings of those born in the 1970s.
- In addition to poorer prospects in the labour market, a growing share of young adults are facing high housing costs. This is largely as home ownership rates for young adults have collapsed – from over 60 per cent at age 30 for those born in the 1960s to less than 20 per cent for those born in the late 1980s – leaving them more exposed to rapidly rising rents, especially in urban areas.

- The combined effect of these developments is to cast a pall over the prospects of young adults and should be cause of serious concern for society at large. One area where policy can help is ensuring the provision of high-quality active labour market programmes with sufficient capacity to cater for the numbers that will need them in the years ahead. Policies that act to tackle the root causes of high rents will also disproportionately benefit those younger adults who otherwise risk being left behind.

CHAPTER 1

Introduction

There are growing global concerns about stagnating material living standards and rising economic inequality, particularly in advanced economies. For example, the OECD (2019) has highlighted the ‘dismal’ income growth experienced by middle-income households in some countries over the last 30 years, while both Atkinson (2015) and Piketty and Saez (2003) point to increasing levels of inequality in the US, the UK and France since the late 1970s. Similar concerns have been expressed by some in Ireland (e.g. Sweeney, 2019), while others have pointed to the potential for the ongoing COVID-19 pandemic to exacerbate existing inequalities in areas including the labour market, education and health (Darmody et al., 2020).

However, discussions around poverty, inequality, low living standards and the appropriate policy response in Ireland are inhibited by the availability of harmonised indicators over an extended period of time. Although the Central Statistics Office (CSO) has – through the Survey of Income and Living Conditions (SILC) – collected comprehensive information on the living standards of households annually since 2003, these do not cover the period of rapid economic growth seen in Ireland over the 1990s. And while comparable surveys – the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services (the 1987 Survey) and the Living in Ireland Survey (LIIS) – were conducted by the Economic and Social Research Institute (ESRI) over these years, the indicators of poverty, income inequality and low living standards derived by researchers using these data (e.g. Callan et al., 1989; Nolan and Maître, 2000; Nolan, 2003) are not directly comparable with those produced subsequently.¹

Despite a rich existing literature,² this lack of consistent data contributes to significant gaps in our knowledge and understanding of poverty, deprivation, income inequality and living standards in Ireland. This report aims to help address some of these gaps by providing a harmonised set of indicators that can be used by policymakers, academics and the wider public.³ These are derived from the three high-quality large-scale household surveys mentioned above, which are described in greater detail in Appendix A along with the methodology used to

¹ This is for reasons as varied as differences in the definitions of income, deprivation, inflation and equivalence scales used across studies, in addition to revisions to the weights used to make these data representative of the underlying populations they are designed to measure.

² See, for example, O’Connell (1982); Callan et al. (1988; 2018); Callan and Nolan (1997); Nolan et al. (2000; 2014); O’Neill and Sweetman (2001); Nolan (2009); and Roantree (2020b).

³ A spreadsheet containing the data underlying the figures presented in this report is being published at https://doi.org/10.26504/bkmnext412_data, which we will update for the duration of this research programme.

construct the measures of poverty, deprivation, income inequality and living standards used in the report.

The structure of this report is as follows. Chapter 2 examines how incomes and income inequality have evolved in Ireland between 1987 and 2019: the earliest and most recent years of data currently available. It first examines growth in average incomes, before turning to look at differences in patterns of growth across the distribution and the implications of these patterns for income inequality. Given policymakers may have particular concerns about the living standards of those with least resources in society, Chapter 3 looks at two key indicators of low living standards: income poverty and material deprivation.

In addition to these two chapters, which will be updated in future editions of this report, Chapter 4 examines another aspect of inequality which is receiving increasing attention in both the domestic and international policy debate: that of inequality between generations. This considers the disproportionate labour market impact of both the pandemic and Great Recession on young adults, in addition to recent developments in the housing market. These factors have combined to cast a pall over the prospects of young adults and should be cause of serious concern for society at large.

The report concludes in Chapter 5 with a summary of our key findings and some reflections on their implications for policy.

CHAPTER 2

Income growth and inequality

This chapter explores how incomes and income inequality have evolved in Ireland between 1987 and 2019: the earliest and most recent years of data currently available. We first examine growth in average disposable incomes, that is after direct taxes have been paid and benefits received. Although subject to some important limitations,⁴ disposable incomes provide a useful measure of material living standards that are widely used by statistical agencies and researchers alike (e.g. Bourquin et al., 2020; Central Statistics Office, 2005; Callan et al., 1988). We then examine incomes before direct taxes are deducted, benefits received and pensions paid – so called ‘market income’ – before turning to look at differences in patterns of growth across the distribution and the implications of these patterns for income inequality.

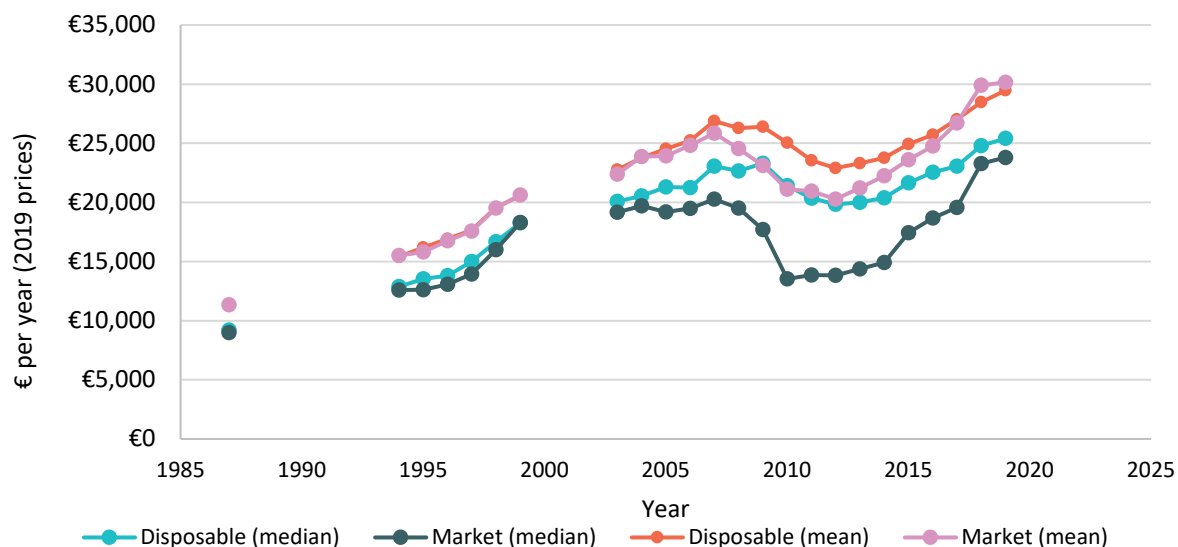
While the unit of analysis throughout this chapter is the individual, the measure of income we consider is that of the household adjusted for size and composition. We do this by taking the total income of all individuals living in a household, rescaling or ‘equivalising’ them to reflect the fact that households of different sizes and compositions have differing needs. The way in which we do this is consistent with the approach of Eurostat and Bourquin et al. (2020) among others but differs from that adopted by the CSO.⁵ As a result the results presented here are not directly comparable with those published annually by the CSO. All monetary amounts are converted to 2019 prices and all growth rates calculated after accounting for inflation using the CSO’s all-item Consumer Price Index.

2.1 AVERAGE INCOMES

Figure 2.1 plots the evolution of average (both mean and median) real equivalised disposable and market income across individuals over time. It shows that average real disposable incomes have grown strongly over the past three decades or so, increasing from €11,307 (€9,211) at the mean (median) in 1987 to €29,464 (€25,406) in 2019. This corresponds to growth of 161 per cent at the mean and 176 per cent at the median, annualised growth rates of 3.0 per cent and 3.2 per cent respectively.

⁴ For example, there is evidence of under-reporting of incomes – especially among very high and low income households – in similar surveys internationally (Brewer et al., 2017; Bollinger et al., 2019; Meyer et al., 2015), while even those households for whom incomes are recorded with perfect accuracy, the measure is a ‘snapshot’ one that captures both temporary and permanent differences between individuals.

⁵ We use the modified OECD scales which assign the first adult in a household a weight of 1, children under 14 a weight of 0.3 and any other individuals a weight of 0.5. The CSO uses scales of 1, 0.33 and 0.66 respectively.

FIGURE 2.1 AVERAGE REAL EQUIVALISED DISPOSABLE AND MARKET INCOME: 1987-2019

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Expressed in 2019 prices in terms of equivalent amounts for a single adult living alone.

However, disposable incomes have also been subject to significant volatility, with gains between 2003 and 2007 eliminated by declines seen over the course of the Great Recession. Indeed, while the subsequent recovery has been relatively rapid, it was not until 2017 that both mean and median disposable incomes had surpassed their pre-Great Recession peaks, amounting to a lost decade of income growth between 2007 and 2017 for the population as a whole.

Average market incomes also saw substantial growth and volatility over this period.⁶ Figure 2.1 shows that this rose from €11,332 (€8,994) at the mean (median) in 1987 to €30,141 (€23,799) in 2019. This corresponds to growth of 166 per cent at the mean and 165 per cent at the median, annualised average growth rates of 3.1 per cent. While average market income growth was therefore weaker than disposable income growth, it was also more volatile. Figure 2.1 shows that the fall from peak to trough over the Great Recession was far more substantial for market incomes, with declines of 22 per cent at the mean and 32 per cent at the median between 2007 and 2012 compared to 15 per cent and 14 per cent respectively for disposable income.

This larger decline in average market income in part reflects the rapid increase in unemployment, which rose from 4.9 per cent in September 2007 to 16.1 per cent by December 2011, leaving many individuals living in households without any

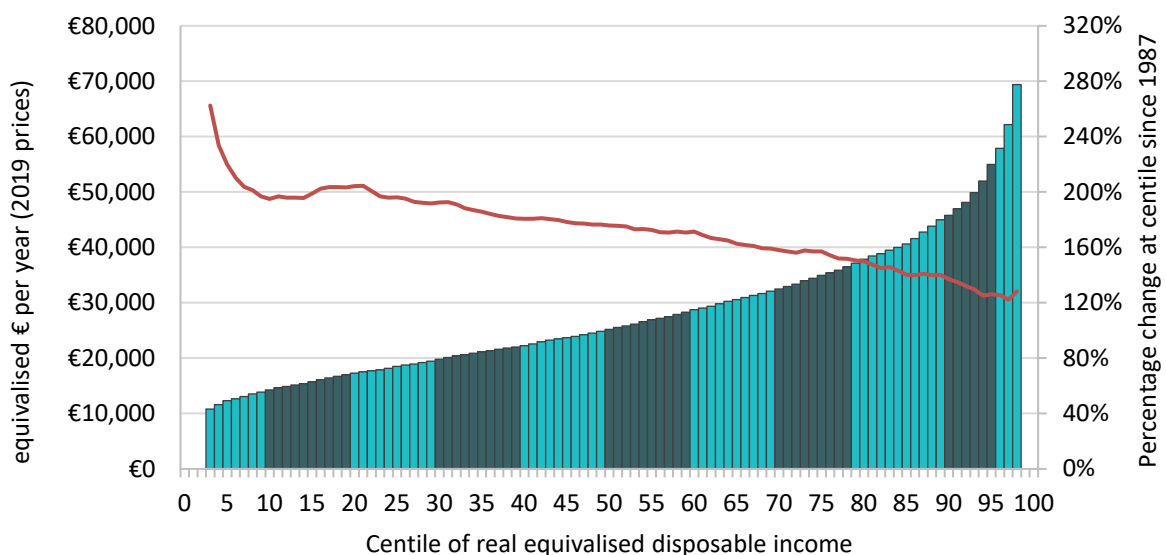
⁶ Our definition of market income excludes that from occupational and private pensions as these are not distinguishable from State pensions in the SILC data.

market income.⁷ However, it also reflects the stabilising effect of the tax and welfare system, which automatically cushions the fall in disposable income for households who lose work by reducing their direct tax liabilities and replacing some of their earnings with jobseeker’s payments. Dolls et al. (2012) estimate that these automatic stabilisers absorb an average of around two-fifths of a typical income shock in EU countries, with Ireland performing close to this average. However, changes in income on average can mask very different experiences at different levels of incomes. For this reason we now turn to look at income growth across the distribution.

2.2 DISTRIBUTION OF INCOME

Figure 2.2 shows the distribution of income in 2019 and how this has changed from that in 1987. It divides the population into 100 equally sized groups (centiles) arranged from lowest- to highest income, left to right, and plots the average disposable income – again expressed as the equivalent amount for a single adult – for each of these groups as bars. Overlaid on this is a line showing the real change in disposable income at that point (centile) of the distribution since 1987. The figure shows that while income is unequally distributed – with 12 per cent reporting less than €15,000 per year and 3 per cent more than €60,000 per year in 2019 – there has been progressive broad-based growth over this period as a whole, stronger at the bottom of the distribution than the middle or the top.

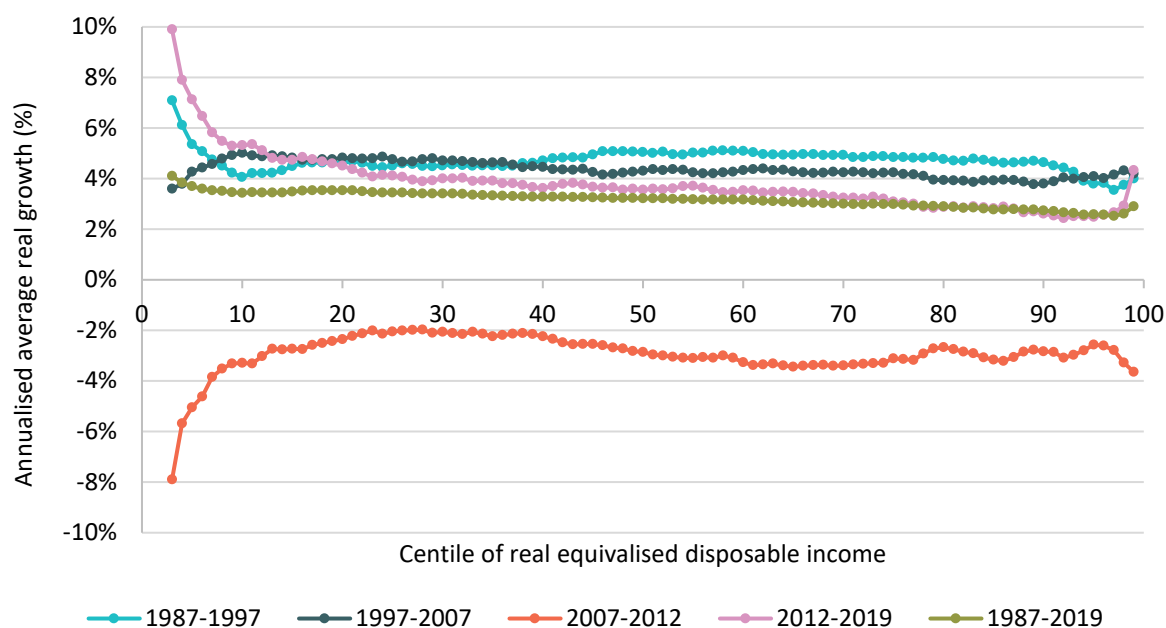
FIGURE 2.2 DISTRIBUTION OF REAL EQUIVALISED DISPOSABLE HOUSEHOLD INCOME: 2019



Sources: Authors’ calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Notes: Incomes after direct taxes paid and benefits received, expressed in 2019 prices in terms of equivalent amounts for a single adult. Lowest- and highest two centiles are excluded given potential concerns about the reliability of data at these extremes (Bollinger et al., 2019).

⁷ CSO Seasonally Adjusted Monthly Unemployment series, available at <https://data.cso.ie/table/MUM01>.

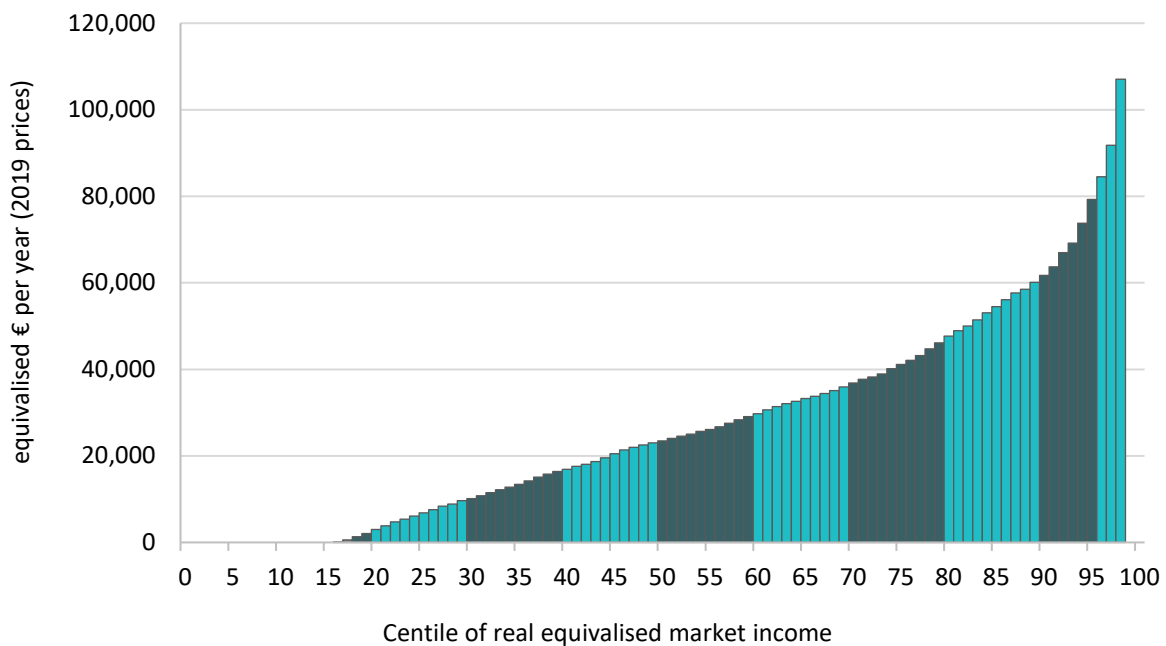
FIGURE 2.3 GROWTH IN REAL EQUIVALISED DIPOSABLE INCOME, BY CENTILE OF DISPOSABLE INCOME

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Incomes after direct taxes paid and benefits received, with growth rates calculated after accounting for inflation using the CSO's all-item Consumer Price Index.

Figure 2.3 plots the average annualised real growth rate across the distribution of income over different periods. The yellow series simply rescales the cumulative percentage change shown in Figure 2.2, with the subsequent series showing that this pattern of progressive broad-based growth has been a feature for most of the past three decades. The blue series shows that between 1987 and 1997 growth was highest at the very bottom of the distribution, while the green series shows that growth was higher for the bottom-half than the top-half of the distribution between 1997 and 2007.

Similarly, the pink series shows that the recovery since 2012 has been strongest at the very bottom of the distribution, with growth for the lowest-income fifth (20 centiles) stronger than the rest of the distribution. However, the orange series shows that the fall in incomes between 2007 and 2012 was also much more pronounced at the bottom of the distribution, with an average decline of more than 5 per cent per year over this period for the very lowest centiles compared to 2-4 per cent across the rest of the distribution.

FIGURE 2.4 DISTRIBUTION OF REAL EQUIVALISED MARKET INCOME: 2019

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Incomes before direct taxes paid and benefits received, expressed in 2019 prices in terms of equivalent amounts for a single adult. Excludes pension income as that from occupational pension schemes cannot be distinguished from non-market sources, notable the State pension. Values below 0 – e.g. self-employment losses – are censored at 0.

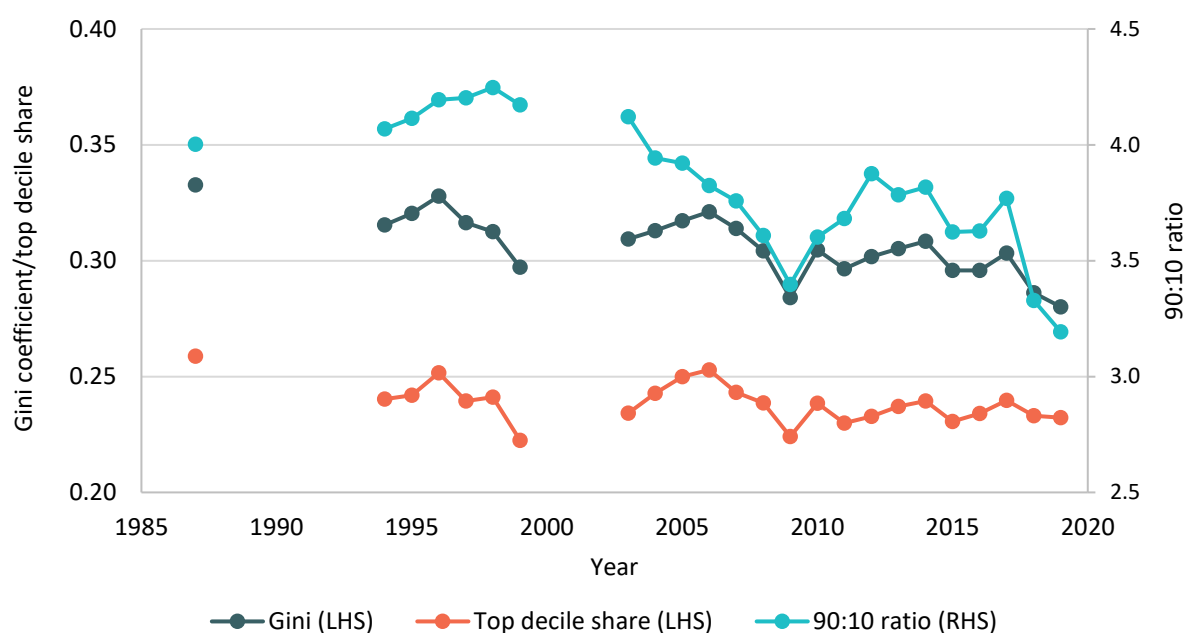
Figure 2.4 plots the distribution of market income in 2019, dividing the population into centiles arranged from lowest- to highest-income like in Figure 2.3 but with the bars now showing the average market income for each of these groups, again expressed in terms of the equivalent amount for a single adult. This shows that the market income is much more unequally distributed than disposable income with, for example, 36 per cent reporting less than €15,000 per year and 10 per cent more than €60,000 per year, compared to just 12 per cent and 3 per cent respectively for disposable income.

What is particularly striking is that in 2019, 15 per cent of individuals lived in a household with no positive market income. While this includes individuals in retired households, Roantree (2020b) shows that – compared to other European countries – Ireland has a relatively high share of working-age adults living alone and lone parents who do not have income from employment. One consequence of this is that it is not possible to plot the growth rate in market income across the distribution (as in Figure 2.3 for disposable income) because this statistic is not defined over large swathes of the distribution. For this reason, we now turn to look at more direct summary measures of both market and disposable income inequality.

2.3 INCOME INEQUALITY

Figure 2.5 shows the evolution of some selected measures of disposable income inequality. While there were some short periods when these measures were rising, the overall trend is one of declining income inequality across the population. For example, on the eve of the pandemic in 2019 the Gini coefficient – which summarises the level of income inequality as a number between 0 (where everyone has the same income) and 1 (where one person has all income) – stood at 0.280: the lowest recorded value our data cover, 16 per cent below its 1987 level (0.333). Similarly, the ratio of the person at the 90th percentile of the distribution compared to the person at the 10th percentile of the distribution – the 90:10 ratio – has fallen by a fifth, from 4.0 in 1987 to 3.2 in 2019. Figure 2.5 also shows that the top 10 per cent share of income has fallen, from 25.9 per cent in 1987 to 23.2 per cent in 2019.

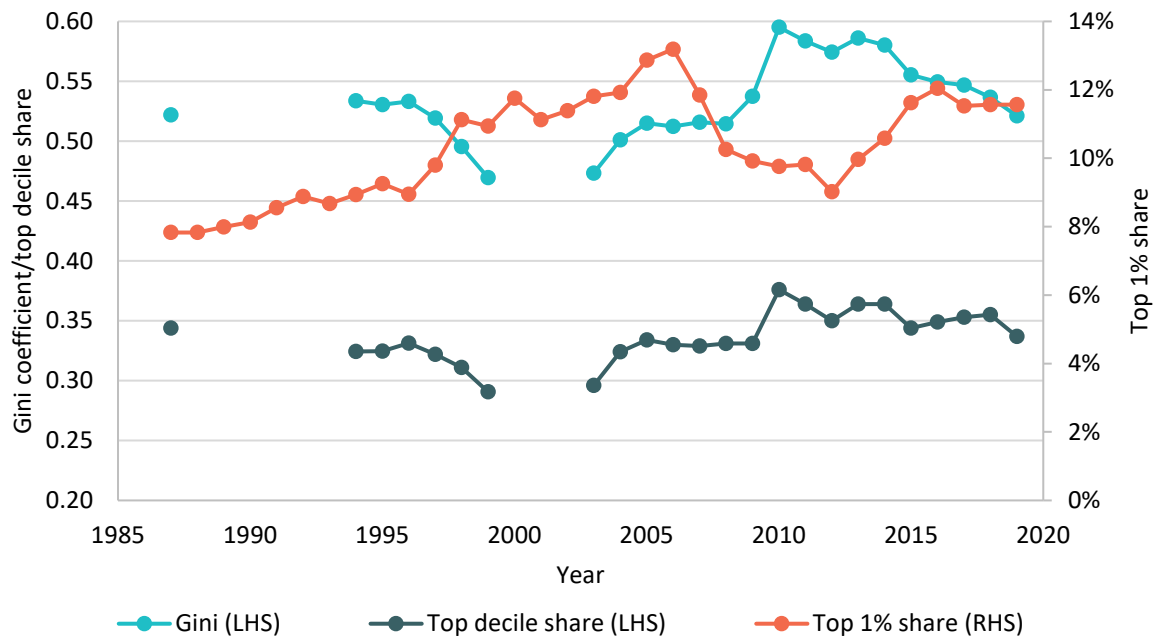
FIGURE 2.5 DISPOSABLE INCOME INEQUALITY: 1987-2019



Sources: Authors' calculations using the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Incomes after direct taxes paid and benefits received.

The decline in disposable income inequality is also evident in other measures of income inequality. Appendix Table B.1 shows that alternate percentile ratios – the 90:50, 75:25 and 50:10 – and supplementary summary measures of disposable income inequality all also exhibit declines over this period. Taken together, the evidence suggests a consistent story of declining income inequality across the population as a whole.

FIGURE 2.6 MARKET INCOME INEQUALITY: 1987-2019

Sources: Gini and top decile share by authors' using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files. Top 1 per cent share as estimated by Nolan (2007; 2012; 2018) taken from World Inequality Database.

Notes: Gini and top decile share are Incomes before direct taxes paid and benefits received, excluding pension income. Top 1 per cent share is of pre-tax national income.

However, Figure 2.6 shows a different story for incomes measured before direct taxes are deducted, benefits received, and pensions paid. Although market income inequality fell over the late 1990s as measured by both the Gini coefficient and the top decile share, these declines were quickly reversed over the early 2000s.⁸ Market income inequality then rose significantly over the Great Recession, with the Gini coefficient rising from 0.516 in 2007 to 0.595 by 2010 and the top decile share from 32.9 per cent to 37.6 per cent over the same period. This rise was closely related to the sharp increase in unemployment experienced over the Great Recession, as the steady decline in the Gini coefficient – and the less steady decline in the top decile share – since 2014 shows. Indeed, both these measures of market income inequality were on track to reach their pre-recession level on the eve of the pandemic, as was the unemployment rate for the population as a whole.

An important caveat to these measures of income inequality relates to those at the very top of the distribution. As in other countries, there is evidence that household surveys in Ireland do a poor job of capturing the incomes of the top 1 per cent or so of households (Callan et al., 2020; Burkhauser et al., 2018; Ruiz and Woloszko, 2016). This may be because those with very high incomes are unlikely to be

⁸ We do not show the 90:10 ratio in this figure as it cannot be computed when more than 10 per cent of individuals are living in households without any market income.

sampled by and respond to household surveys, or perhaps provide incomplete information on their incomes to those surveying them (Lustig, 2018).

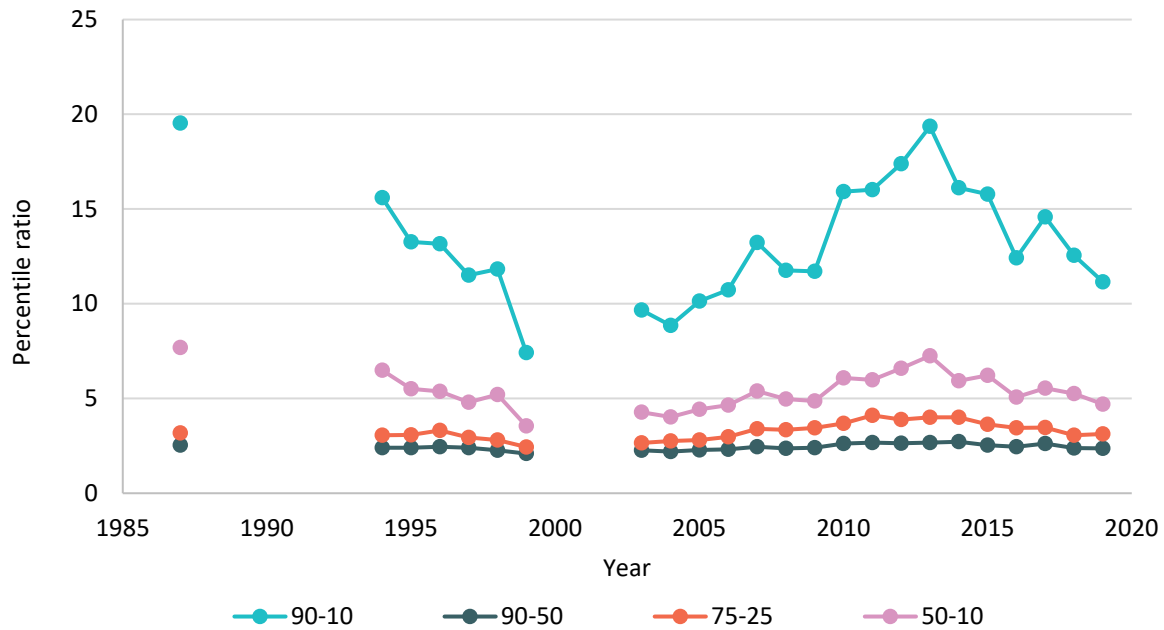
Statistics published from tax returns provide an alternative source for measures of top income inequality. Using such data from the Revenue Commissioners, Nolan (2007; 2012; 2018) estimates the top 1 per cent share of pre-tax national income which – with the caveat that it constitutes a very different concept to (equivalised household) market income – we also show in Figure 2.6.⁹ Intriguingly, this top 1 per cent share rose from 7.8 per cent in 1987 to 13.2 per cent in 2006, with the most rapid rise occurring when our measures of market income inequality were falling. Similarly, the top 1 per cent share *fell* sharply during the Great Recession when our measure of market income inequality was rising, then *rose* again from 2012 when measures of market income inequality were falling.

This suggests a need for caution in drawing strong conclusions about the evolution of market income inequality at the very top of the distribution in Ireland. However, Figure 2.7 shows that percentile ratios calculated across those with positive market income tell the same story for the rest of the population as do the Gini and top decile share shown in Figure 2.6. These measures of market income inequality fell significantly over the 1990s, rose during the 2000s and Great Recession, then fell again during the recovery. Unsurprisingly, the share of individuals living in households without any positive market income also rose significantly over the course of the Great Recession – from 13 per cent in 2007 to 23 per cent in 2010 – and has fallen back to 15 per cent in 2019 with the economic recovery.

Such trends illustrate the importance of changes in employment to the level and evolution of inequality in both market and disposable income, as has been found by previous research for Ireland. For example, Callan et al. (1998) show that increases in the labour force participation of married women were particularly important in explaining the decline in disposable income inequality between 1987 and 1994, while Barrett et al. (1999) point to the significant decline in unemployment over this period.

⁹ This is because tax returns are collected at the level of the tax unit rather than household, so do not adjust for size or composition in the same way. Callan et al. (2020) show that this is quantitatively important and accounts for around half of the difference in estimates of the top 10 per cent income share between SILC and Nolan (2018), with the remaining difference explained by the different income concepts used.

FIGURE 2.7 MEASURES OF MARKET INCOME INEQUALITY AMONG THOSE WITH SOME MARKET INCOME: 1987-2019



Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Percentile ratios for incomes before direct taxes paid and benefits received, excluding pension income and those without any such income.

An implication of this is that the significant disruption to the labour market caused by the COVID-19 pandemic is likely to lead to levels of market income inequality that will remain elevated until those who have lost work are able to return to their previous positions or find new ones. More ambiguous is the effect of these job losses on disposable income inequality. Simulations by Doorley et al. (2020) suggest that while market income inequality did indeed rise in 2020, the combined effect of the government's initial policy response and measures announced in Budget 2021 were sufficient to more than offset this rise and leave disposable income inequality lower. How this evolves in the years ahead will therefore likely depend on the speed of the economic recovery, as well as the length of time expanded income supports are in place (and what – if anything – replaces them).

CHAPTER 3

Income poverty and material deprivation

Our focus so far has been on income growth and inequality across the entire population. However, policymakers may have particular concerns about the living standards of those with least resources. In this chapter we look at two key indicators of low living standards: income poverty and material deprivation.

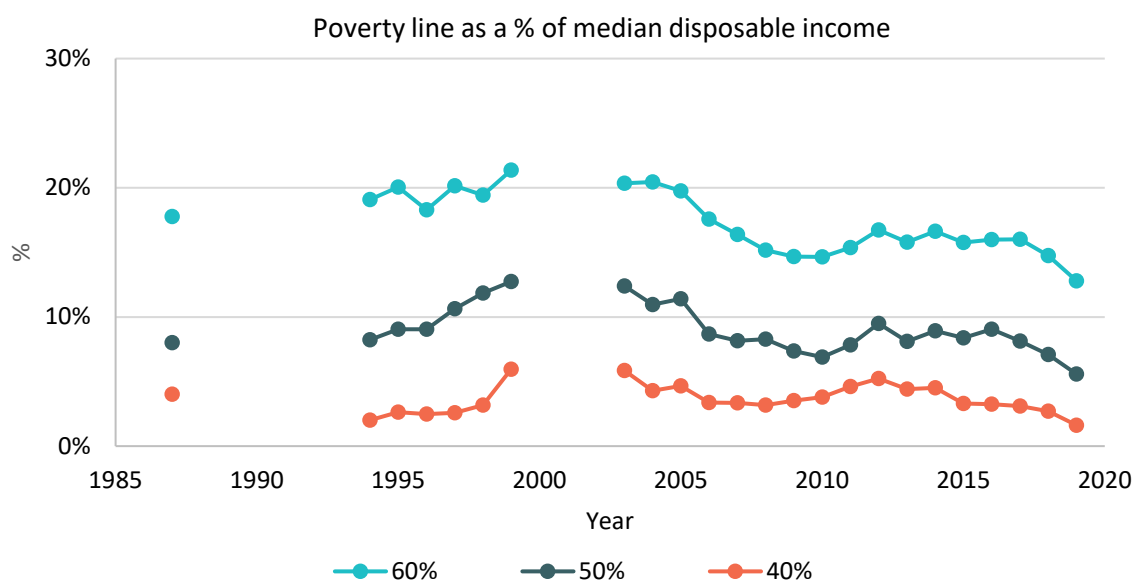
3.1 INCOME POVERTY

Standard measures of income poverty conceptualise low living standards as not having sufficient resources to buy essential goods and services. However, what should be considered an essential good or service is a subjective question to which the answer will evolve over time, reflecting changes in average living standards, technology and the views of society more generally. Because of this, most measures of income poverty are ultimately relative and indeed are explicitly defined with respect to average incomes, setting a ‘poverty line’ under which individuals are deemed to be in or at risk of poverty if their incomes fall below.¹⁰

Figure 3.1 presents estimates for three such measures of income poverty between 1987 and 2019. The first – and most common – measure sets the poverty line at 60 per cent of median equivalised disposable income, while the second and third do so at 50 per cent and 40 per cent respectively.¹¹ Figure 3.1 shows that under all three definitions the rate of income poverty rose over the 1990s: from 17.8 per cent in 1987 to 21.4 per cent in 1999 using the 60 per cent definition; from 8 per cent to 12.7 per cent using the 50 per cent definition; and from 4 per cent to 6 per cent (after falling in the early 1990s) using the 40 per cent definition. All three measures then declined substantially over the 2000s such that they had fallen below their 1987 level in 2010. Although the rate of income poverty fell in the initial years of the Great Recession on both the 50 per cent and 60 per cent measures (reflecting the combined effect of falling median incomes and continued increases to social welfare payments), all three measures rose between 2010 and 2012 as the impact of reductions to social welfare payments for working-age recipients was realised (Callan et al., 2010).

¹⁰ This is true even for what are sometimes (confusingly) called measures of ‘absolute poverty’. These define the poverty line in relation to average incomes in some fixed year, in contrast to what are sometimes called measures of ‘relative poverty’ that do so in relation to contemporary average incomes. We restrict attention to the latter class of measures as our focus in this section is changes in poverty over the medium to long run.

¹¹ The definition of equivalised disposable income used is the same as in Chapter 2, which uses modified OECD equivalence scales to adjust for household size and composition. This means that the statistics presented here are not directly comparable to those released by the CSO, which use a different set of equivalence scales.

FIGURE 3.1 AT RISK OF POVERTY RATE, VARIOUS THRESHOLDS: 1987-2019

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

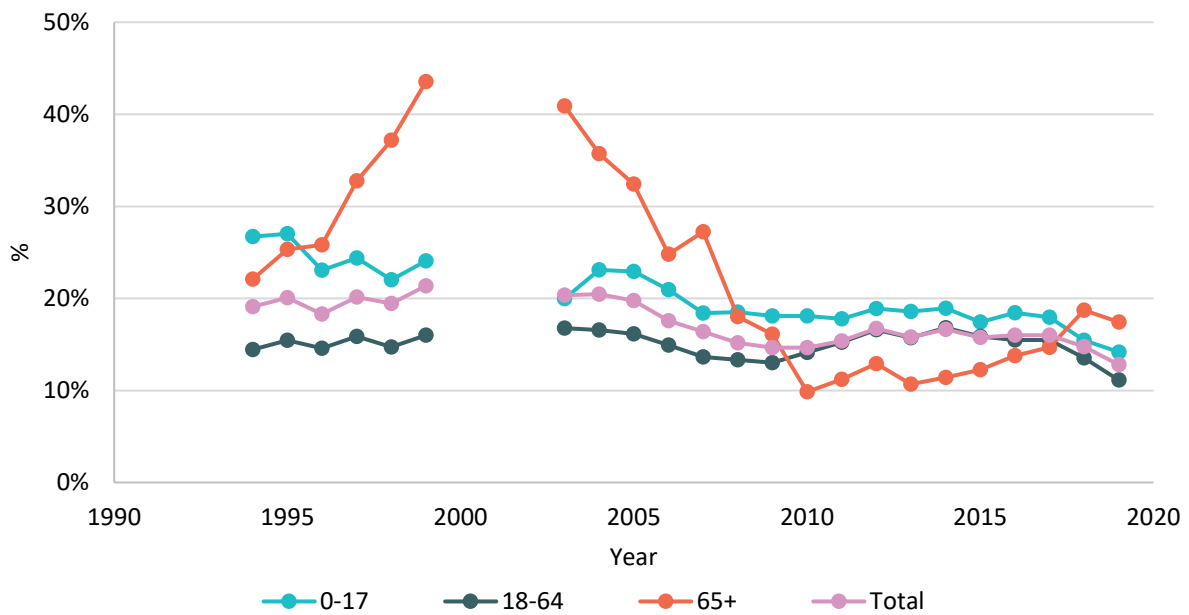
Note: Incomes after direct taxes paid and benefits received, adjusted for household size and composition using the modified OECD equivalence scales.

Since 2012, income poverty has fallen on all three measures with the pace accelerating from 2017 as full employment returned and increases to social welfare payments for working-age recipients resumed (Savage et al., 2016). Indeed, this decline left income poverty at its lowest rate recorded in the 30 plus years our data cover, on all three measures.

However, the rate of income poverty for the entire population can mask significant variation across the population. We now turn to look at the experience of different groups using the 60 per cent of disposable income measure, which – in the interests of brevity – we henceforth refer to as *the at risk of poverty rate*. We also restrict our attention to the years 1994 to 2019 because of the more limited demographic variables available in the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services that is the source for our analysis.

Figure 3.2 shows that the at risk of poverty rate has declined steadily for children, from 27 per cent in 1994 to 14 per cent in 2019, while that for working-age adults fluctuated around 15 per cent from 1994 to 2017 before declining to 11 per cent in 2019. By contrast, at risk of poverty rates for those age 65+ rose sharply over the late 1990s before falling back over the 2000s to such an extent that those age 65+ were the age group at lowest risk of poverty between 2010 and 2017.¹²

¹² Those 65+ remain the age group at lowest risk of poverty using the CSO's national equivalence scale, which implies a greater 'cost' of additional adults and children in a household than does the modified OECD scale we use in this report.

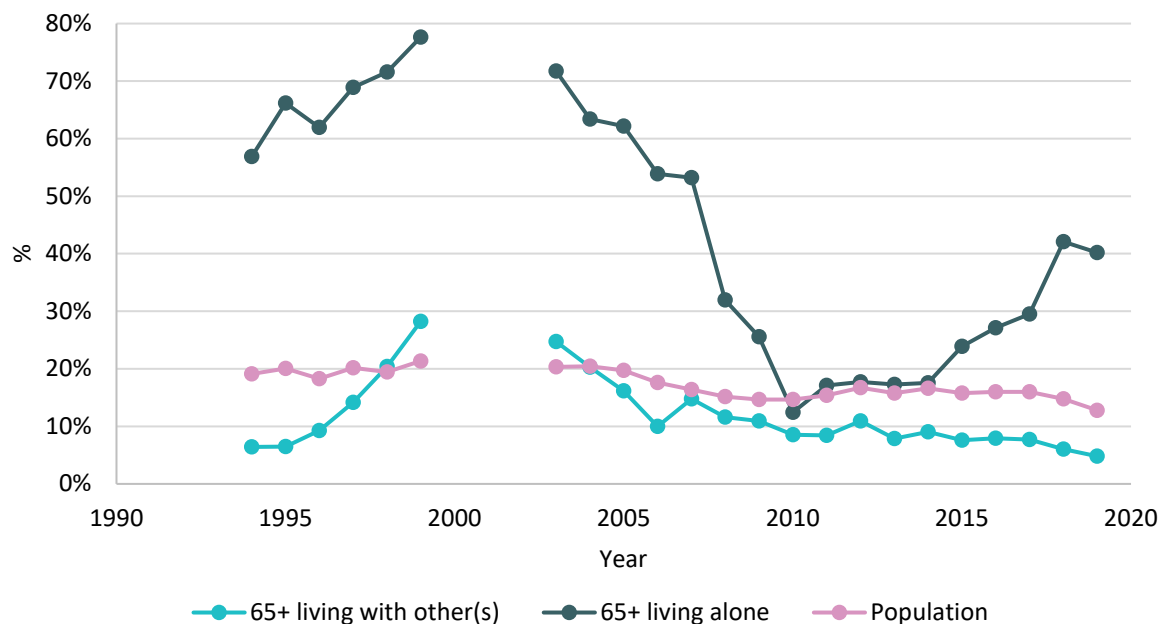
FIGURE 3.2 AT RISK OF POVERTY RATE, BY AGE GROUP: 1994-2019

Sources: Authors' calculations using the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

Note: Poverty line defined as 60 per cent of median equivalised disposable income, that is after direct taxes paid and benefits received adjusted for household size and composition using the modified OECD equivalence scales.

These developments are closely related to changes in the maximum rate of the State pension over time. Between 1995 and 1999, when the at risk of poverty rate was rising sharply for those age 65+, this increased by just 14 per cent in real terms compared to real growth of 35 per cent in median disposable income. By contrast, the maximum rate of the State pension grew by 50 per cent in real terms over the 2000s, much faster than median disposable income growth of 28 per cent and coinciding with a period of rapidly declining at risk of poverty rates for those age 65+. Since 2009, growth in the maximum rate of the State pension has again lagged behind that of average incomes – increasing by 5 per cent to 2019 compared to 9 per cent for real median disposable income – with the at risk of poverty rate for those 65+ again rising: from 9.8 per cent in 2010 to 17.4 per cent in 2019. This illustrates the crucial role the State pension plays in determining the living standards of the older population.

However, there also exists significant variation in income poverty among those age 65+. Figure 3.3 shows that although the at risk of poverty rate is low and has continued falling for those age 65+ who live with at least one other adult, it has increased significantly for those living alone since 2010: from 12.4 per cent to 40.2 per cent in 2019. Nolan et al. (2019) show that much of this elevated risk of poverty is explained by weak previous attachment to the labour market and periods of emigration, as well as by persons not claiming their full entitlements to a State pension.

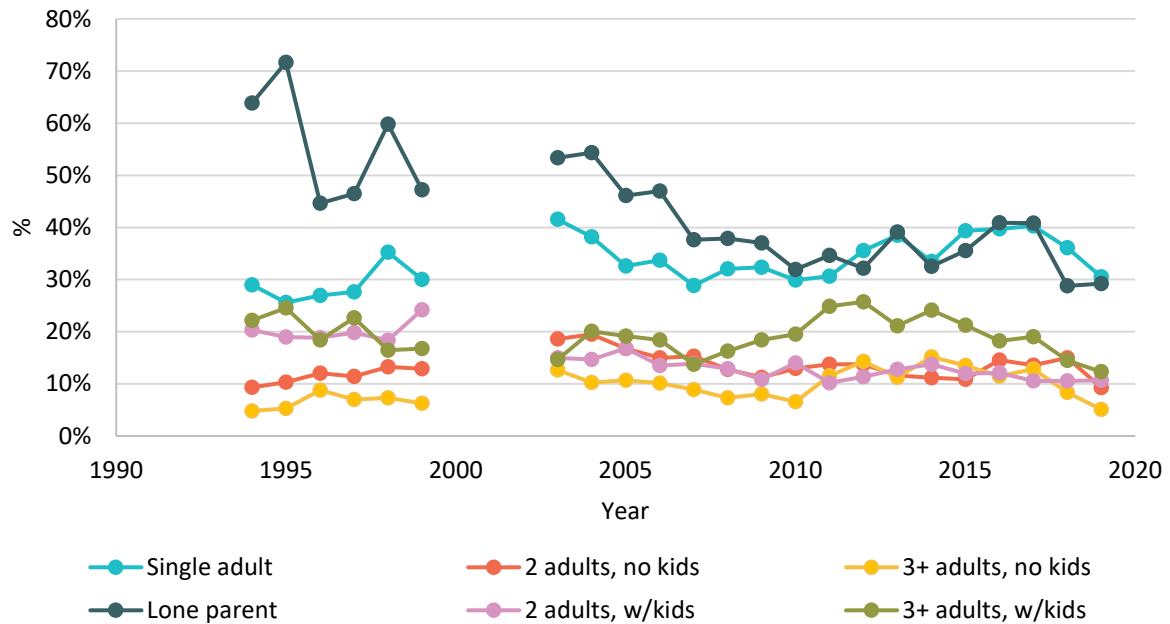
FIGURE 3.3 AT RISK OF POVERTY RATE FOR THOSE 65+, BY WHETHER LIVE ALONE OR NOT: 1994-2019

Sources: Authors' calculations using the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

Note: Poverty line defined as 60 per cent of median equivalised disposable income, that is after direct taxes paid and benefits received adjusted for household size and composition using the modified OECD equivalence scales.

Those age 65+ living alone faced even higher at risk of poverty rates in the 1990s, reaching almost 80 per cent in 1999 before falling dramatically during the 2000s. This was again primarily due to changes in the State pension, which is a particularly important source of income for this group. We observe similarly sharp falls in the at risk of poverty rate using alternative thresholds.

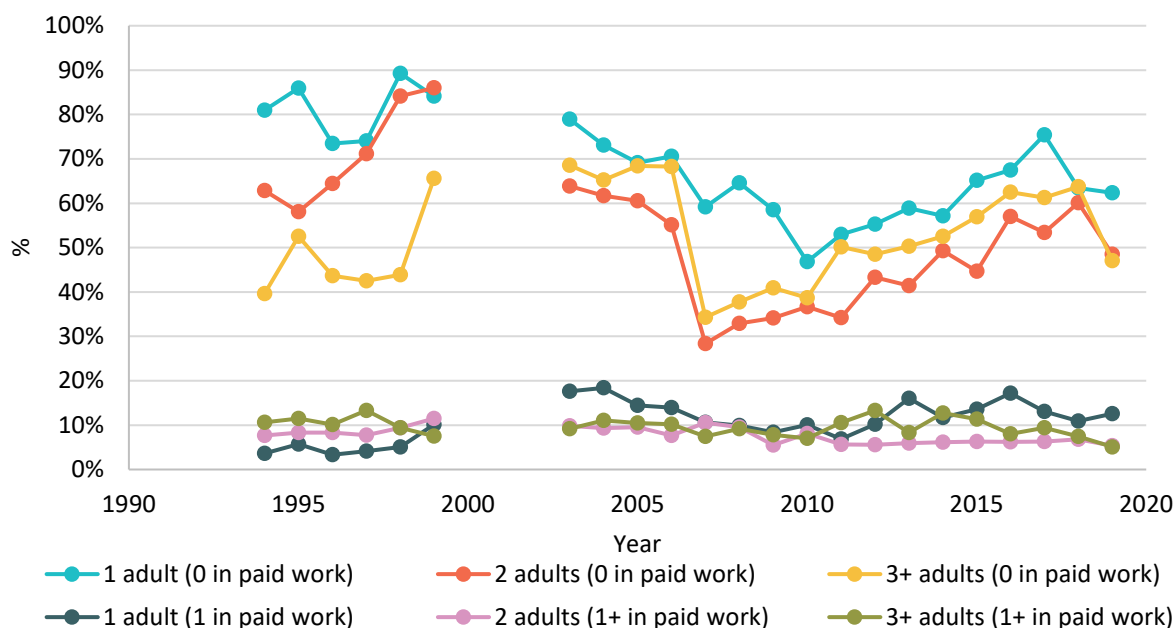
There is also significant variation in income poverty among children and those of working age. Figure 3.4 shows that while much lower than it was in 1994, the at risk of poverty rate is substantially higher for children or working-age adults living in single adult households than for those living in a household with at least two adults. Indeed in 2019 the at risk of poverty rate among those living in single adult households was – at around 30 per cent – more than double that of those living in a two or three+ adult household with children (10.7 per cent and 12.3 per cent respectively) and more than three times that of those living in a two or three+ adult household without children (9.3 per cent and 5.1 per cent respectively).

FIGURE 3.4 AT RISK OF POVERTY RATE FOR THOSE AGED <65, BY HOUSEHOLD TYPE: 1994-2019

Sources: Authors' calculations using the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

Note: Poverty line defined as 60 per cent of median equivalised disposable income, that is after direct taxes paid and benefits received adjusted for household size and composition using the modified OECD equivalence scales.

Income poverty is also closely related to the presence of a paid worker in the household. Figure 3.5 shows that over the entire period our data cover, the at risk of poverty rate is much lower among those in households where there is at least one person in paid work than those where there is none. This is perhaps best illustrated by the fact that the at risk of poverty rate for those in households with no adult in paid work fell below 30 per cent in one year (2007), while the rate for those in households with at least one person in paid work has never exceeded 20 per cent, for the most part fluctuating around or below 10 per cent. The recent rise in the at risk of poverty rate among those in households without anyone in paid work is also striking, increasing – for example – from 28.4 per cent in 2007 to 47 per cent in 2019 for those in two adult households and from 50.2 per cent in 2011 to 62.4 per cent in 2019 for those living alone.

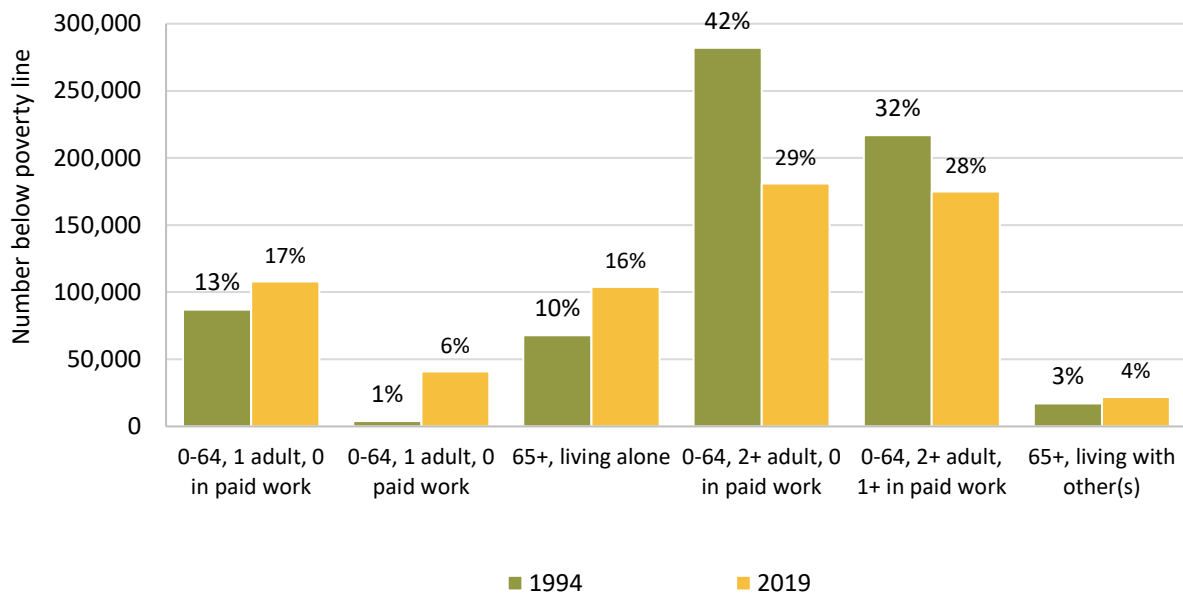
FIGURE 3.5 AT RISK OF POVERTY RATE FOR THOSE AGED <65, BY HOUSEHOLD WORK STATUS: 1994-2019

Sources: Authors' calculations using the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

Note: Poverty line defined as 60 per cent of median equivalised disposable income, that is after direct taxes paid and benefits received adjusted for household size and composition using the modified OECD equivalence scales.

These changes in at risk of poverty rates over time have – alongside shifting demographics – left the composition of those below the at risk of poverty line in 2019 very different to what it was in 1994. Figure 3.6 plots the number of people below this poverty line by household type along with the share of the total number at risk of poverty that they comprise for each of those years. It shows that the share living in single adult households (the first three sets of bars) has increased substantially, from 24 per cent in 1994 to 40 per cent in 2019. This means that despite a decline in the overall at risk of poverty rate during this period (from 19.1 per cent to 12.8 per cent as shown in Figure 3.1), the number below the poverty line living in single adult households has increased from 160,000 in 1994 to 253,000 in 2019.

At the same time, there has been a substantial reduction in the number of people below the poverty line living in 2+ adult households, down from 516,000 people in 1994 to 378,000 in 2019. This decline has been particularly pronounced among those age 0-64 living in 2+ adult households where no one is in paid work, which fell from representing 42 per cent of those below the poverty line to 29 per cent over this period. However, despite the much lower at risk of poverty rates they face (shown in Figure 3.5), those in 2+ adult households continue to comprise the majority of those below the poverty line, largely as they continue make up the vast majority of the population in Ireland.

FIGURE 3.6 COMPOSITION OF THOSE AT RISK OF POVERTY, BY HOUSEHOLD TYPE: 1994 AND 2019

Sources: Authors' calculations using the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

Note: Poverty line defined as 60 per cent of median equivalised disposable income, that is after direct taxes paid and benefits received adjusted for household size and composition using the modified OECD equivalence scales.

Figure 3.6 also shows that the share of those below the poverty line living in a household with someone in paid work is almost the same in 2019 (at 34 per cent or 221,000 people) as it was in 1994 (at 33 per cent or 216,000 people). This is in contrast to some other countries, like Britain, where the share of those below the poverty line living in a household where no one is in paid work has risen from 37 per cent to 58 per cent over the same period (Bourquin et al., 2019).

Poverty is a complex phenomenon, and no single measure or indicator can hope to fully capture its extent. While the at risk of poverty rate is widely used for monitoring poverty, Whelan et al. (2019, p684) – among others – argue that its limitations include:

the failure to take account of longer-term command over resources, unusually high expenses, accumulated debt, the distinctive circumstances of the self-employed and the role played by state services.

In part because of these limitations, researchers working in the area of poverty and social exclusion have moved towards using multiple measures including non-monetary indicators. We now turn to look at one such measure of low living standards: material deprivation.

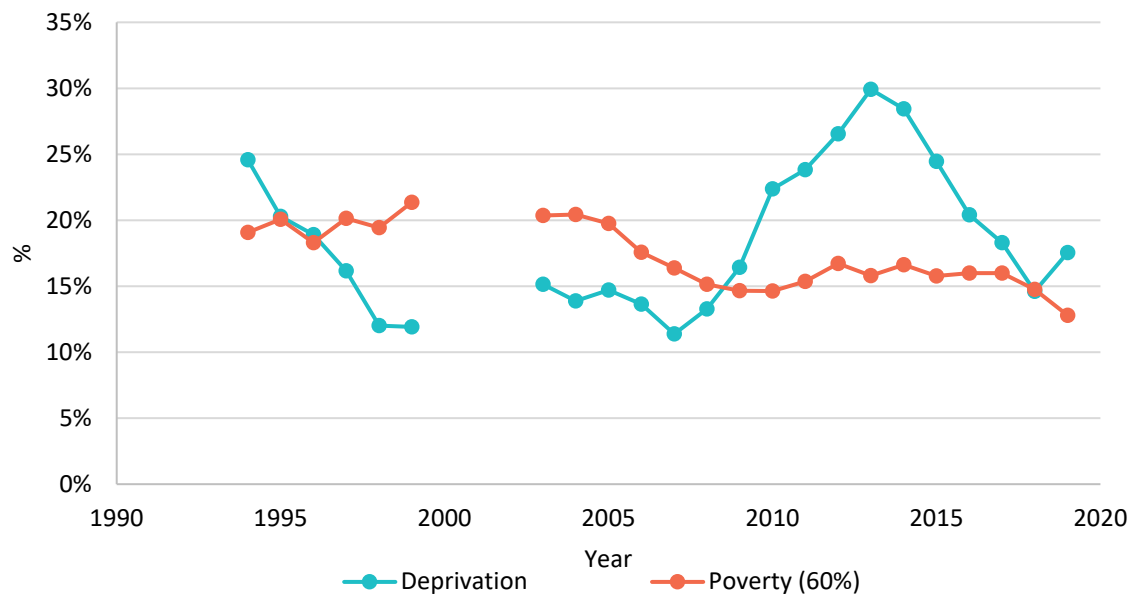
3.2 MATERIAL DEPRIVATION

Like income poverty, measures of material deprivation also conceptualise low living standards as not having sufficient resources to buy essential goods and services. However, they take a different approach to assessing this than measures of income poverty, directly asking people whether they are able to afford certain items which might be considered essential. We construct an indicator of material deprivation that can be measured across the years covered by the Living in Ireland Survey (LIIS) and the Survey of Income and Living Conditions (SILC) – 1994 to 2019 – which classifies people as being materially deprived if they are unable to afford two or more of the following ten items:¹³

- Two pairs of strong shoes;
- A warm waterproof overcoat;
- New (not second-hand) clothes;
- Replacement of worn out furniture;
- A meal with meat, chicken, fish (or vegetarian equivalent) every second day;
- A roast joint or its equivalent once a week;
- Home heating during the last year;
- Presents for family or friends at least once a year;
- Drinks or a meal for family or friends once a month;
- A morning, afternoon or evening of entertainment once a fortnight.

Figure 3.7 plots this measure of material deprivation alongside the at risk of poverty rate for the period 1994 to 2019. This shows that the two measures differ in some important respects with, for example, the rate of deprivation falling over the 1990s when the at risk of poverty rate was increasing, and rising in the initial years of the Great Recession when the at risk of poverty rate was falling. The deprivation rate has also exhibited more volatility than the at risk of poverty rate during the Great Recession and the subsequent recovery, rising from 16.4 per cent to 28.5 per cent between 2009 and 2014 compared to from 14.6 per cent to 16.6 per cent. This is in part because the at risk of poverty rate can be sensitive to changes in average incomes, given it is determined with reference to contemporary median incomes.

¹³ Not all 11 items used for the current official definition of consistent poverty used in the national anti-poverty targets are available for the full period. Section A.3 in Appendix A provides an overview of changes in the measurement of material deprivation in Ireland and how this indicator differs from that used by the Department of Employment Affairs and Social Protection (DEASP) (2020), published by the CSO in its annual Survey of Income and Living Conditions release and that used in the contemporary analysis of the Living in Ireland Survey (e.g. Nolan and Whelan, 1996).

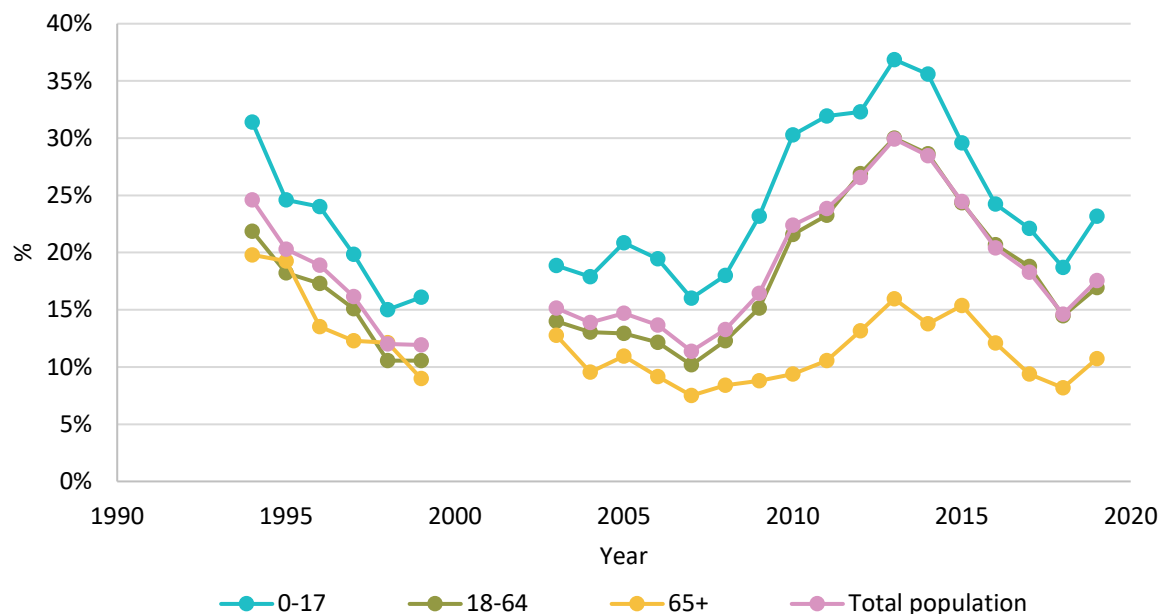
FIGURE 3.7 DEPRIVATION AND POVERTY RATES OVER TIME

Sources: Authors' calculations using the Living in Ireland Survey and the Survey of Income and Living Conditions RMF.

Note: Poverty line defined as 60 per cent of median equivalised disposable income, that is after direct taxes paid and benefits received adjusted for household size and composition using the modified OECD equivalence scales. Deprivation defined as being unable to afford two or more items from a list of ten essentials.

For example, Figure 2.1 showed that real median household income fell substantially between 2009 and 2012 meaning that the threshold below which one would be considered at risk of poverty also fell substantially. This illustrates the difficulty that the at risk of poverty rate can have in measuring low living standards in period of profound economic change such as the Great Recession.

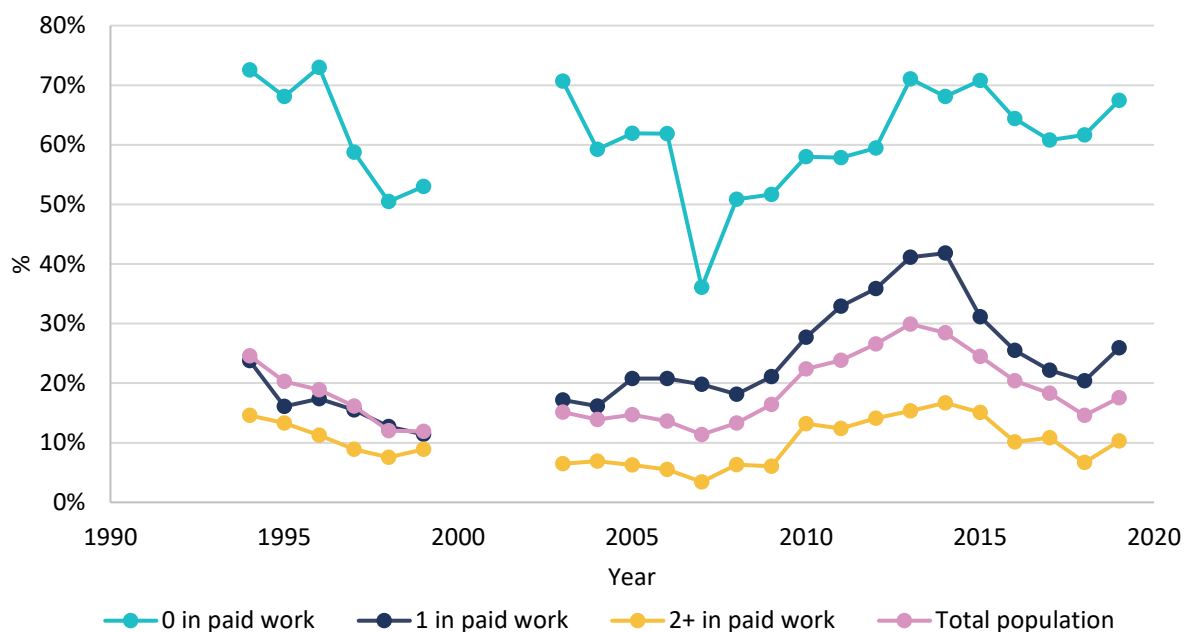
As with poverty, rates of deprivation vary considerably across age groups. Figure 3.8 shows that children have consistently experienced the highest rates of deprivation and – with the exception of two years – those age 65+ the lowest. Unlike the poverty rate (which was rising for those age 65+ in the late 1990s), all age groups experienced a strong fall in deprivation between 1994 and 2007. The deprivation rate also rose rapidly during the Great Recession for all age groups, though this was much more pronounced for children and those of working age, rising to 35 per cent and 30 per cent respectively. While the economic recovery since 2014 has seen deprivation rates for all age groups fall back towards their pre-recession levels, the series all rose in the most recent year of data. Whether – given rising median incomes, falling income inequality and poverty rates – this is a statistical anomaly remains to be seen, but it represents a concerning development on the eve of the COVID-19 pandemic if it is not.

FIGURE 3.8 DEPRIVATION RATE BY AGE GROUP

Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

Given these figures suggest that – unlike with income poverty – children have been consistently at significantly higher risk of material deprivation than the rest of the population, we now turn to look in more depth at which children are living in deprived households. This means that the groups we examine differ somewhat from those considered in relation to income poverty above.

Research has long suggested that one of the most protective factors against poverty is whether working age adults are in employment (e.g. OECD, 2008; 2009) as well as the number of people at work within households (Watson et al., 2012). It is not surprising, then, that Figure 3.9 shows that there is a strong relationship between the number of paid workers in the household and child deprivation. In all but one year our data cover, the deprivation rate for children living in households without anyone in paid work has exceeded 50 per cent, while that for children in households with at least one person in paid work has never reached this level. In addition, although deprivation rates for children in households with someone in work have fallen substantially during the recent recovery, this is not the case for those where no one is in paid work.

FIGURE 3.9 DEPRIVATION RATE FOR CHILDREN, BY NUMBER OF PAID WORKERS IN HOUSEHOLD

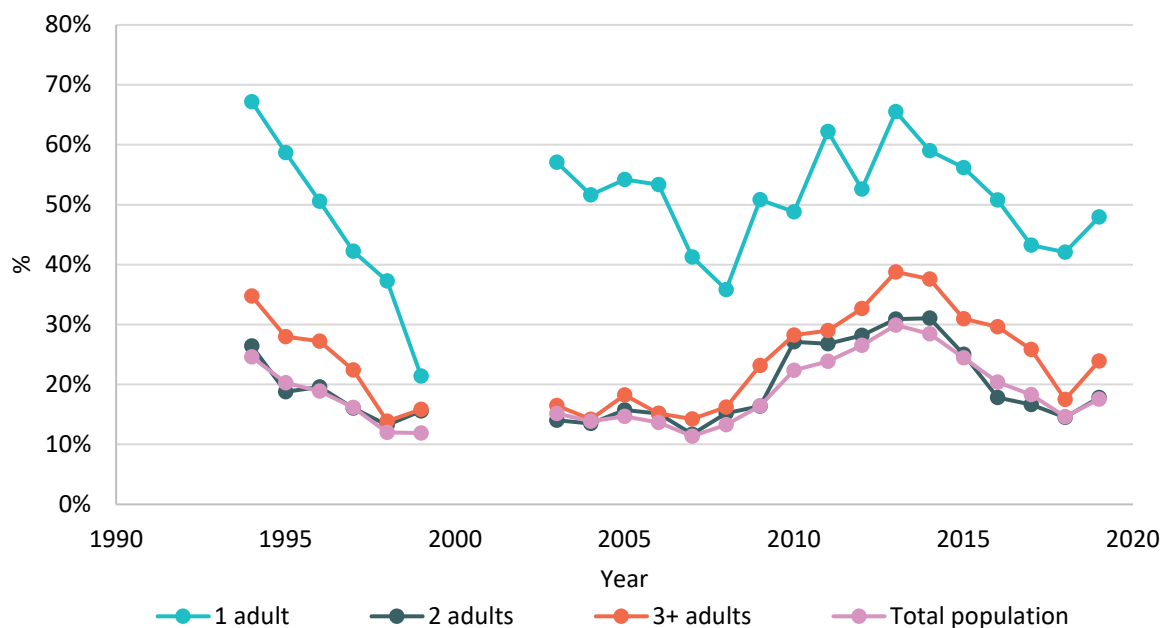
Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
 Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

Figure 3.10 shows that while there are almost no differences in the rate of material deprivation between children in families with two adults and the overall population, rates are slightly higher for those with three or more adults. However, child deprivation rates are much higher for children in one adult households. Despite a significant decline over the late 1990s and during the more recent recovery, the rate of deprivation for children in one adult households has stood above 40 per cent in all but three of the years our data cover, and more than 50 per cent for the majority of those years.¹⁴

Given the high rates of deprivation among children in single adult households, it is of little surprise then that Figure 3.11 shows lone parents are also at greater risk of deprivation than other working-age adults. However, the deprivation rate is slightly lower than for children in lone-parent households, implying that lone-parents experiencing deprivation have – on average – more children than lone-parents not experiencing deprivation. The figure also shows that those in multi-adult households without children have the lowest deprivation rates of working-age adults, substantially below that for single adults living alone and – for the most part – those with children. Interestingly, single adults have experienced consistently higher rates of deprivation than working age adults in two adult households regardless of the presence of children.

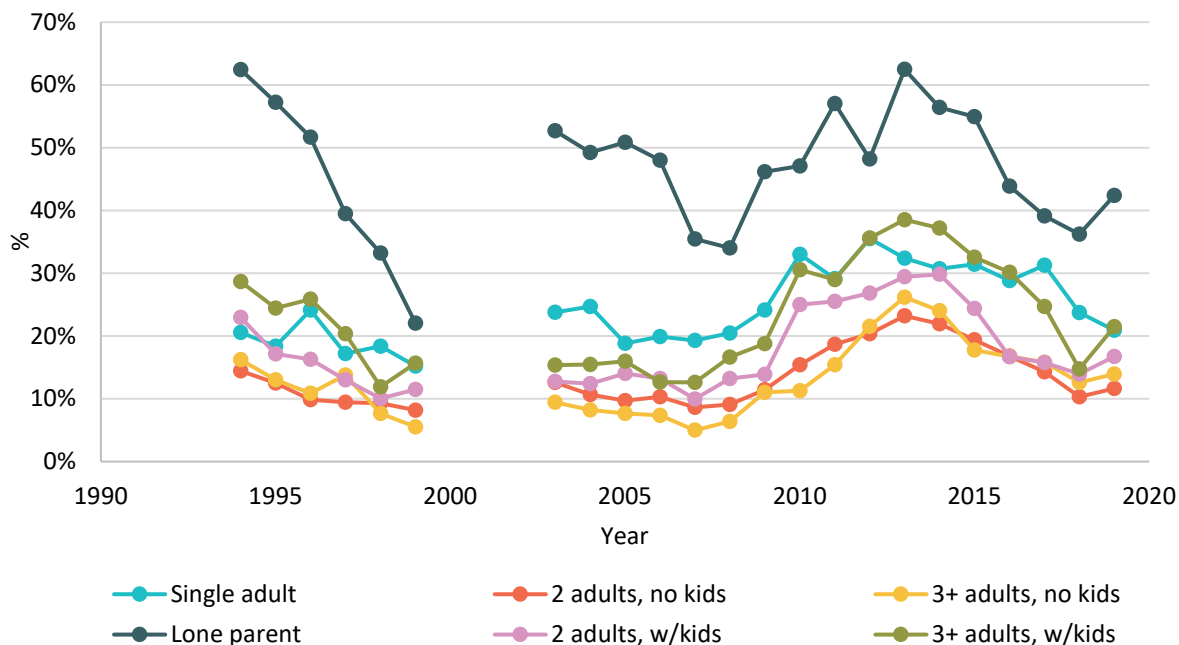
¹⁴ The substantial decline in the deprivation rate for children in single adult households between 1998 and 1999 should be treated with caution due to the small number of cases these estimates are based on.

FIGURE 3.10 DEPRIVATION RATE FOR CHILDREN, BY NUMBER OF ADULTS IN HOUSEHOLD

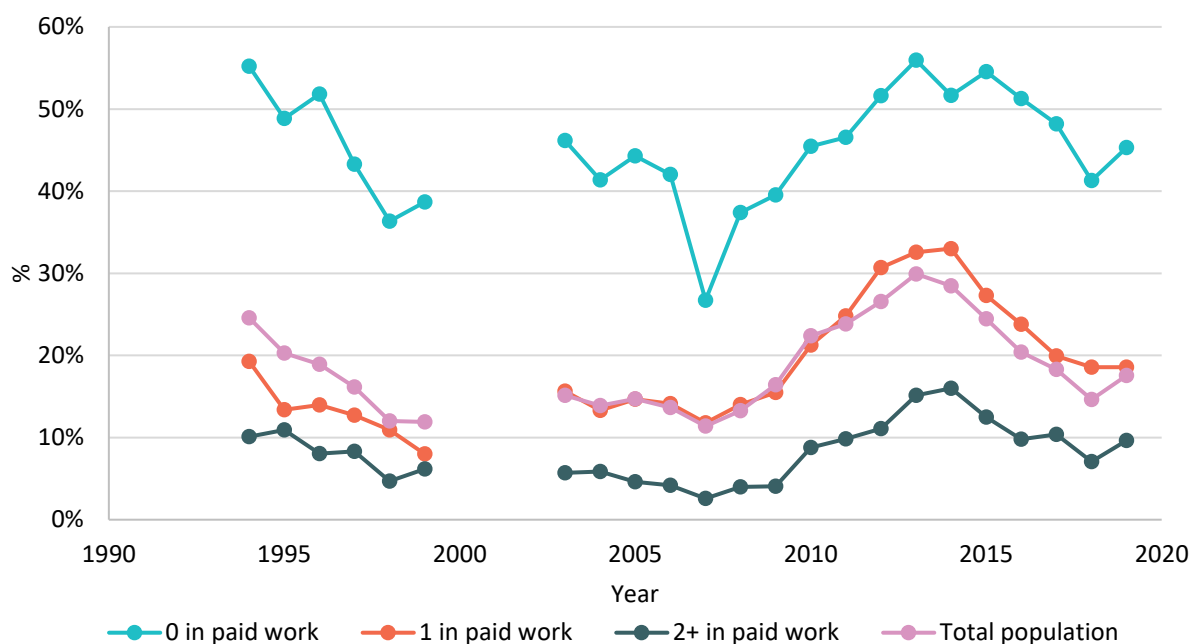


Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
 Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

FIGURE 3.11 DEPRIVATION RATE FOR WORKING-AGE ADULTS, BY HOUSEHOLD COMPOSITION



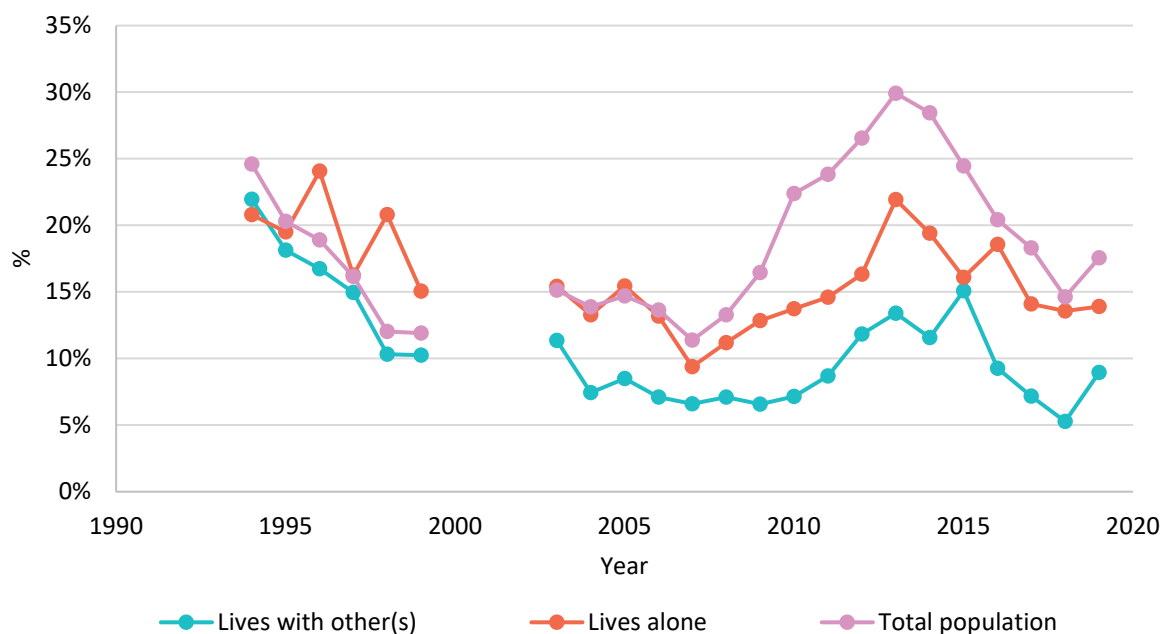
Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
 Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

FIGURE 3.12 DEPRIVATION RATE FOR WORKING-AGE ADULTS, BY NUMBER IN PAID WORK

Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

We now look at the relationship between the number of paid workers for working-age adults and their deprivation levels. Figure 3.12 mirrors the results found for children in Figure 3.9, showing that deprivation rates decline with the number of paid workers in the household. Working-age adults in household without any paid workers experience very high deprivation rates, exceeding 40 per cent in most of the years covered by our data. Levels of deprivation are much lower for working-age adults living in households with someone in paid work, especially those in households with two or more in paid work. These findings again illustrate how paid work and the intensity of paid work in households is a protective factor against poverty and deprivation. However, it is also notable that while working-age adults living in households with one paid worker faced average or below average deprivation rates before the Great Recession, they have faced slightly higher rates of deprivation since.

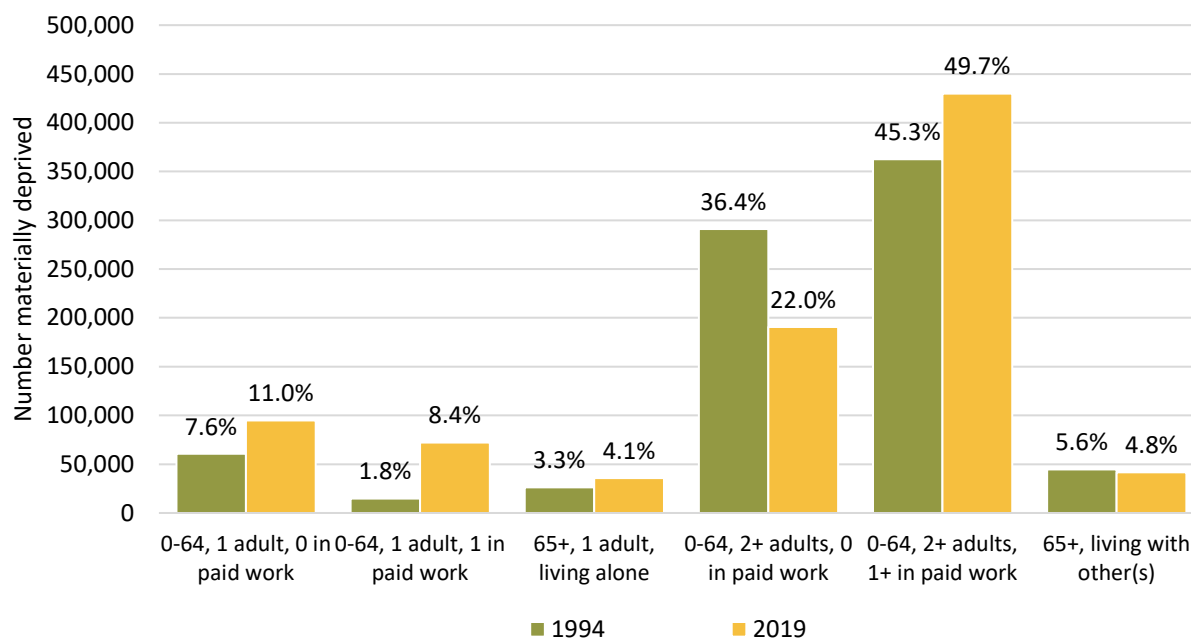
In Figure 3.8 we showed that people aged 65 and over were – compared to other age groups – less likely to experience deprivation and that even during the recession they always reported the lowest deprivation rates. However, we have also seen that there is significant variation in the experience of deprivation among children and working-age adults depending on the structure of the household they live in. Similarly, Figure 3.13 shows that people aged 65 and over living with others have experienced rates of deprivation that are well below those experienced by the general population. In contrast, those age 65+ living alone have – on average – deprivation rates 1.6 times greater than their counterparts living with others, ranging from 9 per cent to 22 per cent.

FIGURE 3.13 DEPRIVATION RATE FOR THOSE AGE 65+, BY WHETHER LIVE ALONE OR NOT

Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

However, while we have seen that those age 65+ living alone were at substantially greater risk of poverty than the general population, this is not the case for deprivation. Indeed, even though they have consistently faced higher rates of deprivation than their counterparts living with at least one other person, those age 65+ living alone have experienced lower rates of deprivation than the general population. This may be because the same level of income in retirement is not needed to obtain a given standard of living in working life as many retirees do not face costs associated with work (for example, commuting costs) or housing (having no mortgage outstanding) and have more leisure time, some of which Aguiar and Hurst (2005) show is used to achieve desired consumption at a lower cost (e.g. shopping around for lower-cost groceries or cooking from scratch rather than eating prepared meals).

It is also notable that while the deprivation rate rose rapidly for the overall population over the course of the Great Recession, the rise was much less pronounced for those age 65+. This was likely driven by the protection of the State pension over the course of the Great Recession, in contrast to social welfare payments for working-age – especially younger – adults (OECD, 2020).

FIGURE 3.14 COMPOSITION OF THOSE LIVING IN MATERIAL DEPRIVATION, BY HOUSEHOLD TYPE

Sources: Authors' calculations using the Living in Ireland Survey and Survey of Income and Living Conditions RMF.
Note: Deprivation defined as being unable to afford two or more items from a list of ten essentials.

As with income poverty, changes in deprivation rates over time have – alongside shifting demographics – left the composition of those living in material deprivation quite different from that in 1994. The first two blue bars in Figure 3.14 show that while just 9.4 per cent of the population experiencing deprivation were 0-64 year olds living in single adult households in 1994, this had more than doubled to 19.3 per cent by 2019: an estimated increase of almost 92,000 people. At the same time, there has been a decline in the share of the population experiencing deprivation who are age 0-64 and living in a multi-adult household: down from a combined 81.7 per cent in 1994 to 71.7 per cent in 2019 (reflecting the fact that such households also make up the bulk of the population). Figure 3.14 shows that the composition of those 65+ experiencing deprivation has also shifted towards those living in single adult households: rising from 3.3 per cent of the total in 1994 to 4.1 per cent in 2019.

3.3 INTEGRATING RESULTS ON INCOME POVERTY AND DEPRIVATION

How do we integrate the results from the two measures of low living standards that we have considered in this chapter? While both show a decline over the full horizon our data cover (with the overall prevalence of income poverty and deprivation falling from 25 per cent to 18 per cent and from 19 per cent to 13 per cent respectively between 1994 and 2019), we have seen that the increase in the overall at risk of poverty rate was much more muted over the course of the Great Recession than that in the deprivation rate. In addition, each measure suggests quite a different age group faces the greatest risk of low living standards: children

in the case of material deprivation and those aged 65+ living alone in the case of income poverty.

While both measures are informative in their own right, an alternative approach is to measure the *combined* incidence of income poverty and material deprivation. This was the approach designed by researchers from the ESRI (Callan et al., 1993, Nolan and Whelan, 1996) and adopted by the Government of Ireland in their 1997 *National Anti-Poverty Strategy*, which for the first time framed a poverty reduction target based on such a measure, termed ‘consistent poverty’. This measure has continued to be used to set national poverty and social exclusion targets in Ireland (DEASP, 2020), but also as part of the Irish contribution to the Europe 2020 poverty strategy (European Commission, 2010). While such a measure has many advantages, it also – by definition – excludes some individuals experiencing only one form of low living standards and suggests a much lower prevalence of low living standards than either income poverty or material deprivation.¹⁵

However, measures of income poverty and material deprivation both point to the high incidence of low living standards among certain groups. We have seen that this is the case for lone parents and their children as well as those of working-age adults living in households without anyone in paid work, with high rates of income poverty and material deprivation for both groups an enduring feature of Irish society since at least the early 1990s. Indeed, measures of consistent poverty also point to these groups as having experienced a higher incidence of low living standards than others.¹⁶

In summary, while measures of income poverty and material deprivation have evolved differently across the economic cycle and differ somewhat in the groups they highlight as being at particular risk, both tell a consistent story about the overall direction of travel and the greater incidence of low living standards among certain groups: lone parents, their children and working-age adults living in households without anyone in paid work.

¹⁵ For example, the CSO estimates (using somewhat different definitions to those deployed here) that the rates of income poverty and material deprivation across the population as a whole were 12.8 per cent and 17.8 per cent respectively in 2019, but that the rate of consistent poverty was just 5.5 per cent: see Table SIA12 at <https://data.cso.ie/table/SIA12>. A consequence of this lower prevalence is that we cannot compute rates of consistent poverty for many groups in a manner compliant with the statistical disclosure rules currently applied by the CSO, one of the reasons we do not consider such measures in this report.

¹⁶ See CSO Tables SIA49 and SIA17 available at <https://data.cso.ie/product/SILC>.

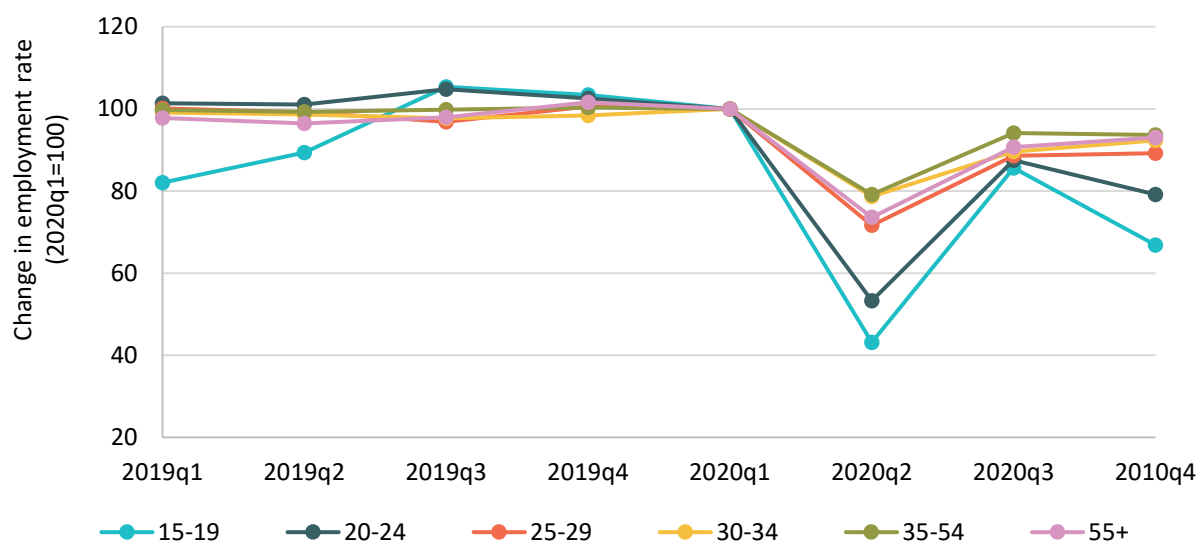
CHAPTER 4¹⁷

Intergenerational inequality

This chapter explores an aspect of inequality which is receiving increasing attention in both the domestic and international policy debate: intergenerational inequality, that is of inequality between generations.¹⁸ Such inequalities have come into sharp focus since the onset of the COVID-19 pandemic, with research highlighting the disproportionate impact in the labour market on younger workers and those from minority backgrounds (Adams-Prassl et al., 2020; Crossley et al., 2021; Enright et al., 2020).

Figure 4.1 shows that job losses have also fallen most heavily on younger workers in Ireland. The series plot the change in the employment rate for different age groups over 2020, excluding those absent from paid work because of COVID-19.¹⁹ These show employment rates fell by almost 60 per cent and 50 per cent respectively for those age 15-19 and 20-24 respectively in the second quarter of 2020, compared to 25 per cent for those aged 25-29 and 55+, and 20 per cent for other age groups.

FIGURE 4.1 CHANGE IN EMPLOYMENT RATE FROM PEAK (Q1 2020=100)



Sources: Authors' calculations using Labour Force Survey Research Microdata Files (LFS RMF).

Note: Employment rate calculated using ILO definition excluding those reporting absences due to COVID-19.

¹⁷ https://doi.org/10.26504/bkmnext412_chapter4.

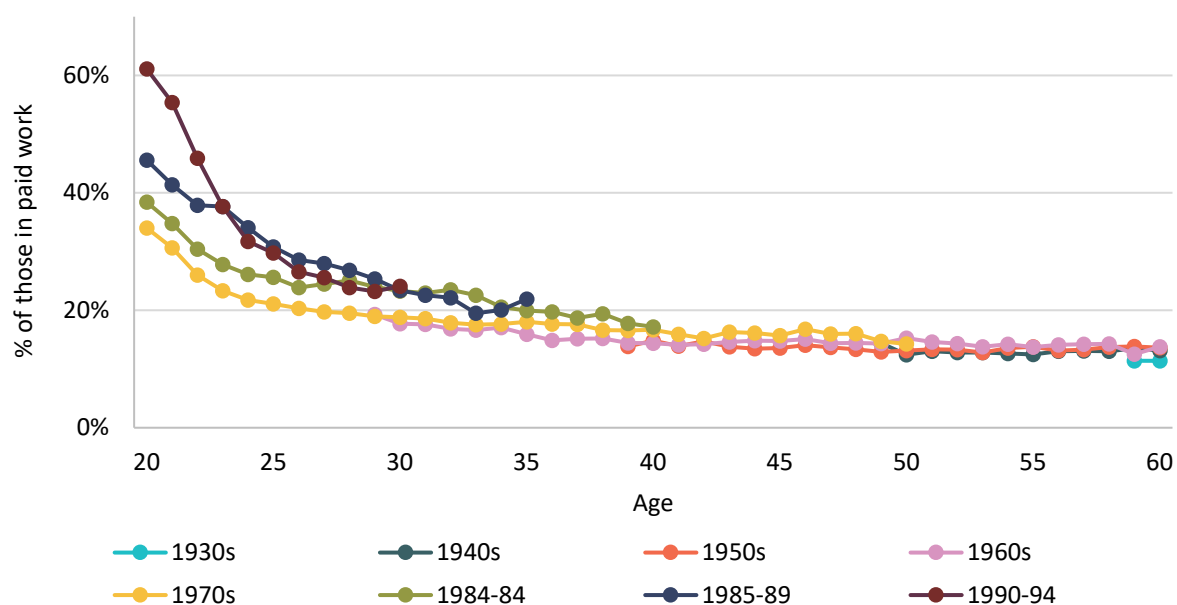
¹⁸ See, for example, Nugent (2020); Cribb (2019); Kurz et al. (2019); Resolution Foundation (2018). The term is sometimes also used to refer to the transmission of disadvantage within families, or social mobility.

¹⁹ This differs from the definition of employment used by the CSO which includes those who expect to return to their employer in the next three months or receive more than 50 per cent of their previous salary, creating clear problems for the measurement of employment during a pandemic. Roantree (2020a) shows the same pattern holds examining claims for the Pandemic Unemployment Payment.

Although employment for all age groups recovered significantly in the latter half of 2020 – reflecting the lifting of public health restrictions over the summer and around Christmas – younger workers have remained most adversely affected, especially taking into account the fact that seasonal patterns of work typically lead to higher rates of employment for younger workers over the summer and at Christmas. Indeed, employment remained a third below its pre-pandemic level for those age 15-19, a fifth below for those age 20-24, and 10 per cent below for those age 25-29, compared to 7 per cent for older age groups. As a result, there were an estimated 112,000 fewer 15-34 year olds in paid work in the final quarter of 2020 than a year earlier, compared to 93,000 fewer workers aged 35+.

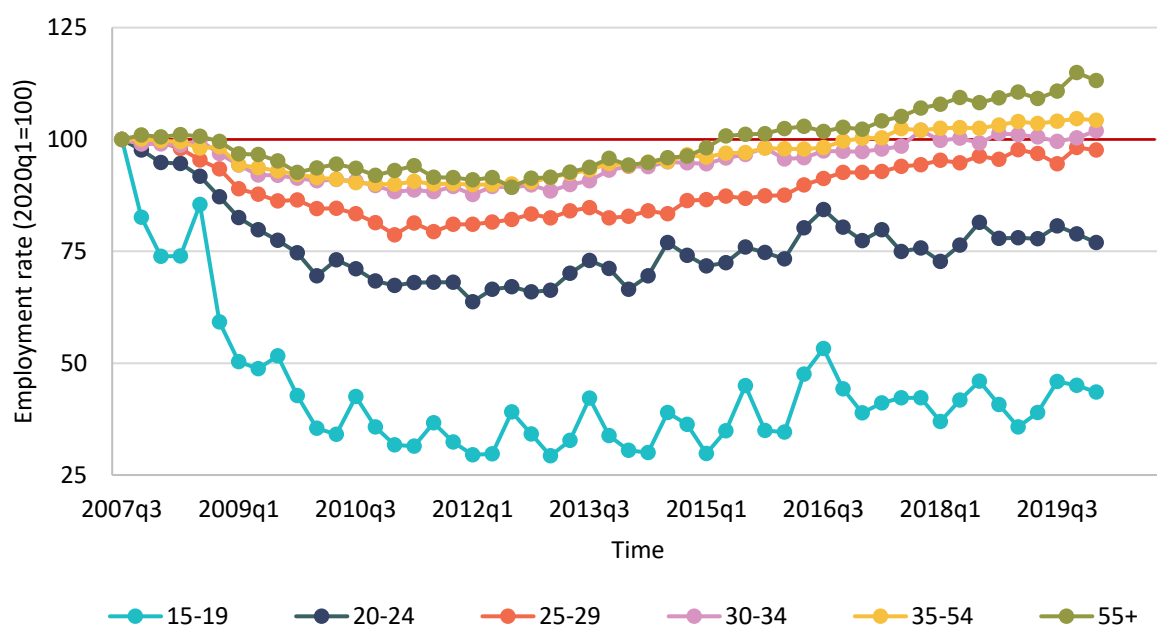
This disproportionate impact of job losses on young workers is in part because they are more likely to work in retail, hospitality, arts or leisure: sectors which have been most heavily affected by the public health measures necessary to suppress the spread of COVID-19 (Byrne et al., 2020). This is shown in Figure 4.2, which plots the share of workers in these sectors by age and birth cohort. A sharp age gradient in the likelihood of working in such vulnerable sectors is evident, with fewer than a fifth of workers age 40-60 doing so compared to more than a third of those in their early 20s. Figure 4.2 also shows that – like in the UK (Blundell et al., 2020) – the importance of these sectors for young adults has been growing across generations, with almost 40 per cent of workers born between 1985 and 1994 working in retail, hospitality, arts or leisure in their mid-20s compared to around 20 per cent of those born in the 1970s.

FIGURE 4.2 SHARE WORKING IN RETAIL, HOSPITALITY, ARTS OR LEISURE, BY AGE AND BIRTH COHORT



Sources: Authors' calculations using Labour Force Survey Research Microdata Files (LFS RMF).

Note: Retail (NACE 45-47), Hospitality (NACE 55-56) and Arts or Leisure (NACE 90-94).

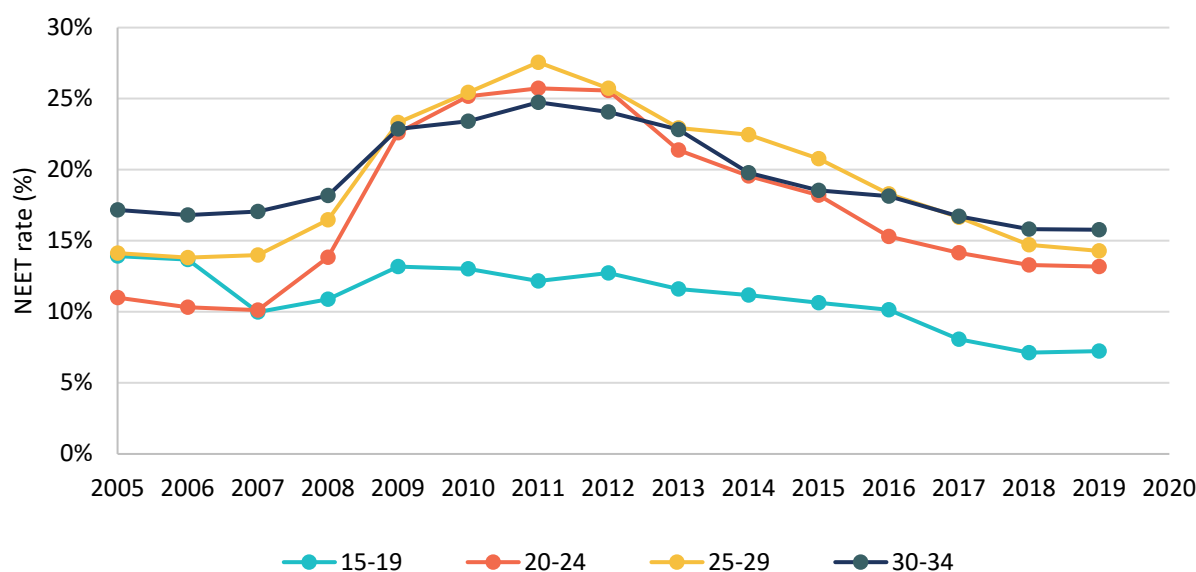
FIGURE 4.3 CHANGE IN EMPLOYMENT RATE FROM PEAK (Q3 2007=100)

Sources: Authors' calculations using Labour Force Survey Research Microdata Files (LFS RMF).
 Note: Employment rate calculated using ILO definition.

In addition to being more likely to work in these lockdown susceptible sectors, Redmond and McGuinness (2020) show that young workers are significantly less likely to have previously worked from home conditional on their occupation. This suggests their scope for working from home may be more limited than older workers in the same jobs, a factor which could also help explain the greater decline in employment among younger adults shown in Figure 4.1.

Young adults were also disproportionately affected by job losses over the course of the Great Recession. This is shown in Figure 4.3, which (like Figure 4.1) plots the change in employment rates by age relative to their pre-crisis peak (in this case Q3 2007). Employment rates declined by around two-thirds from peak to trough for those age 16-19, a third for those age 20-25 and a fifth for those age 25-29, compared to around 10 per cent for older workers. Moreover, Figure 4.3 also shows that employment rates were only just approaching their pre-crisis level for 25-29 year olds on the eve of the pandemic and were still far below the rates for those under 25, despite having recovered for other age groups by 2017 at the latest.

Declines in employment for young adults need not have negative consequences if they are the result of a switch from employment to increased educational participation. Indeed, Bercholz and FitzGerald (2016) raise the prospect of a future *boost* to productivity and earnings arising from the fall in employment and rise in human capital investment over the crisis.

FIGURE 4.4 NOT IN EMPLOYMENT, EDUCATION OR TRAINING (NEET) RATE

Sources: Authors' calculations using Labour Force Survey Research Microdata Files (LFS RMF).

Note: Not in paid work during the LFS reference week nor a student or apprentice in regular formal education during the last four weeks (excluding those temporarily on holidays).

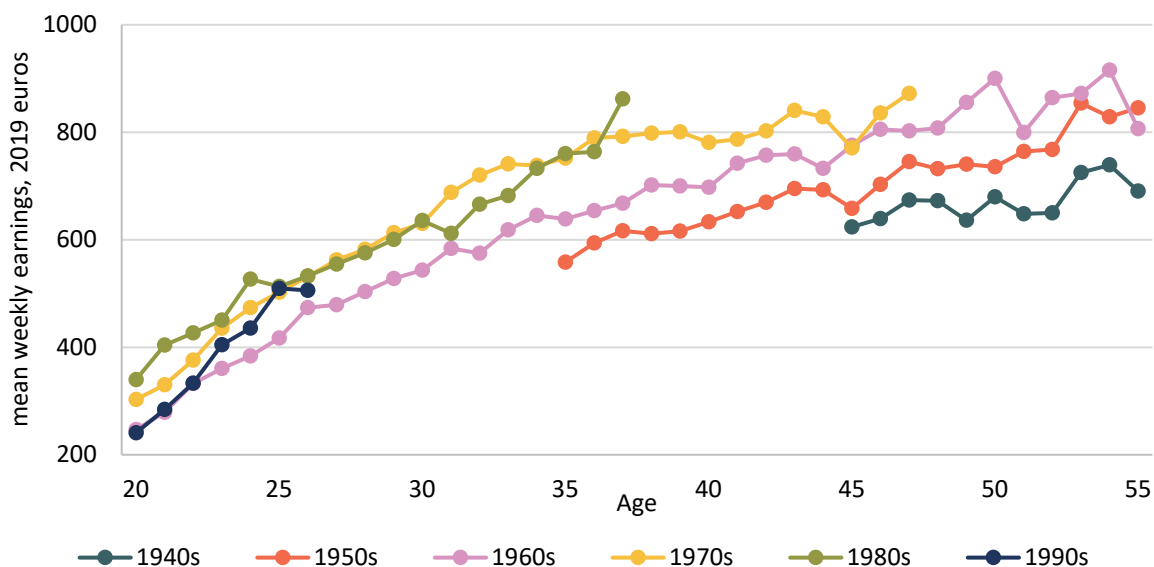
However, Figure 4.4 – which plots the ‘not in employment, education or training’ (NEET) rate for the youngest four age groups considered above – suggests a less sanguine development. It shows that while the NEET rate among those age 15-19 was only temporarily elevated (and indeed by 2017 had recovered to a lower level than in 2007, indicating some substitution from employment to education), this was not the case for those in their 20s. Rather, the NEET rate for those aged 25-29 doubled from 14 per cent in 2007 to 28 per cent in 2011 and had only just returned to its pre-crisis level on the eve of the pandemic. For those age 20-24 NEET rates rose even more sharply, from 10 per cent in 2007 to 26 per cent in 2011, and remained stubbornly above its pre-crisis rate at 13 per cent on the eve of the pandemic. This amounts to around 30,000 more 20-24 year olds not in education, employment or training than one would expect had the labour market fully recovered for this age group; a figure which would likely be higher still if it were not for the impact of emigration which Conefrey (2013) shows was disproportionately comprised of young adults over this period.

Such high and sustained levels of economic inactivity should be of concern to policymakers, not just for the cost they represent in terms of un(der)utilised labour but also the potential ‘scarring’ effect they may have on young adults entering the labour market. A growing body of economic research finds entering a depressed labour market has large, negative impacts on earnings and employment that can take 10-15 years to fade.²⁰ Adverse initial labour market conditions have also been

²⁰ See, for example, Burgess et al. (2003); Kahn (2010); Oreopoulous et al. (2012); Altonji et al. (2016); Schwandt and von Wachter (2019); Yagan (2019); Rothstein (2020); von Wachter (2020); Regan (2020).

found to have persistent effects on the likelihood of engaging in criminal activities, experiencing divorce and even on support for redistribution.²¹

FIGURE 4.5 AVERAGE REAL WEEKLY EARNINGS, BY AGE AND BIRTH COHORT



Sources: Authors' calculations using the Survey of Income Distribution, Poverty and Usage of State Services; the Living in Ireland survey; and the Survey of Income and Living Conditions.

Note: Average (mean) real weekly earnings by age and year of birth cohort for those in paid work, deflated by the CPI.

Figure 4.5 presents early evidence consistent with (and indeed suggestive of) the Great Recession having had such 'scarring' effects on the earnings of young adults in Ireland.²² It shows strikingly that – adjusted for inflation – average weekly earnings for workers born in the 1990s were no higher than for those born in the 1960s at ages 20 to 22, and had by age 26 yet to surpass that of either the 1970s or 1980s cohort. This amounts to a halt in the patterns of earnings growth that have historically been observed across generations both in Ireland (as shown above) and internationally (e.g. Cribb, 2019; Kurz et al., 2019).

However, Figure 4.5 also shows that a more widespread stagnation in earnings growth has ensued from the Great Recession, with average earnings for those born in the 1980s no higher from age 25 to 35 than for those born in the 1970s. This is despite those born in the 1980s seeing earnings that were on average substantially higher at the beginning of working life than they were for those born a decade earlier, and the earnings of the 1970s cohort also being affected by the Great Recession in their mid- to late-thirties. Indeed, those born in the 1980s and 1990s stand out as being the first of the generations covered by our data not to

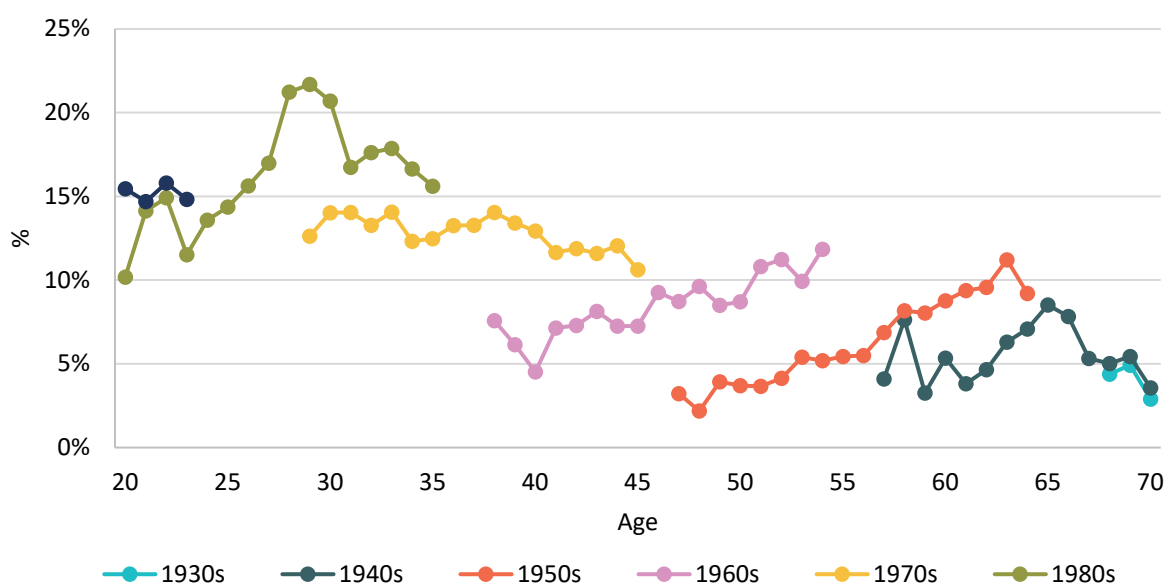
²¹ See Bell et al. (2018), Schwandt and von Wachter (2020) and Giuliano and Spilimbergo (2014) respectively.

²² We say suggestive as credible causal identification of such scarring effects requires the exploitation of quasi-experimental variation in economic circumstances using longitudinal or large-scale cross-sectional data on earnings that are unavailable in Ireland at present.

experience consistently higher earnings than that born a decade earlier, with average earnings for those born in the 1970s and 1960s falling below that of previous cohort at only one age apiece (45 and 55 respectively). Similar stagnation in earnings growth across generations has also been documented in Britain by Cribb (2019) and in the United States by Kurz et al. (2019).

In addition to poor prospects in labour market, a growing share of young adults are facing high housing costs.²³ Figure 4.6 illustrates this, plotting the share paying more than 30 per cent of their disposable income in housing costs – a metric of housing affordability proposed by Corrigan et al. (2019) – each month by age and birth cohort. This shows that more than a fifth of those born in the 1980s were paying more than 30 per cent of their disposable income on housing at age 30 compared to 13 per cent of those born in the 1970s. While our data do not extend back far enough to cover previous generations at age 30, less than 10 per cent of those born in the 1960s spent more than 30 per cent of their disposable income on housing around age 40, compared to 13 per cent of those born in the 1970s.

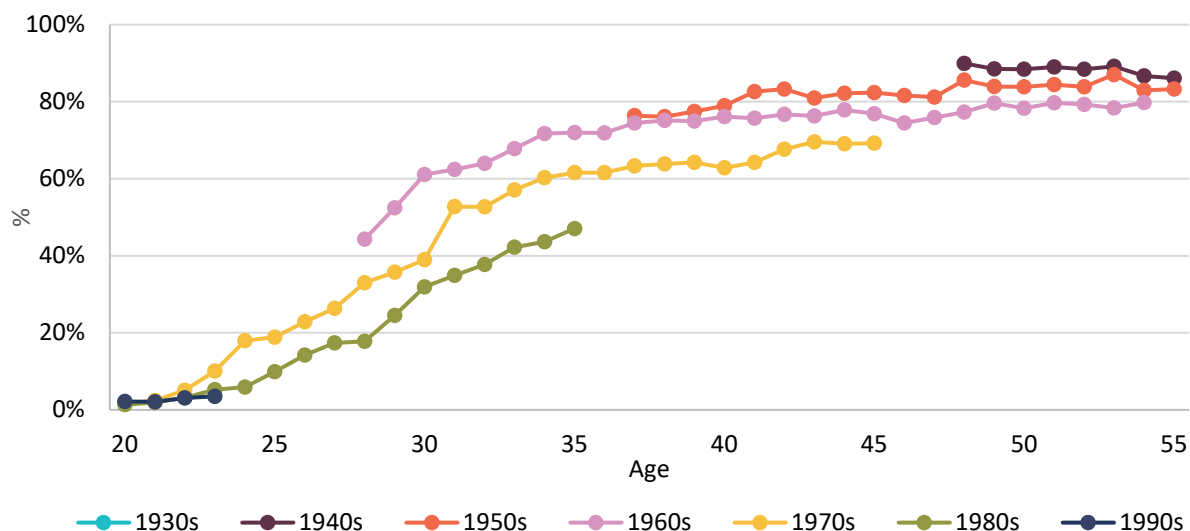
FIGURE 4.6 % PAYING >30% OF DISPOSABLE INCOME IN HOUSING COSTS, BY AGE AND BIRTH COHORT



Sources: Authors' calculations using the Survey of Income and Living Conditions.

Note: Housing costs include rental payments for tenants and mortgage interest payments for owner-occupiers (gross of housing benefits and net of tax relief respectively) along with the cost of utilities, structural insurance, taxes on dwellings, regular maintenance and repairs payments and mandatory services and charges.

²³ We use the Eurostat definition of housing costs from SILC which includes rental payments for tenants and mortgage interest payments for owner-occupiers (gross of housing benefits and net of tax relief respectively) along with the cost of utilities, structural insurance, taxes on dwellings, regular maintenance and repairs payments and mandatory services and charges.

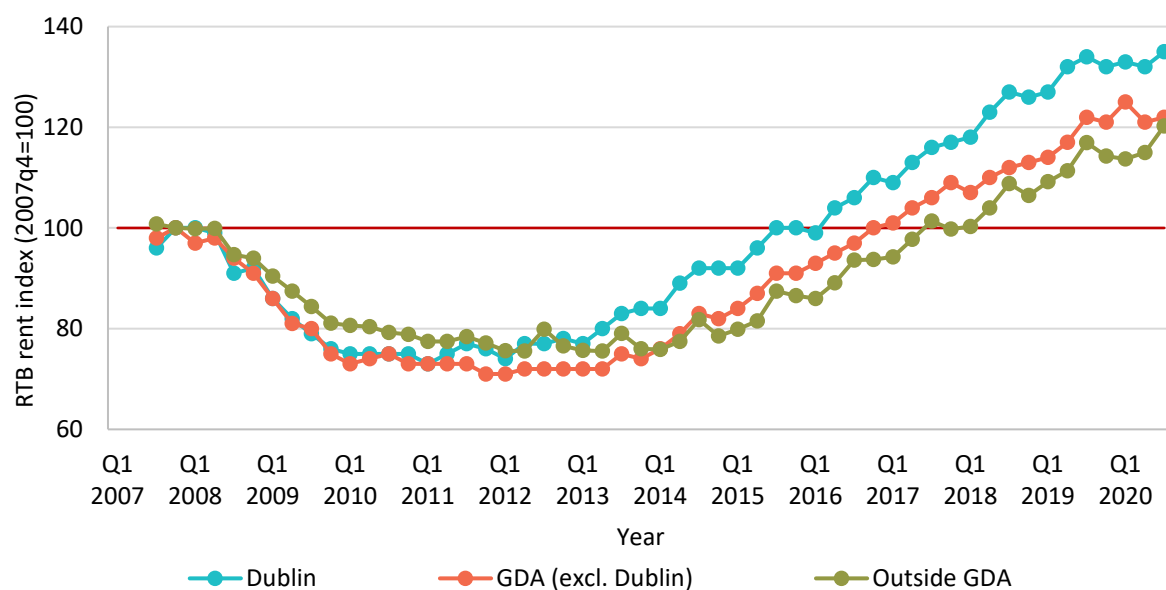
FIGURE 4.7 SHARE OF EACH BIRTH COHORT THAT OWNS THEIR OWN HOME, BY AGE

Sources: Authors' calculations using the Survey of Income Distribution, Poverty and Usage of State Services; the Living in Ireland survey; and the Survey of Income and Living Conditions.

Note: Home ownership defined as being the head – or the partner of the head – of a household that lives in an owner-occupied dwelling (i.e. adult children of owner-occupiers not counted as owning their own home).

This change is closely related to a sharp decline in home ownership rates among recent generations, as is shown by Figure 4.7. While more than 60 per cent of those born in the 1960s lived in a home they or their partner owned by age 30, this had fallen to 39 per cent for those born in the 1970s and 32 per cent for those born in the early 1980s. While there may be some degree of catch-up at later ages (in part reflecting changes in patterns of family formation), the figure shows that rates of home ownership have tended to level off by age 45 for previous cohorts, with each successive generation less likely to live in owner-occupied housing than the last.

Although tenure-neutral housing affordability has been a longstanding objective of (officially stated) Irish policy, research has consistently found that affordability issues are most acute in the private rented sector (e.g. Blackwell, 1989; Fahey, 2004; Fahey et al., 2004; Corrigan et al., 2019; O'Toole et al., 2020). A consequence of declining rates of home ownership across generations is therefore that increasing numbers of young adults are exposed to the private rental market, where existing affordability issues have been exacerbated by rapidly rising rents in recent years.

FIGURE 4.8 PRIVATE RENTS, BY TIME AND REGION

Source: Residential Tenancies Board (2020).
 Note: Figure shows ESRI-RTB Rent Index of standardised rents.

This is illustrated in Figure 4.8, which plots changes in the Residential Tenancies Board (RTB) Rent Index since it began for four regions relative to their level in Q4 2007. While rents declined significantly over the course of the Great Recession, they have since regained and far surpassed their pre-crisis peak in all areas of the country. Rents have risen most sharply in Dublin, where they now stand 35 per cent above their Q4 2007 level and 85 per cent above their Q1 2011 trough. Other parts of the country have also seen significant increases in rent, with the indices for areas outside of Dublin all more than 20 per cent above their Q4 2007 level.

The combined effect of these developments is to cast a pall over the prospects of young adults and should be a cause of serious concern for society at large. While we have looked only at widening inequalities across generations in housing and the labour market, Cribb (2019) and Kurz et al. (2019) show these are even more pronounced for wealth in Britain and the United States respectively. While bequests are likely to mitigate some of this inequality in wealth across generations (with those born in the 1980s and 1990s receiving inheritances from their parents born in the 1950s and 1960s), Bourquin et al. (2021) show these are also likely to amplify inequality *within* generations (between those with richer and those with poorer parents).

As we discuss in the next chapter, one area where policy can help is ensuring the provision of high-quality active labour market programmes with sufficient capacity to cater for the numbers that will need them in the aftermath of the COVID-19 pandemic. Policies that act to tackle the root causes of high rents will also

disproportionately benefit those younger adults who risk otherwise being left behind, especially those policies that act to increase the supply of housing. However, increasing housing supply significantly will take time and there may therefore be a case in the interim for examining whether the current of system of housing supports for low-income private renters (e.g. Housing Assistance Payment and Rent Supplement) is adequate.

CHAPTER 5

Conclusion

This report is the first from a new research programme funded by The Community Foundation for Ireland aimed at helping to address gaps in our knowledge and understanding of poverty, income inequality and living standards in Ireland. We conclude by summarising some of the key findings from our research and reflect on their implications for policy.

Chapter 2 showed that Ireland has experienced strong if volatile growth in disposable incomes over the last three decades, which was broad-based and reduced income inequality significantly. While the magnitude of the growth might best be viewed as belated convergence with the rest of Europe – an Irish hare catching up with European tortoises, as described by Honohan and Walsh (2002) – it is not pre-ordained that such catch-up growth be broad-based or inclusive. From this point of view Ireland's experience is notable. Indeed, as Thewissen et al. (2018) show, the decline in disposable income inequality experienced in Ireland over the last three decades is in striking contrast to the experience of most OECD countries over a similar horizon.²⁴ While Callan et al. (2018) show that policy changes made between 1987 and 2014 played an important role in reducing income inequality, an important question for further research is which particular features of tax and social welfare policy help explain why growth was so broad-based and progressive, and to what extent these might be replicable in the coming years or elsewhere.

A different picture, however, emerges in terms of market income inequality. While growth was – like that for disposable income – strong if volatile, it was also less broadly shared. We have seen that key measures of market income inequality declined over the 1990s, coinciding with a period of rapidly rising employment (especially among women). However, this decline in key measures of market income inequality across the population as a whole was reversed in the early 2000s with the Great Recession leading to a further rise. Although the recovery in the labour market since 2014 has meant that the main measures of market income inequality had almost regained their pre-crisis level by 2019, this is likely to be undone by the sharp falls in employment wrought by the ongoing COVID-19 pandemic. Research has shown that initial job losses were more heavily concentrated on lower-paid workers, particularly those working in areas like hospitality and retail (Byrne et al., 2020). As a result, market income inequality is

²⁴ The only other OECD country to see a decline in the Gini coefficient of similar magnitude from the 1980s to 2010 was France. Austria, Denmark, Estonia, Iceland, Portugal and South Korea also saw reductions, but smaller in magnitude or over a shorter horizon.

likely to have risen and will remain elevated until those who have lost work are able to return to their previous positions or find new ones.

Chapter 3 showed that paid work also plays a crucial role in the determining the extent of very low living standards. Despite taking different paths over the late 1990s and the course of the Great Recession, we saw that rates of both income poverty and material deprivation were significantly lower in 2019 than in 1994 for the population as a whole. However, measures of income poverty and material deprivation both point to the high incidence of low living standards among those in single adult households, particularly those with children. Higher rates of income poverty and material deprivation for lone parents and their children pre-date the Great Recession and have been an enduring feature of Irish society since at least the early 1990s. While the product of a multitude of factors (e.g. low hours and hourly wages among those from these groups in paid work), such high rates of poverty and deprivation in part reflect very low rates of employment among lone parents which Roantree (2020b) shows were – at 36 per cent in 2017 – the lowest in the European Union. Russell et al. (2018) find evidence to suggest that this is at least partly related to the cost of childcare, with mothers facing higher costs working fewer hours than those facing lower costs.

Low rates of employment are also closely related to the risk of poverty and deprivation in other working-age households. Despite making up only 11 per cent of the population in 2019, those aged under 65 living in a household without anyone in paid work make up more than half of those below the poverty line and a third of those living in material deprivation. Not only do relatively few households in poverty or deprivation contain someone in paid work, but as Maître et al. (2017) show, less than a fifth of minimum wage workers belong to a household at risk of poverty. An important implication of this – as Redmond (2020), the Low Pay Commission (2018) and Logue and Callan (2016), among others, have argued – is that the minimum wage is a blunt instrument for addressing concerns around low living standards, poverty or deprivation in Ireland. Instead, the minimum wage might be better seen as a complement to social welfare policy, perhaps as a way of counteracting other forces acting to increase earnings inequality (Holton and O’Neill, 2017), reduce the gender pay gap (Bargain et al., 2018) or – as suggested by Joyce and Zilliak (2020) – limiting the extent to which employers with market power are able to capture gains from in-work transfers like the Working Families Payment.

However, the patterns of poverty and deprivation highlighted in this report suggest that the social welfare system remains a powerful tool for those seeking to address high rates among lone parents and those living in households without a paid worker. This power is well illustrated by the experience of older adults. Chapter 3 showed that income poverty rose rapidly among this group when increases to the

State pension lagged behind median income growth in the 1990s and fell sharply when increases exceeded median income growth in the 2000s. Similarly, the protection of the State pension in both real and nominal terms over the course of the Great Recession helped to mitigate the significant increases in material deprivation seen for other age groups.

The unequal labour market impact of the Great Recession and ongoing COVID-19 pandemic between generations was the topic considered in Chapter 4 of this report. We saw that young adults have been hardest hit by job losses in 2020, in part as more worked in sectors like hospitality, arts and leisure that were most exposed to the lockdowns required to suppress the spread of the virus. While concerning in and of itself, such patterns of job losses are likely to compound the still lingering effects of the Great Recession, which have left not in employment, education or training (NEET) rates for 20-24 year olds almost a third higher on the eve of the pandemic than they were in 2007. We also saw early evidence consistent with (and suggestive of) 'scarring' effects on the earnings of those born in the 1990s. On top of this, home ownership rates for young adults have collapsed, leaving them more exposed to rapidly rising rents, particularly in the urban areas they are more likely to live in. The combined effect of these developments is to cast a pall over the prospects of young adults and should be a cause of serious concern for society at large.

One area where policy can help is ensuring the provision of high-quality active labour market programmes with sufficient capacity to cater for the numbers that will need them in the years ahead. Research suggests that – unlike public sector employment programmes – both human capital training and 'work first' style programmes are effective at increasing the employment rates of participants in the medium-to-long run (Card et al., 2018). Although some of these types of programmes are operative in Ireland, a large share of the activation budget is spent on programmes which research has shown to be ineffective at increasing employment (e.g. Kelly et al., 2015). In addition, the Irish Fiscal Advisory Council (2020), the International Monetary Fund (2017) and the chair of the government's own Labour Market Skills Council (Martin, 2020) – among others – have highlighted the need to significantly increase the number of caseworkers in the public employment services to bring client-caseworker ratios nearer the international best practice level of 100-150 per caseworker. Doing so is likely to require significantly increasing government expenditure on labour market activation measures, above and beyond the relatively modest increase of €210 million announced to date (Irish Fiscal Advisory Council, 2020, Box E).

Policies that act to tackle the root causes of high rents will also disproportionately benefit those younger adults who risk otherwise being left behind, given their relative exposure to the private rental market where affordability issues are most

acute (O'Toole et al., 2020; Corrigan et al., 2019). Foremost among these are policies that increase the supply of housing, such as the taxation of vacant or underdeveloped land (Morgenroth, 2016; Morley et al., 2015). While Corrigan et al. (2020) find evidence that policies aimed at addressing credit constraints may have some merit, O'Toole and Slaymaker (2021) caution that in that context of supply shortages such schemes are likely to lead to higher prices and exacerbate affordability problems in the future.

However, increasing housing supply significantly will take time, and there may be a case in the interim for examining whether the current system of housing supports for low-income renters is adequate. Limits on the rent that can be paid for a property covered by Housing Assistance Payment were last revised in March 2017 and those for Rent Supplement in July 2016, since when rents have risen nationally by 25 per cent and 28 per cent respectively (RTB, 2020). Reports from the Citizens Information Board (2017) and Simon Community (2021) have shown that these limits cover only a small number of properties available for rent on the private market, particularly for single adults and lone parents.

Along with young adults, this report has shown that these groups were at risk of being excluded from the growth in material living standards enjoyed by the wider population, even before the outbreak of the pandemic. Future research – including subsequent editions of this report – will seek to further our understanding of why these groups are at such risk and what options exist for policymakers seeking to address the consistently higher rates of poverty and deprivation they face.

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APPENDIX A

Data and methodology

This appendix provides additional details on the data sources used in this paper as well as the methodology used to derive indicators of poverty, deprivation, and income inequality measures.

A.1 DATA SOURCES

The Survey of Income Distribution, Poverty and Usage of State Services

The Survey of Income Distribution, Poverty and Usage of State Services was carried out by the Survey Unit of the ESRI in 1987 with the support of the European Commission and the Combat Poverty Agency. Results were first published in Callan et al. (1988), which reports that 3,286 households responded out of a valid sample of 5,155: an effective response rate of 63.7 per cent. These households contained just under 8,200 adults, each of whom was interviewed individually about their income sources and experience of the labour market. Weights were derived to correct for the greater likelihood of larger households being sampled (a product of the sampling frame being based on the electoral register and so households with more voters being more likely to be selected for inclusion) and a slight over-representation of older and rural heads of households. Analysis was carried out on the anonymised survey microdata files held by the ESRI on its secure server.

Living in Ireland Survey

The Living in Ireland Survey was also carried out by the Survey Unit of the ESRI beginning in 1994, again with the support of the European Commission. Each adult in a household completed an individual questionnaire through a face-to-face interview, with a similar initial sampling frame to the 1987 Survey. However, in keeping with the European Community Household Panel (ECHP) of which it was part, the survey adopted a longitudinal design with household members followed up in subsequent waves of the survey. By Wave 7 (2000), attrition was deemed to be a cause of concern and the original sample of individuals still in scope of the survey (i.e. who had not died, moved to an institution or outside of the EU) were supplemented with a booster sample selected using a similar procedure as for the first wave of the survey. Weights were derived to correct for attrition and biases in the distribution of observed characteristics compared to the population of interest. There was an influx of more than 1,500 new individuals into the survey as compared to 5,530 from the original sample. However, to avoid any potential concerns about the representativeness of these later waves, we use only Waves 1-6 of the Living in Ireland Survey spanning the years 1994-1999, with analysis again carried out on the anonymised survey microdata files held by the ESRI on its secure server.

Survey of income and Living Conditions

The Survey of Income and Living Conditions (SILC) is an annual survey of households carried out by the Central Statistics Office since 2003. Like the Living in Ireland Survey, it was initiated with the aim of collecting harmonised information on households for all countries in the European Union. However, unlike the Living in Ireland survey, it is not primarily a longitudinal survey with the vast majority of respondents sampled anew each year.²⁵ For the most part, we use the anonymised Researcher Microdata File data made available by the CSO to researchers through a secure virtual desktop infrastructure. Chapter 4 also makes use of the Eurostat User Database version of the data which contains a more limited set of variables.

Labour Force Survey

Chapter 4 also makes use of the anonymised Researcher Microdata File for the Labour Force Survey (LFS), a large-scale, nationwide survey of households in Ireland designed to produce official estimates of employment and unemployment. This replaced the Quarterly National Household Survey in 2017, which had provided such information since 1998. Although it comprises of a much larger sample than the other surveys used in this report (c.25,000 – 35,000 households), it does not include information on household incomes or earnings.

A.2 INCOME CONCEPTS AND COMPARISONS

Market income

Our measure of market income includes employee cash or near cash income, cash benefits or losses from self-employment, income from land or property rental, regular inter-household cash transfers received, interest, dividends, and profit from capital investments in unincorporated business. We exclude income from private pensions from our measure as occupational pension income is combined with that from the State pension in SILC. While it would be preferable to include all forms of pension income, the shift over time towards personal pension plans and away from occupational pensions risks biasing our results over time. We truncate our measure of market income at zero so that negative values (e.g. large losses from self-employment) are counted as zero.

Disposable income

Our definition of disposable income corresponds to that used by Eurostat for the purposes of SILC (Eurostat, 2018) with the exclusion of the imputed value of a company car – which is available only in the SILC data from 2007 – and net contributions to individual private pension plans (which represent deferred income and should be treated in a manner consistent with those to – predominantly public sector – defined benefit pension schemes). In essence, this takes our measure of

²⁵ A small number of households are included in a panel element: see CSO (2017, pp.7-9).

market income (described above), adds pension and social welfare income and deducts taxes on income, social insurance contributions regular taxes on wealth and regular inter-household cash transfers.

Comparing income across households

Our measures of market and disposable income are aggregated to the level of the household before being adjusted for household size and composition (as discussed below). This implicitly makes an assumption of perfect income sharing within households. While appropriate for many households (e.g. a couple who both benefit from additional income in the household), it may be less so for others (e.g. students or young workers sharing a house). However, like Bourquin et al. (2020) we regard perfect income sharing as the most transparent and least arbitrary assumption given the data available.

As described in the main text, our measures of market and disposable income are adjusted for household size and composition using the modified OECD equivalence scale. This is to account for the fact that two households with the same level of disposable income, but different composition will typically experience different standards of living. For example, a household income of €50,000 will – *ceteris paribus* – deliver a much higher standard of living to a single adult than a couple with two children. Equivalising incomes with the modified OECD scale is not the only approach one could take. For example, the CSO uses a ‘national’ equivalence scale that (as shown in Table A.1) gives greater weight to second or subsequent adults and children aged 14 plus, while there are likely characteristics other than age and the number of individuals that affect a households’ needs. Nevertheless, some method is needed for comparing incomes across different household types, and the approach we adopt allows us to produce estimates which can be compared to other European countries, the United States (Joyce and Ziliak, 2020) and Britain (Bourquin et al., 2020).

TABLE A.1 EQUIVALENCE SCALES

	Modified OECD scale	CSO national scale
First adult	1	1
Second or subsequent adults	0.5	0.66
Child aged 14 plus	0.5	0.66
Child age under 14	0.3	0.33

Although we aggregate income to the household level, our unit of analysis throughout is the individual. That is, we assign each individual in a household the equivalised income of their household, consistent with our assumption of perfect income sharing.

Adjusting for inflation

All monetary amounts are converted to 2019 prices using the CSO’s all-item

monthly Consumer Price Index (CPM02). All growth rates in these monetary variables are calculated after accounting for inflation.

A.3 THE MEASUREMENT OF MATERIAL DEPRIVATION IN IRELAND

The Survey of Income Distribution, Poverty and Usage of State Services was the first survey in Ireland to collect a wide range of information about household and individuals' possession of items and activities; and whether they considered those as essentials, and in their absence if that was because they could not afford them. The follow up survey, the Living in Ireland Survey that was conducted by the ESRI between 1994 to 2001, included 23 non-monetary indicators capturing enforced deprivation due to lack of resources. Using factor analysis techniques, Callan et al. (1993) and later Nolan and Whelan (1996) identified several dimensions of deprivation (basic life-style, secondary life-style, housing deprivation). The basic life-style dimension (labelled basic dimension) included eight items from not being able to afford new clothes, to having a meal with meat, fish or chicken every second day. This basic deprivation indicator was used to monitor deprivation in Ireland and people were considered to experience deprivation when they lacked one or more of the eight items. The measure of basic deprivation was also combined with the at risk of poverty measure to create a measure of consistent poverty – identifying people both at risk of income poverty and deprivation – which was officially adopted in 1997 by the Irish government in the *National Anti-Poverty Strategy* (Government of Ireland, 1997).

As living standards rose rapidly during the late 1990s and early 2000s, there was some concern that the eight-item basic deprivation measure was no longer able to capture poverty and social exclusion. Maître et al. (2006) used the release of the SILC survey to re-examine the dimensions of deprivation and derived a new measure of deprivation. Some items of the original eight were dropped and replaced by new items, including items about social interactions. The revised indicator of basic deprivation was in time extended to include 11 items, with people classified as being in material deprivation if they lack two or more items. Of the 11 items collected in SILC, ten are available in the LIIS. We use these to construct a consistent measure of deprivation across the surveys, with individuals classified as deprived if they are lacking two of the ten items.

In the first release of the 2003 SILC results, the Central Statistics Office (2005) noted deprivation rates were about 3 to 5 percentage points higher than those observed in the final wave of the LIIS (2001) and highlighted two factors that could explain these differences. The first was that SILC adopted Computer Assisted Personal Interviewing, whereas the LIIS did not. The second possible explanation related to the longitudinal nature of the LIIS – with the associated issues of attrition discussed above – while the 2003 SILC sample was comprised entirely of households interviewed for the first time.

APPENDIX B

Additional tables and figures

TABLE B.1 SUPPLEMENTARY MEASURES OF DISPOSABLE INCOME INEQUALITY

	Gini	90-10	90-50	75-25	50-10	GE(-1)	GE(0)	GE(1)	GE(2)
1987	0.333	4.0	2.1	2.2	1.9	0.319	0.193	0.202	0.302
1994	0.315	4.1	2.1	2.3	2.0	0.170	0.161	0.179	0.219
1995	0.320	4.1	2.1	2.3	2.0	0.176	0.170	0.213	0.232
1996	0.328	4.2	2.1	2.3	2.0	0.193	0.178	0.212	0.291
1997	0.316	4.2	2.0	2.2	2.1	0.176	0.168	0.217	0.252
1998	0.312	4.2	2.0	2.2	2.1	0.172	0.162	0.197	0.246
1999	0.297	4.2	1.9	2.2	2.2	0.147	0.150	0.200	0.175
2003	0.309	4.1	1.9	2.1	2.2	0.163	0.167	0.265	0.229
2004	0.313	3.9	1.9	2.2	2.1	0.182	0.168	0.225	0.284
2005	0.317	3.9	1.9	2.1	2.1	0.202	0.172	0.207	0.399
2006	0.321	3.8	2.0	2.1	1.9	0.201	0.170	0.197	0.420
2007	0.314	3.8	1.9	2.1	1.9	0.181	0.167	0.239	0.315
2008	0.304	3.6	1.9	2.0	1.9	0.169	0.155	0.213	0.319
2009	0.284	3.4	1.8	2.0	1.9	0.141	0.140	0.339	0.181
2010	0.305	3.6	2.0	2.0	1.8	0.165	0.161	0.271	0.235
2011	0.296	3.7	2.0	2.0	1.9	0.150	0.158	0.295	0.184
2012	0.302	3.9	2.0	2.0	2.0	0.158	0.162	0.357	0.209
2013	0.305	3.8	2.0	2.0	1.9	0.164	0.163	0.245	0.234
2014	0.308	3.8	2.0	2.0	1.9	0.164	0.164	0.262	0.225
2015	0.296	3.6	1.9	2.0	1.9	0.150	0.149	0.228	0.197
2016	0.296	3.6	1.9	2.0	1.9	0.159	0.154	0.374	0.233
2017	0.303	3.8	2.0	2.0	1.9	0.169	0.159	0.236	0.279
2018	0.286	3.3	1.8	1.9	1.8	0.163	0.142	0.234	0.330
2019	0.280	3.2	1.8	1.9	1.8	0.151	0.132	0.146	0.240

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Incomes after direct taxes paid and benefits received. Columns entitled GE(a) show estimates of the Generalised Entropy class of inequality measures, where a=-1,0,1 exclude a small number of observations with non-positive values for disposable income.

TABLE B.2 DECILE SHARES OF DISPOSABLE INCOME

	Bottom %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	Top %
1987	3.1	4.7	5.5	6.6	7.5	8.8	10.3	12.3	15.2	25.9
1994	3.7	4.6	5.5	6.5	7.7	9.1	10.8	12.7	15.4	24.0
1995	3.5	4.6	5.4	6.5	7.7	9.1	10.7	12.6	15.6	24.2
1996	3.5	4.6	5.5	6.5	7.4	8.9	10.5	12.6	15.4	25.2
1997	3.4	4.7	5.5	6.6	7.8	9.2	11.0	12.3	15.5	23.9
1998	3.4	4.6	5.7	6.8	8.1	9.2	10.6	12.4	15.0	24.1
1999	3.4	4.7	5.8	7.1	8.4	9.5	11.0	12.7	15.2	22.3
2003	2.8	4.8	6.0	7.0	8.2	9.7	10.8	12.3	15.0	23.4
2004	3.3	4.7	5.7	6.9	8.1	9.3	10.7	12.4	14.7	24.3
2005	3.3	4.7	5.7	6.8	8.0	9.2	10.6	12.2	14.5	25.0
2006	3.2	4.8	5.7	6.8	7.9	9.0	10.5	12.1	14.6	25.3
2007	3.2	4.9	5.8	6.8	7.9	9.2	10.8	12.5	14.7	24.3
2008	3.1	5.1	6.1	7.0	8.1	9.4	10.4	12.4	14.6	23.9
2009	3.6	5.3	6.2	7.1	8.2	9.4	10.7	12.5	14.5	22.4
2010	3.2	5.2	6.1	7.0	8.0	9.2	10.5	12.1	15.1	23.9
2011	3.1	5.2	6.2	7.1	8.1	9.4	10.6	12.3	15.0	23.0
2012	3.1	5.0	6.2	7.1	8.1	9.3	10.6	12.5	14.9	23.3
2013	3.1	5.1	6.0	6.9	8.0	9.3	10.5	12.4	14.9	23.7
2014	3.0	5.0	6.1	7.0	8.0	9.5	10.2	12.4	15.0	23.9
2015	3.4	5.1	6.1	7.0	8.1	9.3	10.6	12.4	15.0	23.1
2016	3.4	5.1	6.1	7.1	8.1	9.4	10.6	12.2	14.6	23.4
2017	3.5	5.1	6.0	6.9	7.9	9.1	10.6	12.1	14.9	24.0
2018	3.7	5.3	6.2	7.3	8.2	9.3	10.3	12.1	14.3	23.3
2019	4.0	5.4	6.3	7.2	8.1	9.2	10.4	12.0	14.1	23.2

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Note: Incomes after direct taxes paid and benefits received.

TABLE B.3 SUPPLEMENTARY MEASURES OF MARKET INCOME INEQUALITY

	Gini	90-10	90-50	75-25	50-10	GE(-1)	GE(0)	GE(1)	GE(2)
1987	0.522	19.5	2.5	3.2	7.7	0.360	0.588	27.231	0.591
1994	0.534	15.6	2.4	3.1	6.5	0.306	0.499	10,355.800	0.543
1995	0.531	13.3	2.4	3.1	5.5	0.307	0.491	2,256.663	0.555
1996	0.533	13.2	2.4	3.3	5.4	0.339	0.534	2,459.659	0.628
1997	0.519	11.5	2.4	2.9	4.8	0.310	0.507	338.426	0.559
1998	0.496	11.8	2.3	2.8	5.2	0.297	0.472	13.664	0.503
1999	0.469	7.4	2.1	2.4	3.5	0.252	0.416	14.004	0.433
2003	0.473	9.7	2.3	2.7	4.3	0.268	0.399	10.948	0.441
2004	0.501	8.9	2.2	2.8	4.0	0.326	0.414	25.855	0.743
2005	0.515	10.1	2.3	2.8	4.4	0.342	0.401	2.310	0.821
2006	0.512	10.7	2.3	3.0	4.6	0.346	0.421	2.580	0.815
2007	0.516	13.2	2.4	3.4	5.4	0.358	0.459	3.855	0.716
2008	0.515	11.8	2.4	3.3	5.0	0.340	0.430	3.302	0.632
2009	0.538	11.7	2.4	3.4	4.9	0.322	0.436	4.400	0.595
2010	0.595	15.9	2.6	3.7	6.1	0.394	0.551	14.399	0.868
2011	0.584	16.0	2.7	4.1	6.0	0.369	0.522	12.318	0.712
2012	0.574	17.4	2.6	3.9	6.6	0.351	0.530	11.702	0.653
2013	0.586	19.4	2.7	4.0	7.2	0.382	0.564	32.559	0.776
2014	0.580	16.1	2.7	4.0	5.9	0.379	0.544	18.804	0.757
2015	0.555	15.8	2.5	3.6	6.2	0.349	0.509	18.613	0.652
2016	0.549	12.4	2.4	3.5	5.1	0.355	0.488	8.662	0.704
2017	0.547	14.6	2.6	3.5	5.5	0.377	0.513	12.394	0.780
2018	0.537	12.5	2.4	3.1	5.3	0.405	0.519	31.555	1.095
2019	0.521	11.1	2.4	3.1	4.7	0.355	0.470	89.601	0.746

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

Notes: Incomes before direct taxes paid and benefits received, excluding pension income. Columns entitled GE(a) show estimates of the Generalised Entropy class of inequality measures. All measures except the Gini and GE(2) exclude a significant number of observations with non-positive values.

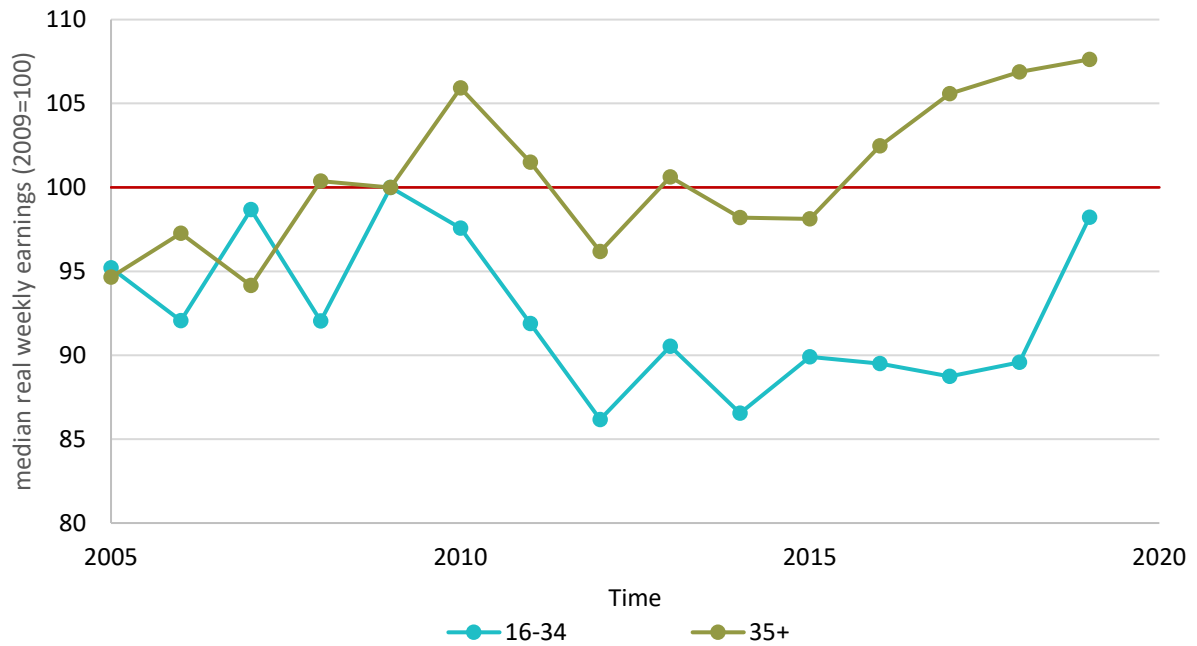
TABLE B.4 DECILE SHARES OF MARKET INCOME

	Bottom %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	Top %
1987	0.0	0.2	2.1	4.7	6.9	8.9	11.1	13.9	18.7	33.5
1994	0.0	0.0	1.0	4.2	6.8	9.2	11.8	15.0	19.6	32.4
1995	0.0	0.0	1.3	4.4	6.7	9.1	11.8	14.8	19.4	32.5
1996	0.0	0.0	1.6	4.2	6.6	9.1	11.4	14.6	19.4	33.1
1997	0.0	0.0	1.8	4.7	7.0	9.1	11.4	14.5	19.2	32.2
1998	0.0	0.2	2.6	5.3	7.4	9.1	11.6	14.2	18.4	31.1
1999	0.0	0.2	3.1	6.0	7.8	9.9	11.8	14.3	17.8	29.1
2003	0.0	0.4	3.2	5.7	7.7	9.6	11.7	14.0	18.2	29.6
2004	0.0	0.2	2.7	5.2	7.2	9.3	11.3	13.8	17.7	32.4
2005	0.0	0.2	2.4	4.9	7.0	9.1	11.3	13.9	17.8	33.4
2006	0.0	0.3	2.4	4.9	6.9	9.0	11.3	14.1	18.0	33.0
2007	0.0	0.4	2.3	4.6	6.7	8.8	11.3	14.4	18.4	32.9
2008	0.0	0.4	2.5	4.6	6.8	9.0	11.3	14.1	18.3	33.1
2009	0.0	0.0	1.5	4.1	6.2	8.9	11.8	15.0	19.4	33.1
2010	0.0	0.0	0.3	2.6	5.2	7.9	11.1	14.8	20.3	37.6
2011	0.0	0.0	0.5	2.8	5.2	8.1	11.4	15.1	20.6	36.4
2012	0.0	0.0	0.5	2.9	5.5	8.2	11.7	15.4	20.8	35.0
2013	0.0	0.0	0.4	2.6	5.3	8.2	11.5	15.1	20.5	36.4
2014	0.0	0.0	0.7	3.0	5.7	7.8	11.2	14.9	20.4	36.4
2015	0.0	0.0	1.0	3.5	6.2	8.5	11.5	14.9	20.0	34.4
2016	0.0	0.0	1.4	3.9	6.3	8.7	11.3	14.5	19.1	34.9
2017	0.0	0.1	1.7	4.1	6.2	8.5	10.9	14.2	19.0	35.3
2018	0.0	0.1	2.1	4.4	6.6	8.9	11.0	13.5	17.9	35.5
2019	0.0	0.2	2.4	4.6	6.9	8.8	11.2	13.9	18.3	33.7

Sources: Authors' calculations using the ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey and the Survey of Income and Living Conditions Research Microdata Files.

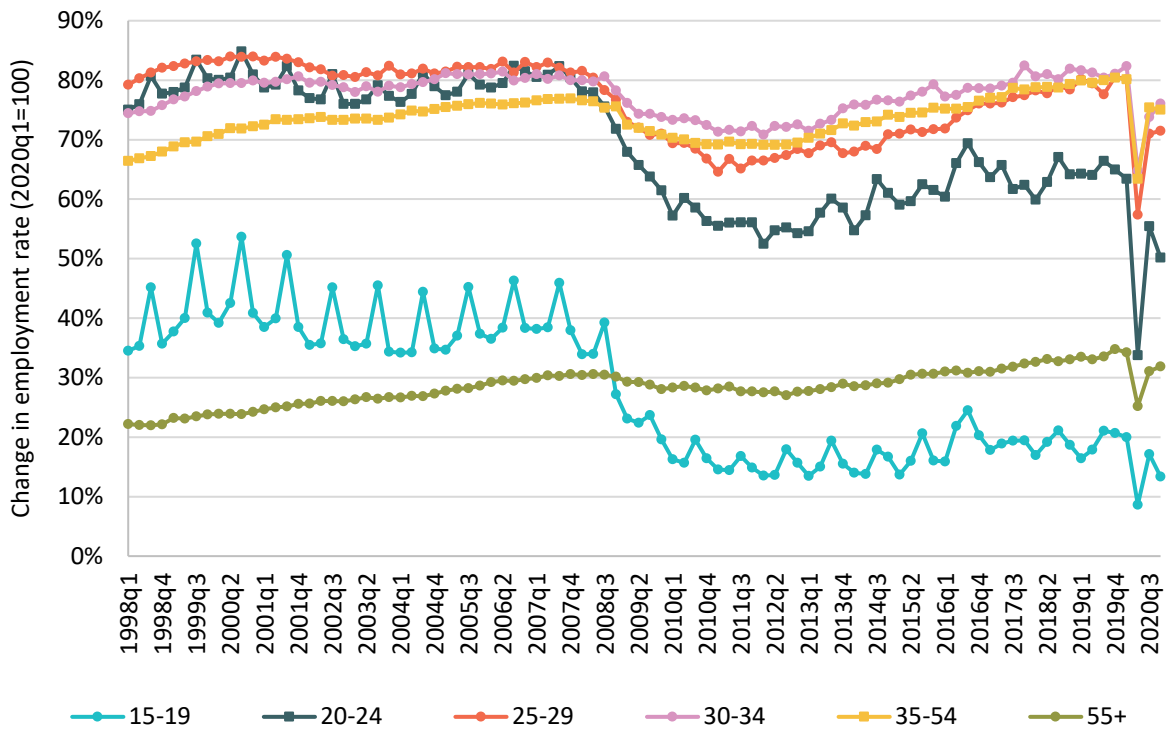
Note: Incomes before direct taxes paid and benefits received, excluding pension income.

FIGURE B.1 CHANGE IN REAL MEDIAN WEEKLY EARNINGS, BY AGE



Sources: Authors' calculations using Survey of Income and Living Conditions Research Microdata Files (SILC RMF).
 Note: Median weekly earnings deflated by the CPI and expressed relative to their 2009 level.

FIGURE B.2 EMPLOYMENT RATES, BY AGE



DRAFT

Sources: Authors' calculations using Labour Force Survey Research Microdata Files (LFS RMF).
 Note: Employment rate calculated using ILO definition excluding those reporting absences due to COVID-19.



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