INCOME GROWTH AND INCOME DISTRIBUTION: A LONG-RUN VIEW OF IRISH EXPERIENCE

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INCOME GROWTH AND INCOME DISTRIBUTION: A LONG-RUN VIEW OF IRISH EXPERIENCE

ABSTRACT

Over the past 30 years, there have been periods of boom and bust, but average household incomes have grown strongly in Ireland. The distribution of household income has been broadly stable over this period, so that there has been substantial growth for low-, middle- and high-income households. Ireland's rapid, even growth in incomes across the distribution is unusual in an international setting. During this time, inequality has risen in many other countries. As a result, while Ireland was once towards the high end of the inequality spectrum for an advanced country, it now occupies a middle-ranking position. Market income inequality is high in Ireland, but a redistributive tax and transfer system has helped to offset that. Over the 1987 to 2014 period, discretionary changes in tax and welfare policy led to gains which were greatest among those with incomes in the lowest 20 per cent of households. Much of this differential growth in incomes arose from the implementation of the recommendations of the Commission on Social Welfare (1986), which raised the payment rates for the schemes with the lowest payment levels.

1.   INTRODUCTION

Data gathered by the CSO's Survey on Income and Living Conditions have featured regularly in debate about policy on social inclusion and public policy. Analysis of the distributional impact of budgetary policy, based on the same underlying data, has also become an ongoing part of debate about tax and welfare policy. SILC began in 2003, but similar survey evidence is available for some earlier years, going back at least as far as 1987. In this paper we use both the SILC data and the earlier data to provide some longer-term perspectives on how household income levels, and the distribution of household incomes, have evolved in Ireland. We concentrate for the most part on the period 1987 to 2014, for which we have the greatest detail in terms of household surveys.[1] This longer-run perspective provides insights that are valuable in themselves, and provide a useful backdrop in interpreting the shorter-run movements in incomes and income distribution which have tended to receive greater attention. We document the movements in incomes and in income distribution over the period.

This investigation has parallels in the international literature, where one of the key themes has been the examination of the combined impact of overall growth and income inequality on the living standards of ordinary families (see Nolan, 2018 and

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[1]   This paper draws on material first presented by Callan et al. (2016).

Cribb et al., 2017). We draw therefore on some results from this literature and find interesting comparisons and contrasts with developments elsewhere, notably in the UK.

Tax and welfare policies play a key role in generating the observed outcomes. We analyse the impact of discretionary policy changes over the 27-year period, using SWITCH, the ESRI tax-benefit model. Our analysis uses a 'wage indexed' budget as a distributionally neutral benchmark against which to assess the distributional impact of tax and welfare policy. The conventions governing the construction of the 'opening budget' involve a nominal freeze on the money value of tax and welfare parameters. We also examine the long-run implications of maintaining such a freeze on tax and welfare policy parameters.

We begin by reviewing the evidence on the growth of incomes over the 1987 to 2014 period. Section 2 draws both on national accounts sources and, where available, on household income surveys. Overall income growth is strong, but there were sustained periods where incomes were stable or falling, counterbalanced by very rapid growth at other times. Section 3 finds that the overall distribution of income was remarkably stable, as measured by the Gini coefficient or by quintile shares, over a period of almost 30 years. The net result was strong and relatively even growth in incomes across the income distribution. Section 4 shows that Ireland's experience means that it now occupies a middle-ranking position in terms of income inequality across countries.

Ireland's rapid, even growth in incomes across the distribution is unusual in an international setting. The role of tax and transfer policy in generating the observed outcomes is examined in Section 5. While market income inequality in Ireland is towards the high end of the international spectrum, the redistributive impact of Ireland's tax and transfer system helps to ensure that inequality in disposable income is at a middle-ranking level.

Over the 1987 to 2014 period, discretionary changes in tax and welfare policy led to gains which were greatest among those with incomes in the lowest 20 per cent of households. Much of this differential growth in incomes arose from the implementation of the recommendations of the Commission on Social Welfare (1986), which raised the payment rates for the schemes with the lowest payment levels.
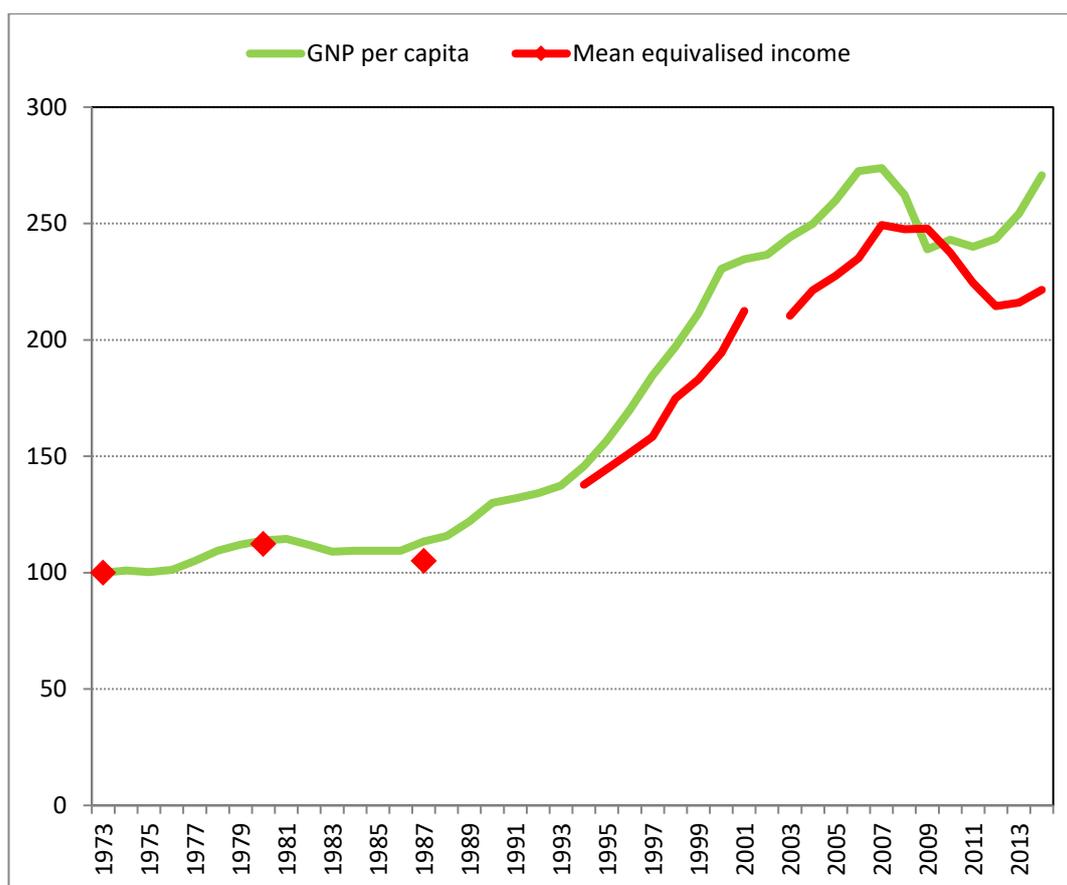
2.   INCOME GROWTH: EVIDENCE FROM SURVEYS AND FROM NATIONAL ACCOUNTS

Analysis of the distribution of household income requires the use of household survey data.[2] Comparisons with national accounts data can, however, be helpful in establishing whether surveys are adequately representing the overall growth in incomes. Nolan et al. (2018) identify a range of reasons for divergences between median equivalised household incomes and GDP per capita. They find that there is substantial variation over time and across countries in the divergences between the two approaches. For Ireland, their analysis indicates that the main sources of divergence over the 1987 to 2010 period relate to the difference between GDP and Gross National Income, and the household size adjustment (per capita for national accounts versus adjustment in line with the number of adult equivalents for survey data). While the Nolan et al. analysis allows for a potential gap between the incomes covered by Gross National Income and survey data, this gap turns out to be very small (averaging one twentieth of 1 per cent per annum).

Figure 1 plots GNP per capita, and household incomes from survey sources. It should be noted that for the SILC years (2003–2014), we follow the OECD approach of using a lag of one year, partly reflecting the fact that SILC incomes are measured with respect to the 12 months prior to interview.

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[2]   Administrative data have advantages in the analysis of the very highest incomes. However, administrative data on incomes refer to the relevant tax unit (with couples mainly, but not universally, treated as a single unit). This means that they cannot provide a picture of the broader household income distribution, which is the key unit for income distribution analysis internationally.

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FIGURE 1   GNP AND HOUSEHOLD INCOME GROWTH, 1973–2014

Our focus on GNP, which is much closer than GDP to Gross National Income, removes one of the main sources of divergence. Nolan et al.'s analysis indicates that most of the divergence that remains relates to the household size adjustment, and to the difference between the GDP deflator and the Consumer Price Index. This lends confidence to the current analysis of income growth and income inequality using household surveys as being broadly consistent with the picture painted by national accounts, before the emergence of recent difficulties with such measures (and the introduction of new concepts, such as modified GNI (GNI*), to deal with them).

As noted in Callan et al. (2017), household incomes did not fall as fast as the initial GNP shock in 2009, but continued to fall while GNP rose in 2010, so that over the

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[3]   The period covered here pre-dates the 26 per cent recorded growth rate in 2015. The smaller year-to-year impacts of earlier multinational activities (such as redomiciled plcs), identified by FitzGerald (2015), do not affect the broad point made in relation to Figure 1.

two-year period both income measures fell by similar proportions. The gap between GNP and household income changes in these years could be interpreted as reflecting some smoothing of the shock to household incomes by tax and welfare policy.

Both series show very substantial growth – more than doubling – in real incomes between 1987 and 2014. Growth is not steady over the period – there are long periods of income stagnation, alternating with very rapid growth.[4] Nolan et al. detail a number of reasons why household survey incomes differ from GNP per capita. In the recessionary period, it should also be noted that deficit budgeting by the Irish government helped to ensure that household incomes did not fall as fast as the initial fall in GNP.

FIGURE 2   UNEMPLOYMENT RATE (OECD HARMONISED), 1983–2018
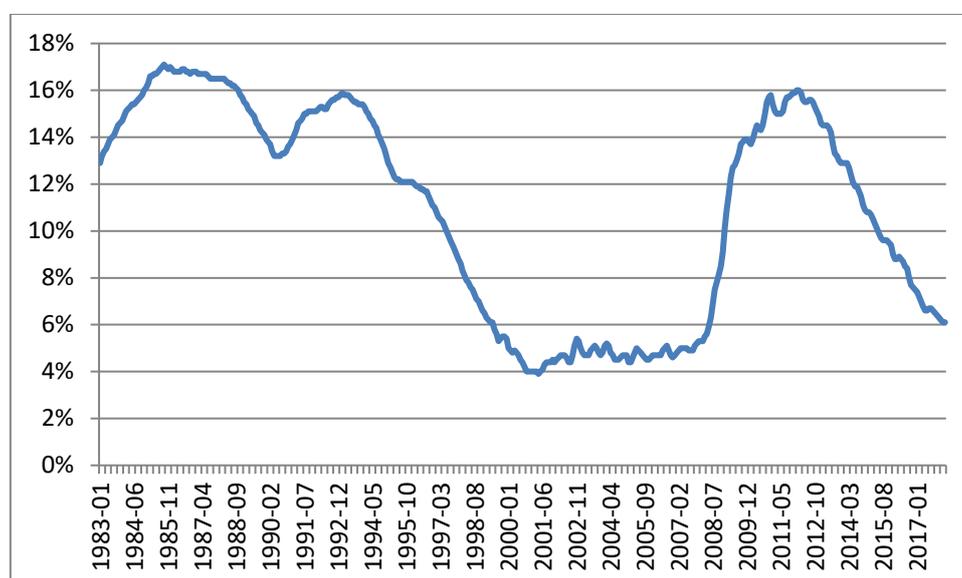
Source: OECD.

In interpreting later results it is also important to recognise the role played by dramatic movements in the unemployment rate. There was very limited income growth between 1973 and 1987, during which time the unemployment rate was above 13 per cent. Fast growth in incomes between 1994 and 2007 was accompanied by a fall in unemployment to historically low levels. More recently unemployment spiked again during the Great Recession, but it is now reaching much lower levels as the economy recovers.

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[4]   See Honohan and Walsh (2002) for an overview of factors contributing to rapid growth after earlier stagnation.

3.   INCOME DISTRIBUTION, 1987–2014

Has the extent of inequality in household incomes increased over the recession? In order to examine this question, we focus on the repeated cross-sections (or 'snapshots') of the household income distribution provided by the Survey on Income and Living Conditions. We consider both the Gini coefficient, the most commonly used summary measure of income inequality, and measures which provide a more detailed perspective of income share and income levels at the bottom, middle and top of the income distribution.

Figure 3 shows the evolution of the Gini coefficient for household disposable income for Ireland from 1987 to 2014. What is evident from this figure is the broad stability of the Gini coefficient over the whole period, despite the major upheavals in the later years of a boom, bubble and bust in the economy, with unemployment rising from 5 to 15 per cent and a collapse in the banking system. A small increase in the Gini coefficient is evident between 2008 and 2013, where the point estimate rises from 30.6 to 32.0. By 2015, the Gini had fallen back to 30.8. Savage et al. (2017) find that there is very limited evidence of any statistically significant differences between the estimates for individual years. In fact, the hypothesis that inequality is the same, at its average level, over the whole period cannot be rejected statistically.[5] Very similar findings are obtained by Savage et al. (2017) when looking at incomes net of housing costs.

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[5]   An exception to this is in 2009, when the Gini reached a historic low of 29.3. See Callan et al. (2014) for further discussion.

FIGURE 3   GINI COEFFICIENT FOR HOUSEHOLD DISPOSABLE INCOME PER ADULT EQUIVALENT,
          1987, 1994–2001 AND 2003–2014
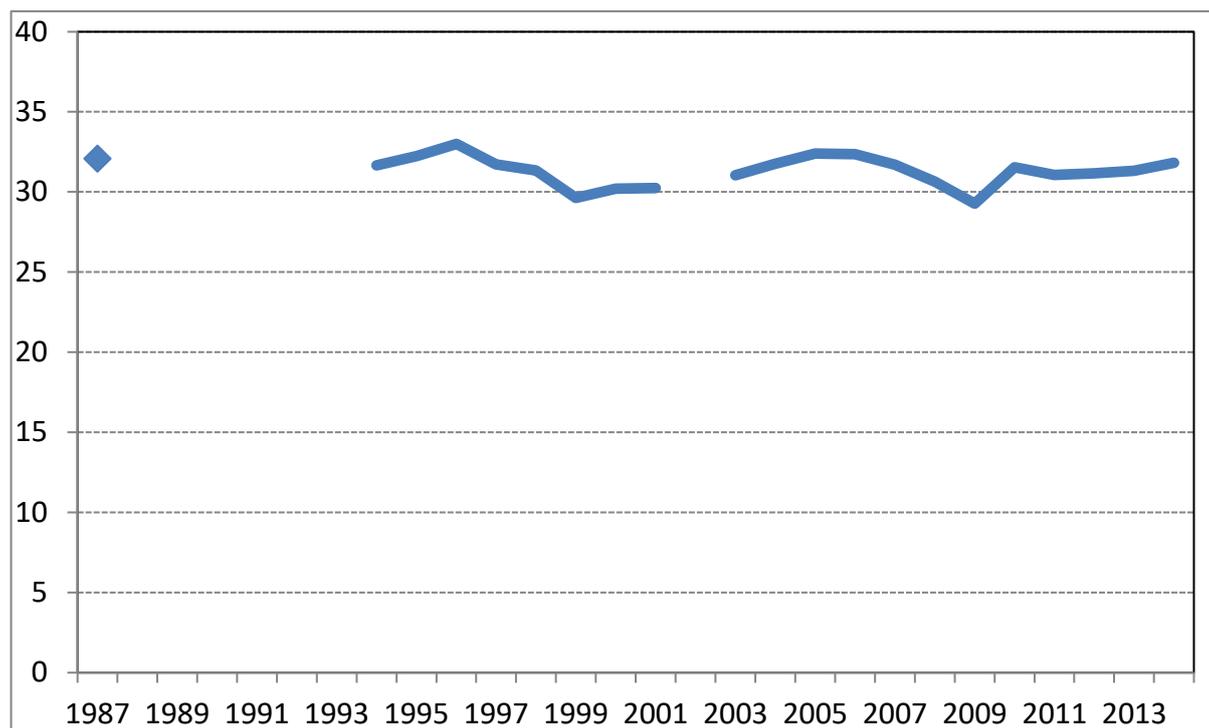
Table 1 shows that there has been remarkably little movement in quintile shares measured at approximately seven-year intervals, despite the very different macroeconomic contexts involved.

TABLE 1   QUINTILE SHARES OF HOUSEHOLD INCOME, IRELAND, SELECTED YEARS 1987–2014

Decile	1987	1994	2000	2007	2014
Lowest	8	8	8	8	8
2nd	13	12	13	12	13
3rd	17	17	18	17	17
4th	23	23	23	23	23
Highest	40	40	38	40	40

What does the growth in incomes observed in Figure 1, and the stability in inequality measures, imply for income growth at different points in the household income distribution? This has been a major concern in some countries, with a 'becalming' affecting middle incomes (Section 4 will examine this further). In Ireland, however, substantial overall growth and stability in inequality have

translated into substantial growth at all levels of the income distribution. Figure 4 illustrates this, showing growth of over 100 per cent for deciles 2 to 9, and of close to 95 per cent for the bottom decile.

FIGURE 4   GROWTH IN HOUSEHOLD INCOME BY DECILE OF EQUIVALISED INCOME: IRELAND, 1987–2014
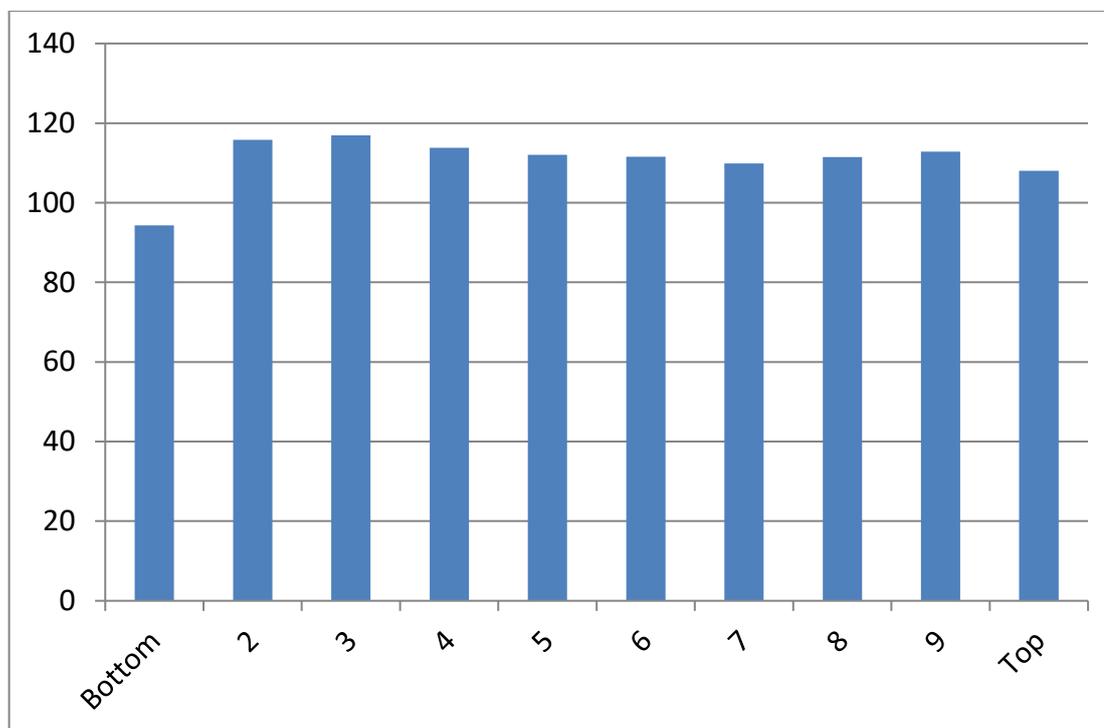
4.   INCOME GROWTH AND ITS DISTRIBUTION: IRELAND IN INTERNATIONAL PERSPECTIVE

International concern about rising inequality can be readily traced in a series of reports from the OECD. For example, OECD (2015) notes that OECD (2011) documented 'the deep-rooted reasons why inequality was rising so much' and states that 'Over the past three decades, income inequality has risen in most OECD countries'. Given this trend towards rising inequality internationally, the stability of income inequality in Ireland means that it is now among the countries in the middle of the inequality rankings, as illustrated in Table 2. Among OECD countries for which a Gini coefficient is available in the OECD Income Distribution Database, there are 15 countries with lower Gini coefficients than Ireland and 17 countries with higher coefficients. Countries with a Gini coefficient within 1 percentage point of Ireland's include Germany, France and the Netherlands.

TABLE 2   DISPOSABLE INCOME GINI COEFFICIENTS IN OECD COUNTRIES (2014)

Country	Gini coefficient
Iceland	0.246
Slovak Republic	0.247
Slovenia	0.251
Denmark	0.256
Czech Republic	0.257
Finland	0.257
Norway	0.257
Belgium	0.266
Austria	0.274
Sweden	0.274
Luxembourg	0.284
Hungary	0.288
Germany	0.289
France	0.293
Switzerland	0.297
IRELAND	0.298
Poland	0.298
Korea	0.302
Netherlands	0.305
Canada	0.313
Italy	0.326
Australia	0.337
Portugal	0.338
Greece	0.339
Spain	0.344
Estonia	0.346
New Zealand	0.349
Latvia	0.35
United Kingdom	0.356
Israel	0.365
United States	0.394
Turkey	0.398
Mexico	0.459

Source: OECD Income Distribution Database, accessed on 23 May 2018.

The impact of rising inequality has also been noted in OECD (2015): 'In recent decades, as much as 40% of the population at the lower end of the distribution has benefited little from economic growth in many countries'. This focus on the living standards of ordinary workers is a theme in a new study on generating prosperity for working families in affluent countries (Nolan, 2018). We draw here on some aspects of this study, which help to contextualise our findings regarding the growth in Irish incomes across the distribution. Nolan and Thewissen (2018) report annual average income growth over a period from about 1980 for a range of countries,

including Ireland. We focus first, in Table 3, on how Ireland compares with results for the US and the UK. The US results show little gain at the median level of income, and negligible gains or losses at lower income percentiles. For the UK, there are significant gains at the median, but these are less than at higher levels; and gains for the bottom half of the distribution are lower than the median gain. For Ireland, by contrast, there are substantial gains at all income levels – and rather similar levels of gain across the distribution.

Nolan and Thewissen's analysis also shows that the level of growth of household income in Ireland is exceptional in the broader international context, ranking second in terms of income growth among the 31 countries included. The level of 3.23% for growth in median income compares with an average across the 31 countries of 1.2%. Most countries have income growth that is either low or skewed towards the top. Ireland is unusual in having a combination of fast growth and relatively even distribution of that growth.

TABLE 3   ANNUAL AVERAGE INCOME GROWTH AT SELECTED PERCENTILES, LONGEST PERIOD COVERED SINCE 1980: US, UK, IRELAND

Percentile	P10	P30	Median (P50)	P70	P90
USA	−0.08	0.01	0.27	0.50	0.82
UK	1.22	1.27	1.49	1.72	2.05
Ireland	3.34	3.33	3.23	3.04	2.82

Source: Nolan and Thewissen (2018), Table 2.7.

5. INCOME DISTRIBUTION OUTCOMES IN THE LONG RUN: WHAT ROLE HAS TAX-TRANSFER POLICY PLAYED?

Disposable incomes can be seen as having two major components: market incomes, and the net balance between income taxes and income transfers. Market incomes include earnings from employment and self-employment, rents and investment income. Income-related taxes include income tax and social security contributions.[6] Transfers include State pensions (both contributory and non-contributory) and a wide range of working-age payments associated with different contingencies (e.g. unemployment, illness, lone parenthood).

We provide two perspectives on the role of tax and transfers in the long-run evolution of incomes and income distribution. In Section 5.1, we continue with the international comparative theme, highlighting differences in the role played by the Irish tax-transfer system as against those in the UK and the US. Section 5.2 examines the impact of actual policy choices in Ireland relative to a neutral, wage-indexed

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[6] In the Irish context, USC (Universal Social Charge) is a form of income tax, as no entitlement is associated with the payment of USC.

budget, and of some alternative choices including long-run indexation with respect to prices or a freeze on tax and welfare parameters in nominal terms. Section 5.3 reconsiders issues relating to the choice of a neutral benchmark for policy evaluation.

5.1   Market income and redistribution: US, UK and Ireland

Figure 5 shows how inequality in market incomes, as measured using the Gini coefficient, has evolved over the 2004 to 2015 period. All three countries are at the high end of the international spectrum in this regard. Up to 2007, the Gini coefficients for market income in Ireland and in the UK were almost identical. With the differential impact of the crisis, market income inequality rose sharply in Ireland but was relatively stable in the UK. With falling unemployment as the Irish economy has recovered, market income inequality fell sharply in 2014. Data for 2015, based on SILC 2016, are due to be published by OECD in summer 2018. It will be of interest to see whether the continuing fall in unemployment brings Irish market income inequality closer to the stable UK figure.

Figure 5 also shows the evolution of disposable income inequality, again as measured by the Gini coefficient. Despite higher market income inequality in Ireland, the Gini coefficient for disposable income lies below those for the US and the UK.

FIGURE 5   GINI COEFFICIENTS FOR MARKET AND DISPOSABLE INCOME: IRELAND, UK AND US
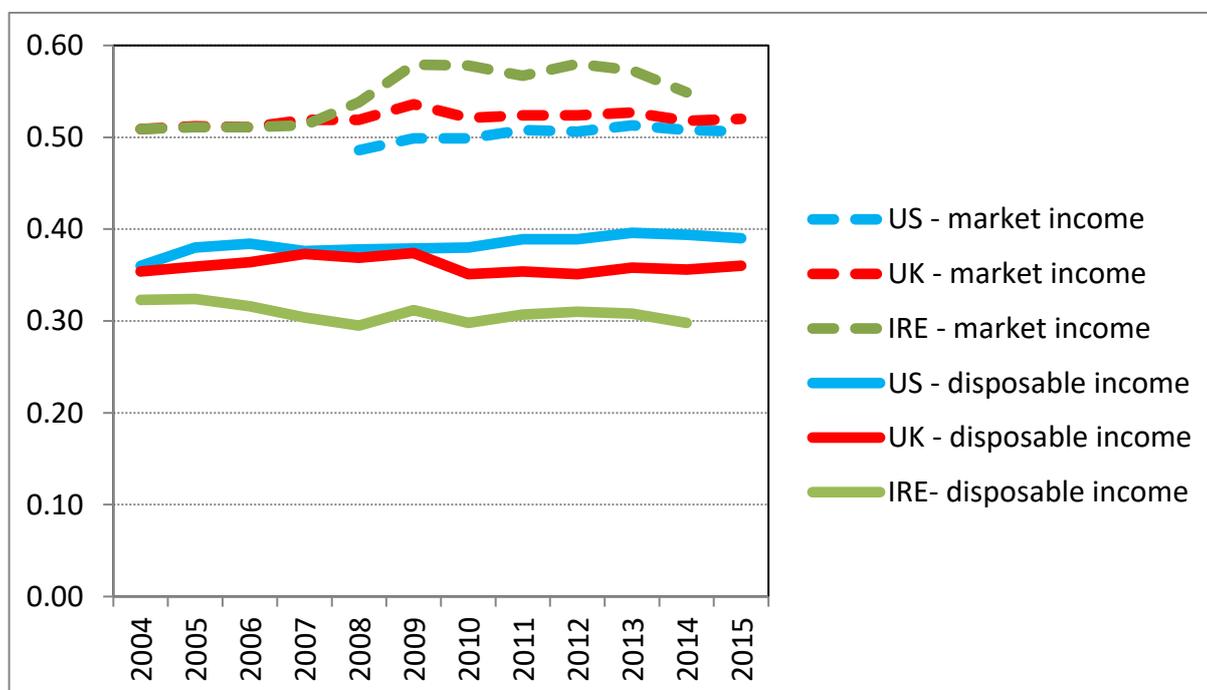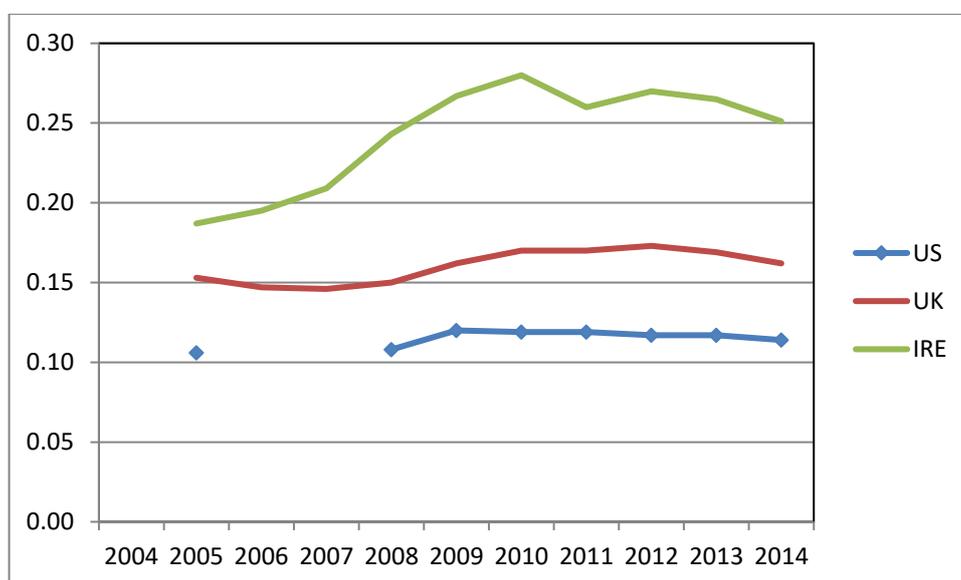

Source: OECD Income Distribution Database.
Note: The OECD practice, based on the fact that for almost all SILC countries income data refer to the previous calendar year, is to record data for SILC year *t* as data for year *t* – 1. For Ireland, the average lag is closer to 6 months, as data refer to the 12 months prior to interview.

Figure 6 clarifies the role played by tax-transfer policy in the three countries, identifying the extent of redistribution as measured by the difference (reduction) between the Gini coefficients for market income and disposable income. This is known as the Reynolds–Smolensky index of redistribution (Reynolds and Smolensky, 1977). The level of redistribution is higher in Ireland initially.

With the advent of the Great Recession, the redistribution index rises sharply in Ireland, with only moderate increases in the UK and even milder effects in the US. Previous analysis (Savage et al., 2018) has indicated that the rise in redistributive impact in Ireland is mainly due to automatic stabilisation effects – such as increased unemployment compensation when unemployment increases – rather than discretionary policy changes. Callan et al. (2018) also identify significant automatic stabilisation impacts in a number of EU crisis countries.

FIGURE 6   REDISTRIBUTION INDICES (REYNOLDS–SMOLENSKY): US, UK AND IRELAND, 2004-2014

Source: OECD Income Distribution Database.
Note: The Reynolds–Smolensky index measures the reduction in the Gini coefficient when moving from market income (before taxes and transfers) to disposable income (after taxes and transfers).

5.2   Long-run perspectives on the impact of changes in tax-transfer policy

Administrative and political approaches to the construction of an 'opening budget' differ across countries, across tax and welfare parameters, and over time. In Ireland, the general convention for annual budgets is that tax and welfare parameters are frozen in nominal terms. On the other hand, long-run pension policy, as reaffirmed in the recent *Roadmap for Pensions Reform* (Government of Ireland, 2018), establishes a target of 34% of average earnings for the State Contributory Pension. This implies that annual adjustments would be in line with wage growth.

In the UK, since the Rooker–Wise amendment of 1977, increases in tax-free allowances and tax bands have been linked to the rate of price inflation. State pensions in the UK, from 2010, have been adjusted using a more complex formula known as the triple lock: the higher of price inflation and wage inflation, but also subject to a minimum increase of 2.5 per cent. If policy impacts are measured against such politically determined 'default options', then they can be influenced by government choices as to the default option. For independent policy evaluation, what is needed is an appropriate benchmark. The case for using a 'distributionally neutral' benchmark has been made in a series of Budget Perspectives papers, and regularly used in analyses of the impact of annual Budgets. This can be implemented using wage growth as the key parameter for uprating of tax and welfare policy parameters. Key features of this approach include the following.

- Average tax rates remain unchanged in the face of wage growth over time.

- Welfare incomes rise in line with other incomes.

- The overall distribution of income therefore remains broadly unchanged.

There may, of course, be reasons why policymakers wish to alter the distribution of income – making it more or less equal, or favouring/disfavouring particular groups because of issues relating to financial incentives to work. The analytic framework of 'distributionally neutral' can be seen as a starting point – debate as to changes in the distribution can be conducted from this basis. But the independent starting point of an unchanged distribution allows for a systematic evaluation of such arguments.

Here we apply this framework to policy changes over the 1987 to 2014 period. We begin by examining the evolution of some key tax and welfare parameters. Note firstly that real wages rose by just over 70 per cent between 1987 and 2014. The State Contributory Pension rose at a similar rate, but other welfare benefits – non-contributory pensions and jobseeker payments – rose by rather more. This was largely due to the fact that in 1987, welfare payment rates were quite dispersed. Following the recommendations of the Commission on Social Welfare, the lowest payment rates in the system were increased as a new floor to working age payments was established, and State non-contributory pensions were raised much closer to the contributory pension rate. Most of this adjustment took place in the period 1987–1994.

On the tax side, it should be noted that the standard rate of tax fell from 35 per cent to 20 per cent, and that almost all the main tax thresholds – entry to the standard rate of tax and to the top rate of tax – more than kept pace with real wage growth. The exception to this is the threshold in relation to married couples with one earner. The debate around this issue, now generally known as tax individualisation, is considered in Callan and Farrell (1991), Callan et al. (2008) and Doorley (2018).

TABLE 4**REAL PERCENTAGE INCREASES IN WELFARE AND TAX PARAMETERS, 1987–2014**

Policy parameter	Real % increase
Real wages	71
Welfare	
State Contributory Pension	75
State Non-Contributory Pension	95
Jobseeker's Benefit	86
Jobseeker's Allowance	108
Tax free allowances (TFA)/Tax credit equivalent	
Personal TFA/credit	73
Personal & PAYE TFA/credit	156
Thresholds for top rate of tax	
Single	86
Married, one earner	45
Married, two earners	127

Note: The standard rate of tax fell from 35% to 20%.

The net impact of these changes can most easily be gauged by examining a contrast between the 1987 policy, indexed in line with nominal wage growth, and the actual 2014 policy. We use the SWITCH model to conduct this comparison, applying it to the 2014 population and incomes. The results, reported in Figure 7, show that tax and welfare policy in 2014 treated all income groups more favourably than the wage-indexed 1987 system. The average gain from discretionary tax-benefit policy, relative to the wage-indexed benchmark, was close to 10 per cent. The greatest gains were for the two lowest income groups, with the lowest income group experiencing by far the greatest gain. This result reflects the adjustments to the welfare system described earlier, which were in line with the recommendations of the Commission on Social Welfare.
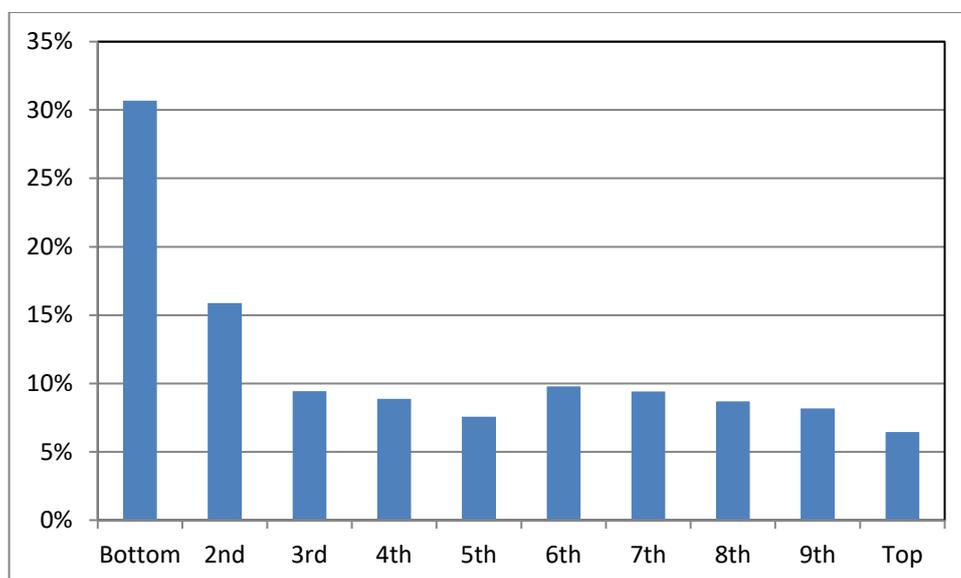
In Table 5 we examine the impact of 2014 policy, as against wage indexation, on some measures of the risk of poverty. The first measure is the head count or 'at risk of poverty' measure used by the EU: it counts the proportion of persons living in households falling below 60 per cent of median income. The 2014 policy leads to a reduction in this head count of poverty by 1 percentage point.

However, the head count does not give a full picture of the impact on poverty: it takes no account of the depth of poverty (how far below the poverty line a household's income falls) or of its distribution (it gives equal weight to a poverty reduction arising from a person moving from just below the line to just above, or from a minimal income to above the poverty line). The poverty gap measure proposed by Foster and Shorrocks (1984) takes account of both the extent of poverty, as measured by the head count ratio, and the depth of poverty (for each poor individual, how far below the poverty line income they fall). On this broader measure, the 2014 policy has a greater impact – reducing the poverty gap by over 20 per cent.

TABLE 5   **AT RISK OF POVERTY MEASURES UNDER ALTERNATIVE POLICY SCENARIOS**

At risk of poverty measure	1987 policy indexed in line with wage growth	Actual 2014 Policy	1987 policy unindexed (frozen in nominal terms)	1987 policy indexed in line with price inflation
Head count (%)	16.5	15.5	32.2	25.7
Poverty gap (index: 1987 = 100)	100	75.5	339	189.8

Source: Analysis using SWITCH, the ESRI tax-benefit model, on the 2014 SILC.

We look finally at two other scenarios. What if policy had simply indexed welfare and tax parameters in line with price inflation, or had frozen these parameters in nominal terms? We find that a 1987 policy frozen in nominal terms would have doubled the head count of poverty, and trebled the poverty gap. A price-indexed policy would have seen the head count of poverty rise by about 50%, and the poverty gap close to double.

This contrasts with stated policy in the area of pensions, where there is a target which rises in line with gross earnings. The nature of the conventional opening budget 'frozen in nominal terms' becomes more evident in the long-run setting examined here, and has implications for the debate about the choice of an appropriate short-run benchmark for evaluation of the distributional impact of budgetary policy. Differences between wage-indexed, price-indexed and nominally frozen policies can be relatively small on a year-to-year basis, which is the focus of the annual budget. But in the longer run, substantial differences do emerge. This further strengthens the case for the use of a wage-indexed benchmark in the short-run evaluation of distributional impacts, so that the framework used in the short run is consistent with that required in the longer run.

6.   CONCLUSIONS

Ireland's income distribution has been broadly stable for most of the past 30 years. During this time, inequality has risen in many other countries. As a result, while Ireland was once towards the high end of the inequality spectrum for an advanced country, it is now closer to the middle rank. Market income inequality is high in Ireland, but a redistributive tax and transfer system has helped to offset that.

Two features of the system stand out. First, in a long-run perspective, adjustment of tax and welfare parameters has been in line with, or slightly ahead of, growth in wages. This has helped to ensure that 'fiscal drag' has not reduced the incomes of those in employment, and has helped to provide a floor to incomes for those dependent on welfare which has at least kept pace with general income growth.

Second, in a short-run perspective, this system has helped to provide automatic stabilisation not just of incomes, but of inequality.

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