The Economic and Social Review, Vol. 56, No. 1 Spring 2025, pp. 3-29

POLICY PAPER: FISCAL POLICY

Fiscal Policy and Redistribution in Ireland

Barra Roantree
Trinity College Dublin

Abstract: This paper explores the role fiscal policy plays in shaping the distribution of resources through the tax and transfer system in Ireland. It first shows that there has been a shift towards taxes on income and towards expenditure on income transfers as the size of government has increased. This has implications for the amount of redistribution, which appears relatively high compared to other European countries and has risen over the last three decades. However, the tax and transfer system can also shape the distribution of income through the effects it has on the behaviour of individuals, households and firms. Despite an explosion of international research on these effects in recent decades, we have little credible empirical evidence on the magnitude of these effects in Ireland, in large part due to the lack of access for researchers to administrative data.

Acknowledgements: Thanks to Patrick Honohan, Philip Lane, John FitzGerald, and Cormac O'Dea for suggestions and comments on some of the ideas discussed in this paper, which uses microdata data from the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services, the 1994-1999 Living in Ireland Survey, and the 2004-2019 EU Survey on Income and Living Conditions (https://doi.org/10.2907/EUSILC2004-2021_V.2). The author is solely responsible for the content and the views expressed.

Corresponding author: barra.roantree@tcd.ie.

I INTRODUCTION

A clear message that emerges from the work of Patrick Honohan over the past five decades is the import role fiscal policy has played in Ireland. For example, Honohan and Ó Gráda (1998) point to the role "heavy supplementary import duties on a range of finished and semi-finished consumer goods" introduced in March 1956 had in exacerbating a crisis triggered by a misguided suppression of interest

rates the previous year. Honohan (1999) described how "excessive fiscal expansion brought the state close to the point where partial default might have been considered" before a belated "successful fiscal correction, supported by a political and social consensus, injected a crucial element of long-term confidence about the direction of policy". Lastly, Honohan and Walsh (2002) identify income tax rate reductions in the 1990s as "part and parcel of the fiscal normalization" which contributed – alongside an array of other factors – to help unleash the Irish hare; a far superior metaphor to the more widely touted (and as the authors note, zoologically improbable) "Celtic Tiger".

This paper explores one particular aspect of fiscal policy: the role it plays in shaping the distribution of resources through the tax and transfer system. It begins by outlining the changing size and shape of the Irish fiscal state since independence, as captured by the level and composition of tax revenues and public expenditure. It then proceeds to consider the role of tax and government transfers in shaping the distribution of resources: first – in Section III – in terms of the somewhat mechanical role the tax and transfer system plays in redistributing income from rich to poor, and then – in Section IV – more broadly through the effects the tax and transfer system have on economic behaviour. The paper then concludes in Section V with a summary and some suggestions for future research on fiscal policy and redistribution in Ireland.

II TAXATION AND SPENDING IN IRELAND

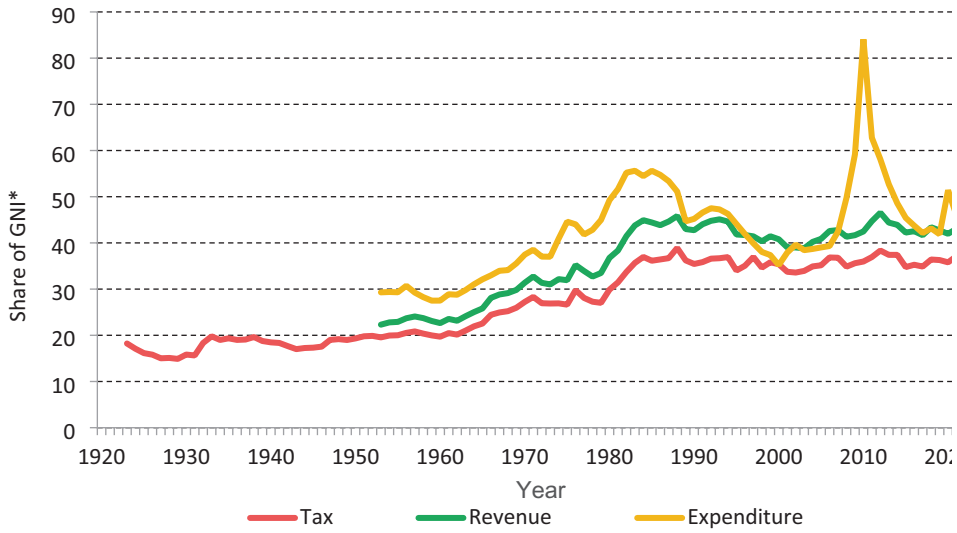
Like other European and advanced economies (Lindert, 2004), there has been an enormous change in the size and shape of the Irish fiscal state over the 20th century. Figure 1 plots the evolution of taxation along with broader measures of government revenue and expenditure as a share of economic activity from 1923 (for taxation) and 1953 (for government revenue and expenditure), drawing on data assembled by FitzGerald (forthcoming) and FitzGerald and Kenny (2018).

This shows that for the first four decades of independence, the Government raised no more than a fifth of economic activity in tax. This share increased to almost 30 per cent over the 1960s, hovering around that level for a decade before increasing again to just over 35 per cent over the 1980s, a level it has fluctuated around since.

Figure 1 also shows that the evolution of broader government revenue and expenditure follow a similar pattern, rising particularly rapidly over the 1960s and 1980s. However, both measures peak at a higher level, in part reflecting the fact that government revenue encompasses sources of income other than taxes (e.g. local government rents and the profits of commercial semi-states).

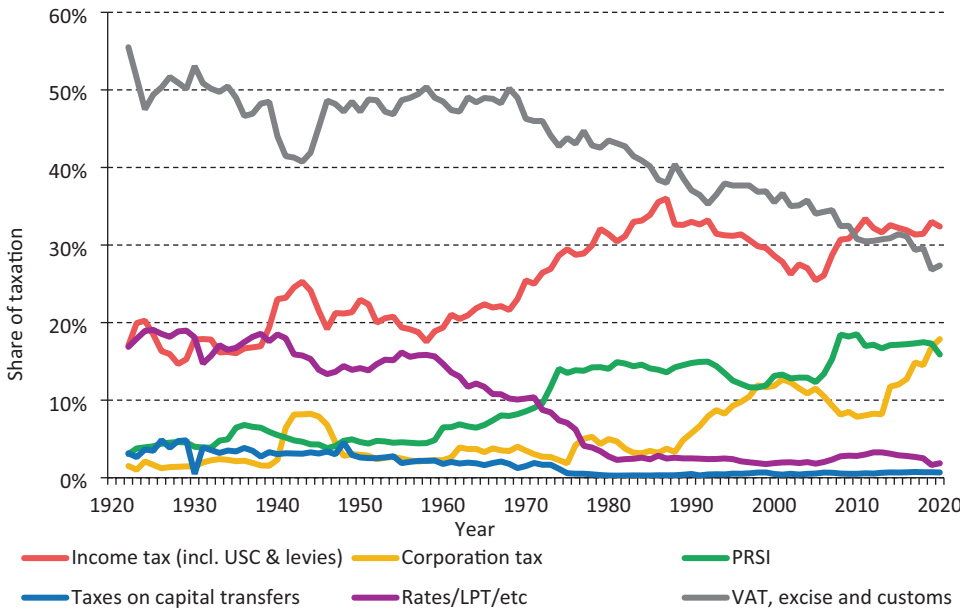
In addition, the expansion of government expenditure was more sustained than revenue through the 1970s. This led to a large deficit opening over this time, which

Figure 1: Taxation, Revenue and Government Expenditure as % GNI*



Source: FitzGerald and Kenny (2018); FitzGerald (forthcoming).
Note: 2010 spike in expenditure as a share of GNI* reflects cost of recapitalising Irish banks.

Figure 2: Composition of Tax Revenue

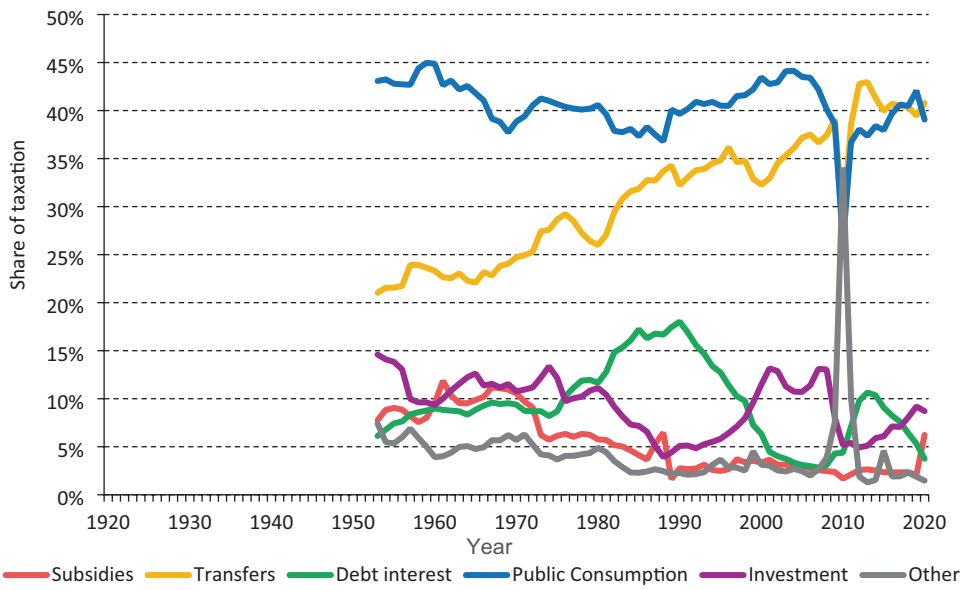


Source: FitzGerald and Kenny (2018); FitzGerald (forthcoming).

was eventually closed with the fiscal consolidation of the late 1980s (Honohan, 1999). While government revenues exceeded expenditure briefly during the late 1990s and early 2000s, generating a short-lived surplus, the onset of the economic crisis saw a much larger – if even more short-lived – deficit open up as revenues initially declined and expenditure (including the costs of recapitalising Ireland's banks) surged. This deficit was again closed through a (painful) fiscal consolidation, before opening up again in a more temporary and unusual form with the COVID-19 pandemic in 2020.

As well as increasing in scale, the composition of both taxation and expenditure has changed dramatically over time. Figure 2 shows that over the past century the balance of taxation has shifted away from taxes on consumption (VAT, excise and customs) and property (Rates/LPT/etc), and towards taxes on income (income tax, PRSI and corporation tax). Indeed, while a similar share of tax receipts was raised in taxes on property as from income tax over the first two decades of independence, the former has fallen to a trivially small 2 per cent of receipts while the latter has risen to a third. With the decline in the importance of VAT, excise and customs, this means that taxes on labour income now make up the single largest source of tax receipts: by some distance if one also includes PRSI receipts, which – given the extremely weak link between contributions and benefits – are in effect just a supplementary tax on income.

Figure 3: Composition of Government Expenditure



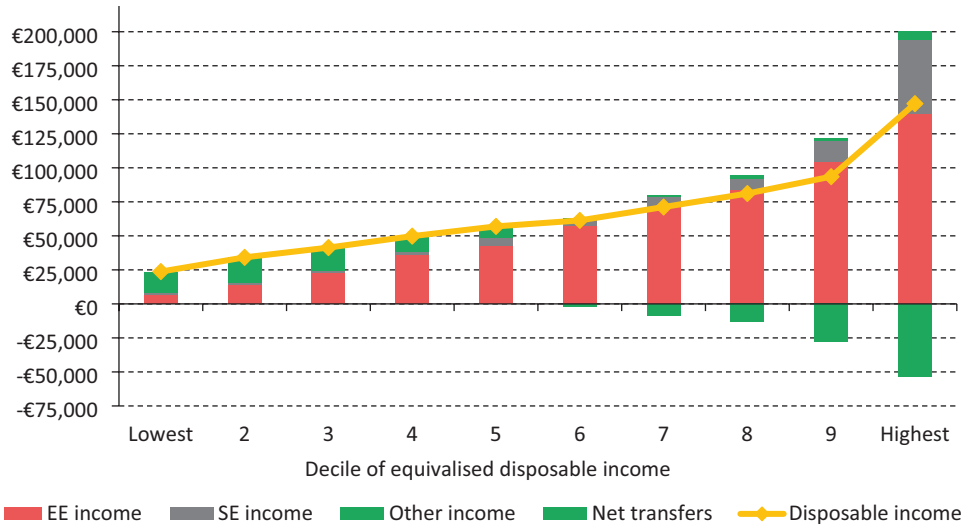
Source: FitzGerald and Kenny (2018); FitzGerald (forthcoming).
Note: 2010 spike in 'other' and dip in 'public consumption' expenditure as a share of total Government expenditure reflects cost of recapitalising Irish banks.

Figure 3 shows (over a shorter horizon) that there has also been a shift in the composition of government expenditure towards transfers. These have increased from just 22 per cent of expenditure in 1953 to about 40 per cent in recent years. The rise in the relative importance of transfers appears to have come at the expense of subsidies, debt interest, and – with the short-lived exception of the 2000s – government investment.

III DIRECT REDISTRIBUTION

A key function of taxes and transfers is to redistribute resources, generally (but not always) from those with higher to those with lower levels of incomes. This is illustrated in Figure 4, which uses data from the 2019 EU Survey of Income and Living Conditions (EU-SILC) to plot the composition of income across each decile (or tenth) of the income distribution, equivalised (or adjusted) for household size.[1]

Figure 4: Composition of Income, by Decile of Equivalised Income



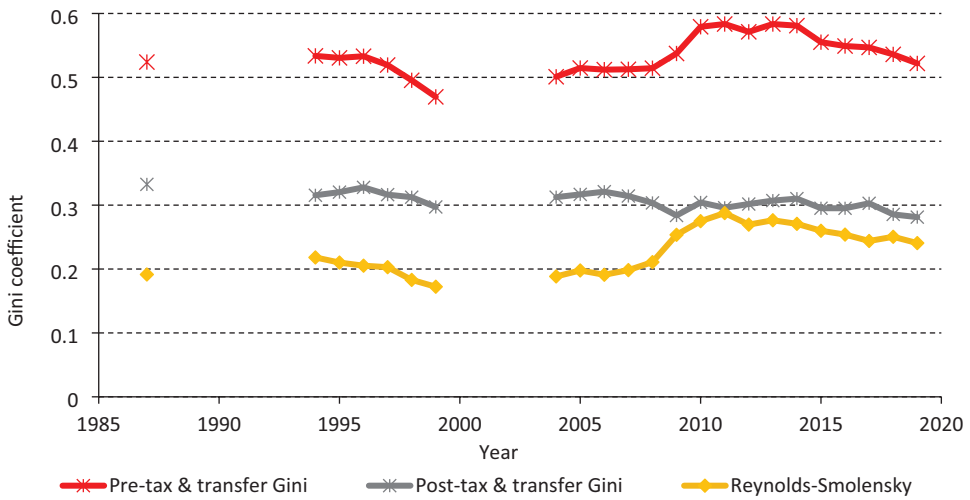
Source: Author's calculations using 2019 EU-SILC microdata.
Note: Deciles based on incomes adjusted for household size and composition using the modified OECD equivalence scales, but income components unequivalised, shown in 2022 prices.

[1] We use the modified OECD equivalence scale 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. This is consistent with the approach of Eurostat – among others – but differs from that of the CSO in official statistics whish used equivalence scales of 1, 0.33 and 0.66 respectively. For what difference this makes to measures of income inequality and poverty, see Doorley *et al*. (2024).

The bars in Figure 4 show the average income from employment, self-employment and other sources (e.g. rental income, dividends) along with net transfers: cash transfers received from government less direct taxes paid to the government.[2] The overlaid connected line shows average annual disposable income – the sum of these four components – which ranges from €23,732 for the lowest income decile to €147,150 for the highest income decile (in 2022 prices, uprated using the CPI).

The bars show that employment income – the red bars – is the most important source of income for deciles 3-10, and that net transfers – the dark green bars – are the most important for those in the lowest two income deciles at €15,386 and €18,570 respectively. While net transfers are on average positive for those in the bottom half of the distribution, they are negative for those in the top half of the distribution, peaking at an average of €53,140 for those in the very highest income decile. This illustrates the extent to which the tax and transfer system redistributes from those with higher to those with lower incomes, at least on average and – for now – assuming the system does not itself affect the distribution of pre-tax and transfer income.

Figure 5: Income Inequality and Redistribution in Ireland, 1987-2019



Source: Author's calculations using the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey (1994-1999) and EU-SILC RMF microdata (2004-2019).
Note: Incomes adjusted for household size and composition using the modified OECD equivalence scales.

[2] SILC does not collect information on certain taxes, most notably those on expenditure (e.g. VAT, customs and excise duties) and capital gains (e.g. CGT for Ireland).

One important effect of this redistribution is to reduce income inequality. Figure 5 illustrates this going back to 1987, the earliest that available microdata allow.[3] The first two series plot 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) – for pre-tax and transfer income and disposable (aka post-tax and transfer) income respectively. The red series shows that the Gini coefficient for pre-tax and transfer income has mostly fluctuated between 0.50 and 0.55, rising sharply over the course of the Great Recession and then falling as the economy recovered from 2014. The grey series shows that the Gini coefficient for post-tax and transfer (aka disposable) income is much lower, and has fallen from 0.33 to 0.28 over the 1987-2019 horizon covered by our data; a relatively rare experience among advanced economies (Thewissen *et al*., 2018), some reasons for which are explored by Nolan and Roantree (2023) and Roantree and Barrett (2024).

The third (yellow) series in Figure 5 plots the difference between the pre- and post-tax and transfer Gini coefficients. This is often called the Reynolds-Smolensky index, and can be thought of as providing a measure of the amount of redistribution carried out by the tax and transfer system (Enami *et al*., 2023). Between 1987 and 2007 this index fluctuated around 0.20, before rising sharply over the course of the financial crisis, peaking at 0.29 in 2011.

This increase in redistribution reflects both the rise in unemployment over this period (which increased pre-tax and transfer income inequality) and the related increase in transfers (which acted to reduce post-tax and transfer income inequality). As the economy has recovered, this rise in unemployment and transfers has unwound, leaving the Reynolds-Smolensky index lower – at 0.24 in 2019 – albeit at a higher level than before the crisis. This suggests that some combination of policy reforms and changes to the distribution of pre-tax and transfer income have acted to increase the amount of redistribution performed by the tax and transfer system.

How do these measures of income inequality and redistribution compare to those for other countries? While harmonised data covering as long a horizon as considered above are quite limited, Figure 6 plots Gini coefficients and the Reynolds-Smolensky index for all countries who participated in the 2019 EU-SILC, ordered highest-to-lowest in terms of their pre-tax and transfer income Gini. These show that of the 30 countries for which we have data (the EU27, Norway, Switzerland and Serbia), Ireland ranked 4th highest in terms of pre-tax and transfer income inequality, behind only Bulgaria, Romania and Greece.[4]

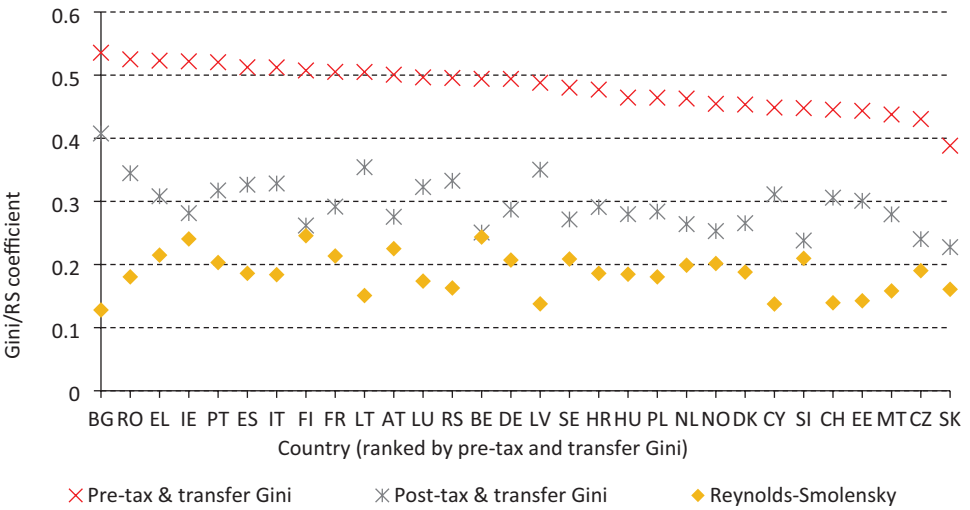
[3] Here we again use data from the EU-SILC along with its predecessors: the Living in Ireland Survey (1994-1999) and the the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services which have been harmonised by Roantree *et al.* (2021).

[4] Both Roantree (2020) and Nolan and Maître (2021) point to the role played by Ireland's relatively high share of working-age households with no income from employment or self-employment, though the latter also highlight the "relatively high levels of dispersion in earnings within one-earner and two-earner households".

Figure 6 also shows that Ireland ranks mid-table (13th of 30) in terms of its post-tax and transfer income Gini coefficient. At 0.28, this is slightly lower than Germany and France (15th and 17th respectively, with Ginis of 0.29) and slightly higher than Denmark and Sweden (8th and 9th respectively, with Ginis of 0.27).

The reason for this is that net transfers – the difference between these two measures of income inequality – do a lot to reduce income inequality in Ireland. This is illustrated by the Reynolds-Smolensky index which, at 0.24 for Ireland, is highest of the high pre-tax and transfer income inequality countries and third highest overall, behind only Belgium and Finland.[5] While sometimes put forward as evidence that Ireland's tax and transfer system is among the – if not the – most progressive of any EU or advanced economy, several factors complicate such an interpretation.

Figure 6: Income Inequality and Redistribution Across the EU, 2019



Source: Author's calculations using 2019 EU-SILC microdata.
Note: Incomes adjusted for household size and composition using the modified OECD equivalence scales.

Firstly, such measures of redistribution do not account for indirect taxes, notably VAT which comprised about a fifth of total tax revenue in 2021. Some research (e.g. Leahy *et al*., 2011; Barrett and Wall, 2006) argues that VAT in Ireland is regressive because it amounts to a greater proportion of income for lower- than for higher-income households. However, Mirrlees *et al*. (2011) – among others –

[5] As appendix Table A.2 shows, this pattern is even more pronounced if one looks only at the working-age population (those aged 25-55), for whom Ireland has the highest Reynolds-Smolensky index. Tables A.1 and A.2 also show that Ireland ranks highest in terms of the Musgrave-Thin index of redistributive effect and among the highest in terms of both the Kakwani index and Suits index of progressivity.

argue that assessing the distributional impact of indirect taxes by comparing them to incomes gives a misleading impression because such patterns are driven by some low-income households who spend more than their income and so pay a lot of VAT relative to their income.

But households cannot spend more than their income indefinitely, as over a lifetime income and expenditure must be equal, save for the bequests and the possibility of dying in debt. Rather, VAT looks large relative to income because of some households who are experiencing temporary periods of low income, but borrowing or drawing down savings to maintain levels of consumption closer to their longer-run level (Brewer *et al*., 2017).[6] A more accurate perception of the distributional impact of indirect taxes like VAT would ideally therefore assess this burden relative to longer-run or lifetime incomes, or failing that (given data limitations) current expenditures.

Indeed, Thomas (2022) finds VAT appears proportional or slightly progressive in most OECD countries – including Ireland – when assessed relative to expenditure. This is in part the result of the zero-rating of much expenditure on food which – as shown by Coffey *et al*. (2020) – makes up a disproportionate share of expenditure for lower income households. Nevertheless, VAT is less progressive than income tax because it does not contain a tax-free allowance (analogous to income tax credits), nor an initial tranche of expenditure subject to a reduced rate of tax (analogous to the standard rate band). As a result, accounting for indirect taxes like VAT would reduce estimates of how much redistribution the tax and transfer system carries out, but by less than is sometimes argued (e.g. Collins and Turnbull, 2013).

A second, related, issue with these measures of redistribution is that they are computed only at a particular point in time. Given individuals' circumstances vary substantially across the lifecycle and over time, it has long been recognised such measures may overstate the degree of interpersonal redistribution the tax and transfer carries out (e.g. Weizsäcker, 1978).

Indeed, Roantree and Shaw (2018) show that the Reynolds-Smolensky index in Britain falls by about a fifth as the income reference period for pre- and post-tax and transfer income is expanded from 1 to 18 years (the maximum possible using the British Household Panel Dataset they draw on). While the absence of comparable long-running, longitudinal data for Ireland means similar estimates are not currently available,[7] it is likely that longer-run measures of redistribution are lower than those displayed above (although to what extent is unclear).

[6] Such temporarily low incomes can arise for a variety of reasons including periods of study, unemployment, and time out of the labour market to raise children, as well as retirees drawing on past savings.

[7] Such estimates might soon be possible to construct using the *Growing Up in Ireland* data as more information on the earnings, taxes and transfers of the (1998) child cohort becomes available.

A third issue with these measures of redistribution is that they do not account for wider public spending, including expenditure on what might be considered in-kind transfers like health or education. Although data on the extent to which people with different levels of income differentially utilise public services does exist (or can be estimated),[8] the cost of provision can differ – substantially – from what we would really like to know to incorporate in-kind transfers to existing measures of redistribution: how much individuals value the service in cash terms. O'Dea and Preston (2012) argue – convincingly – in favour of valuing publicly provided private goods according to an equivalent cash transfer, though recognise the practical difficulties in implementation (especially in terms of data limitations). While well-developed approaches of this type exist (e.g. Barofsky and Younger, 2022), few have been applied to the provision of in-kind transfers in Ireland.

Lastly, such measures of redistribution take as given the distribution of pre-tax and transfer income. In other words, these measures account only for the mechanical impact of taxes and transfers, but not any effect that taxes and transfers have on the decisions of individuals, households and firms, which has the potential to shape the distribution of the pre-tax and transfer income we observe. It is to some of these fundamental questions – and the extent of our knowledge on these effects in Ireland – we now turn to.

IV TAXES, TRANSFERS and ECONOMIC BEHAVIOUR

4.1 Taxes on labour income and consumption

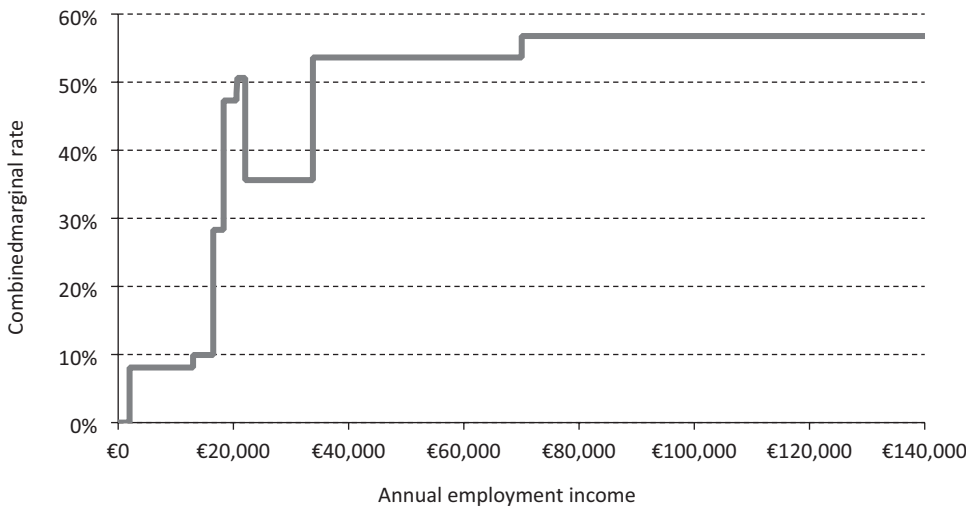
Section II showed that taxes on labour income now account for the largest source of tax receipts in Ireland. These taxes are disparate, encompassing income tax, Pay Related Social Insurance (PRSI) and the Universal Social Charge (USC).

While the tax unit and base for each differs somewhat[9] – with each defined by its own system of allowances, bands and rates – taken together they represent a progressive (in places a heavily progressive) tax schedule. This is shown in Figure 7, which plots the combined marginal rate of income tax, PRSI and USC on employment earnings for a single adult without children in 2021. This quickly rises from 0 per cent as employer PRSI is levied at a rate of 8.8 per cent on the entirety of earnings once they exceed €1,976 per year (€38 per week), representing a jump in the average tax rate or 'notch' in the tax schedule (Blinder and Rosen, 1985). It rises slightly as the USC begins to apply from €13,000 per year (again, with a

[8] For example, SWITCH – the ESRI tax and benefit microsimulation model – allows for the distributional impact of expanding access to medical or GP visit cards to be estimated (Keane *et al*., 2023), while O'Hagan (1995) considers the distributional implications of admission charges to national museums.

[9] For example, income tax is in-part levied on the annual joint income of married couples (unless they elect otherwise), while PRSI is levied on an individual per employment basis and USC an annual individual basis.

Figure 7: Tax Schedule on Employment Income for a Single Adult, 2021



Source: Author's calculations.
Notes: Assumes single adult of working-age with employment income only, paying class A PRSI. Ignores infinite marginal rates created by discrete jumps ('notches') in USC and PRSI schedules.

notched structure), before rising more sharply around €20,000 per year. This is as income tax credits are exhausted, and the 20 per cent rate of income tax applies to earnings above €16,500 per year while the 4 per cent rate of employee PRSI applies on earnings above €18,304 per year (€352 per week).

However, the combined marginal rate rises by more than 24 percentage points because of the way in which employee PRSI is levied, again with a notched structure but one which is partially offset with a credit. This PRSI credit is withdrawn at a rate of 1-in-6 (16.7 per cent) against taxable earnings in addition to income tax, PRSI and USC (whose marginal rate rises from 2 per cent to 4 per cent from €20,687 per year), giving rise to an effective marginal rate of around 50 per cent over a short range of income (from €18,304 to €22,048). While this combined marginal rate falls back down to 35.6 per cent, it quickly rises again to more than 50 per cent as the higher 40 per cent rate of income tax kicks in from €33,800 per year and then the 8 per cent rate of USC from €70,044 per year.

As well as being unnecessarily complicated, such a tax schedule clearly has the potential to affect the choices individuals make about whether, how much, and even how hard to work. In addition, given that no equivalent of employer PRSI applies to income from self-employment, the tax schedule also has the potential to influence the legal form through which this work takes place; an issue highlighted

by NESC (2020), Kakoulidou and Roantree (2021) and the Commission on Taxation and Welfare (2022) among others.

The extent to which the personal tax system affects taxpayers' choices – and so shapes the pre-tax distribution of income – depends crucially on the responsiveness of taxpayers to such incentives. While this question has been central to the field of public economics since its inception, with rapid methodological progress over recent decades giving rise to a voluminous international literature,[10] there has been relatively limited research using modern empirical methods and microdata in Ireland. Notable exceptions include Hargaden and Roantree (2019), Acheson *et al*. (2018) and Doorley (2017), who all find relatively modest responses to PRSI or income tax for most taxpayers. This contrasts somewhat with earlier empirical work using microdata (e.g. Doris, 2001; Barrett *et al*., 2000; Callan and Doris, 1999; Callan and Van Soest, 1996; and Callan and Farrell, 1991) which found a relatively high degree of responsiveness to taxes for women, but also that the degree of responsiveness had fallen over time.

It is more difficult to reconcile microdata-based estimates with the more extensive macro literature which finds or calibrates models so that labour supply is highly responsive to net-of-tax wages (e.g. Bergin *et al*., 2013; 2017; 2013; Bergin and Kearney, 2007; FitzGerald, 1999; Curtis and FitzGerald, 1996). While this issue of divergent macro and micro estimates is not unique to Ireland, with the reasons the subject of – at times heated – debate,[11] it is one of which perhaps there has been limited discussion of to date.

This means it is difficult to say with any certainty what effects the, in places, sharp (dis)incentives created by taxes on labour income have on the distribution of pre-tax income in Ireland. The more responsive – or elastic – taxpayers are to these incentives, the more these incentives will affect the distribution of pre-tax income. As Section V discusses, more research on this topic is therefore vital, not least given concerns about the growing potential for people – particularly those with very high incomes or working in especially mobile occupations – to respond to taxes by moving country; something on which there exists very little empirical evidence beyond small groups like superstar footballers or inventors (Kleven *et al*., 2020).

Empirical evidence about the effects of consumption taxes on economic behaviour in Ireland is also quite limited. A notable exception to this is carbon taxes, which have been the subject of extensive study from both a macroeconomic (e.g. de Bruin and Yakut, 2024) and a microeconomic perspective (e.g. Tovar Reaños and Lynch, 2022) over recent years. There has also been a series of papers by

[10] For an overview, see the surveys of Blundell and MaCurdy (1999), Meghir and Philips (2010), Keane (2011), Saez *et al*. (2012) and Kleven (2014).

[11] See, for example, Keane and Rogerson (2012), Chetty *et al*. (2011), Chetty (2012), Peterman (2016), and Kleven *et al*. (2023).

Madden (1989; 1993; 1995; 1997), and more recently by Savage (2016), which have sought to estimate the elasticity of demand for a variety of goods using the long-running Household Budget Survey.[12]

However, no recent attempt has been made to use these estimates – or others – to calculate the magnitude of the distortion(s) to individuals' consumption behaviour generated by the numerous reduced and zero rates contained in our system of VAT. Nor do we know much about the effects many other taxes on consumption that are levied in Ireland have on behaviour, including Alcohol Products Tax, the Sugar Sweetened Drinks Tax, or the landfill levy to name just a few. As with taxes on income, this makes it very difficult to say much about the welfare costs associated with taxes on consumption in Ireland; a topic we return to in the conclusion.

4.2 Capital income and transfer taxes

As with taxes on personal income, the design of capital income and transfer taxes in Ireland have the potential to significantly affect the behaviour of taxpayers and so shape the distribution of income as well as wealth.

Nowhere is this more evident than with Capital Gains Tax (CGT), which is charged at a rate of 33 per cent on the increase in the value of an asset between its acquisition and when it is sold or otherwise disposed of (e.g. gifted to a child inter vivos). While there are different views among economists on how such capital income should be taxed relative to labour income,[13] the divergence in tax rates with those on labour income clearly has the potential to affect the pre- as well as the post-tax distribution of income.

Perhaps more importantly, CGT contains a multitude of reliefs and reduced rates which it is difficult to believe do not influence the behaviour of taxpayers. For example, the Irish tax code provides for full relief from CGT on assets that are transferred at death, including to the executor or personal representative of a deceased person. This treatment – often referred to as the step-up basis of taxation – means that any unrealised capital gains accrued between the date of purchase and the date of death are effectively exempted from tax.

Death is not the only time of life that reduced – or zero – rates of CGT are applied to otherwise chargeable capital gains. Principal Private Residence (PPR) relief exempts entirely from CGT the gains on disposal of a property that was lived in as an individual's main residence. Retirement Relief provides for relief from CGT on the disposal of certain business or farming assets by those above the age of 55, with this relief restricted for disposals to persons other than children and

[12] Other exceptions include Petrov et al. (2019) – who find that while a 2008 reform to Vehicle Registration Tax and Motor Tax on car sales led to reductions in carbon emissions, it also led to increases in air pollution as consumers switched to diesel vehicles – and Madden (2007) – who finds tobacco taxes effect the likelihood that women start and quit smoking.

[13] See Banks and Diamond (2010) for an accessible discussion of these views.

(since 2014) for disposals to children for those above the age of 65.[14] Revised Entrepreneur relief provides for a 10 per cent reduced rate of CGT on gains from the disposal of certain qualifying business assets (including shares held by an individual in a company in which they were a director or employee) up to a lifetime limit of €1 million.

While there may or may not be some goal of economic or social policy that is well served by these zero and reduced rates of CGT, they undoubtedly create a strong set of incentives for individuals to hold assets in particular tax-favoured forms (especially owner occupied housing) and until certain tax-favoured points in life (especially death). This affects the choices individuals make about when and how to invest, with potential consequences for efficiency and productivity.

Recent research has found that reduced rates of CGT like those described above lead company owner-managers to retain substantial profits in their firm with no evidence this increases business investment (Miller *et al*., 2024). In other words, the effect of such reduced rates is to induce income shifting on the part of company owner-managers, substantially reducing the revenue raised in tax from this group. This suggests reduced rates of CGT may have important consequences for the distribution of income (and wealth), by encouraging individuals to realise income as capital gains rather than dividends or labour income.

Such effects are exacerbated by the exclusion of both realised and accrued capital gains from typical measures of income inequality and redistribution like those considered in Section II. This is particularly as capital gains are disproportionately concentrated among older, higher income individuals (e.g. Delestre *et al*., 2024; Zidar, 2024; Sarin *et al*., 2022), with international research showing that accounting for these can make a substantial difference to measures of income inequality (e.g. Moriguchi and Saez, 2008; Roine and Waldenström, 2012; Alvaredo *et al*., 2013; Advani and Summers, 2020).

However, we again know very little about the extent of these issues in Ireland, other than that a sizeable number of individuals make use of some CGT reliefs each year at what appears to be a substantial cost.[15] A key reason for this is that information on capital gains is not captured in SILC or the Household Finance and

[14] Disposals above certain lifetime thresholds result in 'marginal' rather than full relief from CGT, which limits CGT to half the difference between the sale or market price and the relevant lifetime threshold. For example, an individual who sold a business originally acquired or invested in for €100,000 to someone other than their child for €1,000,000 when aged 54 would pay CGT of €297,000 (33 per cent of €900,000). If they instead sold this business for the same price a year later when aged 55 and availed of (marginal) Retirement Relief, they would pay just €125,000; half the difference between the sales price and the relevant threshold of €750,000. A recently abandoned reform would have introduced a lifetime limit of €10,000,000 on (previously unrestricted) disposals to children when aged between 55 and 65.

[15] For example, statistics from the Revenue Commissioners (2024) show that there were 1,334 claims for Revised Entrepreneur relief in 2022 at an annual cost of €161.7 million (an average of €121,214 in CGT forgone per claimant). There were even more claims in 2022 for Retirement Relief (1,923), though no costing is available while neither a costing nor the number of claims is known for PPR relief.

Consumption Survey (HFCS), while little information on the distribution of capital gains is published by the Office of the Revenue Commissioners. Nor has administrative microdata on CGT returns yet been made available to researchers, meaning we have no credible evidence on the magnitude of responses to CGT rates or reliefs, and so what impact their design has on the distribution of income or wealth.[16]

Similarly, we have little evidence on how the design of Capital Acquisitions Tax (CAT) on gifts or inheritances affects the distribution of income and wealth. This tax is paid at a rate of 33 per cent on the value of inheritances or gifts received that exceed a lifetime threshold determined by the relationship between the person that receives the benefit (the beneficiary) and the person who gives it (the disponer).

As with CGT, there exist numerous reliefs from CAT that create strong incentives to hold wealth in certain forms if someone is considering bequeathing or gifting it to their children. CAT Business Relief and CAT Agricultural Relief both reduce the taxable value of eligible assets by 90 per cent. Combined with the parent-child (group A) lifetime allowance of €335,000, this means that a business or farm worth up to €3.35 million can be left or gifted by a parent to a child without giving rise to any CAT liability, with an effective rate of just 3.3 per cent on anything above that.[17]

There is some suggestive evidence that these reliefs affect the distribution of income.[18] Using data from the HFCS, Lawless and Lynch (2017) find that having received a gift or inheritance of a business or farm is associated with being 26 percentiles higher up the wealth distribution than someone with the same income and demographics who does not receive any gift or inheritance. This relationship is much stronger than for those who inherit money or their principle private residence, which is associated with being 7-8 percentiles higher up the wealth distribution.

Nevertheless, such evidence is merely suggestive and, as with CGT and taxes on labour income, we again know very little about the magnitude of responses to CAT by either beneficiaries or disponers.

[16] This is despite surge in CGT receipts following the halving of the rate from 40 per cent to 20 per cent in 1998, which is often cited as evidence that reducing rates of CGT will increase receipts (e.g. Family Business Network, 2022). Among other things, such claims fail to account for the (substantial) retiming of realisations in response to such a tax cut, as discussed in an US context by Sarin et al. (2022).

[17] Statistics from the Revenue Commissioners (2024) show that in 2023 there were 763 claims for Business Relief at a cost of €224 million (relief of €293,840 per claim on average) and 1,781 claims for Agricultural Relief at a cost of €246 million (relief of €138,462 per claim on average).

[18] The effect of inheritances on wealth inequality more generally is less clear. For example, Arrigoni *et al.* (2023) find that "inheritances and gifts contribute little to the overall distribution of wealth in Ireland" and "may actually have reduced overall wealth inequality over time, as their contribution to net wealth is higher for households in the middle of the wealth distribution than for households at the top".

4.3 Means-tested transfers

Just as taxes on labour or capital income have the potential to shape the distribution of pre-tax income, so too do means-tested transfers by changing the slope and shape of the budget set facing individuals. This can be through the tapering (withdrawal) of transfers against income (and/or assets), as well as through the imposition of (minimum or maximum) work requirements as a condition of eligibility for certain transfers.

Figure 8 provides an illustration of this potential, plotting the distribution of usual weekly hours of work for single women with and without children using data from the 2015-2019 EU-SILC. Those in the latter group may be entitled to an in-work transfer called Working Families Payment (WFP) – a means-tested payment for low-income employees with children – while those the former group are not. Claimants receive 60 per cent of the difference between their average net of tax weekly income and a threshold (that depends on family size) so long as they work at least 19 hours per week. Similar incentives have been shown to affect the distribution of hours worked in the UK (Blundell *et al*., 2000) and earnings in Germany (Haywood and Neumann, 2021).

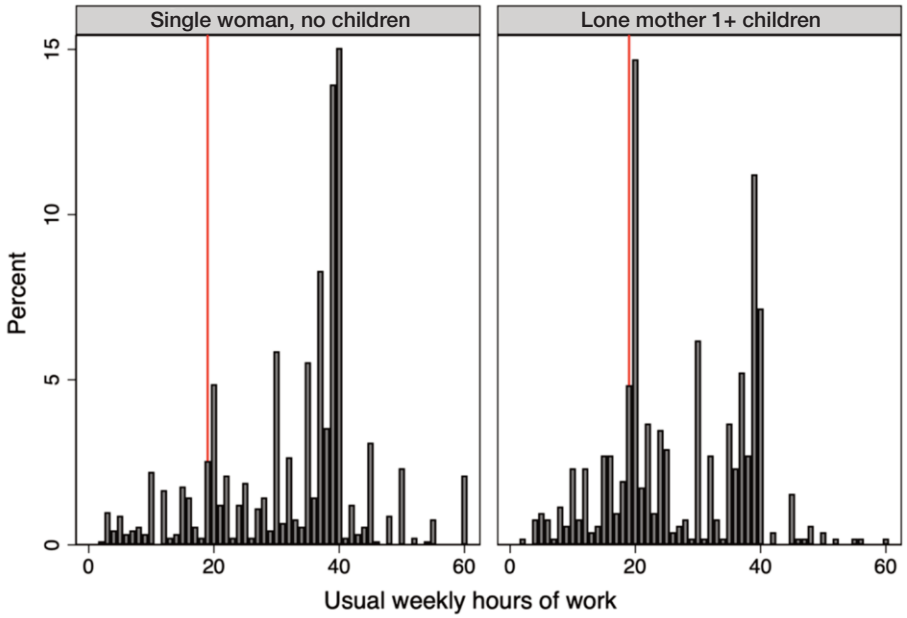
Figure 8 shows that the distribution of hours for single women with children exhibits much sharper bunching at 19 and 20 hours per week compared to 16, ten or even eight hours per week for single women without children. This suggests the design of the WFP affects the distribution of pre-tax earnings for lone parents, encouraging more than would otherwise to work at least (but little more than) 20 hours week.

While the incentives created by the WFP are strong, they are by no means an aberration. For example, to be eligible for the maximum full-time undergraduate student 'maintenance grant' of €7,586, claimants' household income must be no more than €26,200 where there are four or less dependent children in the household and the claimant lives 30 kilometres or more from their college or university. Going even one euro above this threshold can lead to a 43 per cent (€3,294) reduction in the amount of grant a student receives. This creates a strong incentive for parents of children anticipating attending higher education to keep their 'reckonable' income below this threshold, or one of the numerous others present in the system of student grants.[19]

Such discontinuous cliff-edges are also not an uncommon feature of non-cash transfers. The medical card, for example, is subject to a discontinuous means-test and withdrawn from those under age 70 whose income (less some deductions) exceeds a certain level per week that depends on family size, while similarly eligibility for social housing is limited to those with incomes below a maximum income limit. There also exist numerous non-cash benefits that are available only

[19] See https://www.susi.ie/eligibility-criteria/income/full-time-undergraduate-income-thresholds-and-grant-award-rates/ for details on the many discontinuous thresholds the student grant system contains.

Figure 8: Distribution of Usual Weekly Hours of Work for Women



Source: Author's calculations using data from the 2015-2019 EU Survey of Income and Living Conditions.
Note: Vertical red line indicates 19 hours per week.

(i.e. discontinuously) to those of a certain age: for example, the free travel pass for those aged over 65.

In addition to leading to some discontinuous cliff-edges, the operation of the Irish social welfare system can result in high effective marginal tax rates for some claimants, particularly those in receipt of multiple means-tested benefits (Doolan *et al*., 2022; Commission on Taxation and Welfare, 2022). For example, a lone parent with one child earning the minimum wage can face an effective marginal tax rate around 80 per cent when USC and PRSI are taken into account alongside the withdrawal of One Parent Family Payment and WFP; potentially higher if the claimant is also in local authority accommodation (and so paying income-related rents).

Cliff-edges and high effective marginal tax rates plausibly affect the distribution of pre-tax and transfer income by shaping the work (and human capital) decisions of individuals, particularly those at the bottom of the income distribution. Yet while there has been extensive research modelling financial work incentives for the Irish population,[20] there is far less research – particularly making use of modern

[20] Much of this research uses SWITCH, the longstanding tax and benefit microsimulation model developed at the Economic and Social Research Institute, described most recently by Keane *et al.* (2023) e.g.: Doorley *et al.* (2023); Doolan *et al.* (2022); Callan *et al.* (2016; 2012; 2011); and Savage *et al.* (2015).

empirical approaches and microdata – that has sought to estimate the effects these incentives have on individuals' choices.[21]

Such research is essential to assess the likely effects of proposals such as those of the recent Commission on Taxation and Welfare (2022) to reform the transfer system by smoothing out existing cliff-edges and high effective marginal tax rates. This proposal has the potential to improve the economic efficiency of the tax and transfer system for low-income households in addition to addressing the issues of horizontal equity that cliff-edges in particular give rise to. However, these gains must be set against the non-trivial administrative costs that welfare reform can generate, as the experience in Britain with the recent Universal Credit reform illustrates (Timmins, 2016).

This applies equally – if not more so – to the more radical reform of the transfer system that the introduction of a Universal Basic income would constitute. While often put forward as a solution to a whole array of issues with the existing system, a Universal Basic Income – if it is to be more than a relabelling of the existing system – would inevitably involve either redistributing away from households currently deemed to have additional needs (e.g. those with children) or come at an enormous fiscal cost; points made by Honohan (1994) and more recently by both Hoynes and Rothstein (2019) and Redmond *et al*. (2022).

This paper now concludes with a summary of the key points and some suggestions for future research on fiscal policy and redistribution in Ireland.

V CONCLUSION

This paper began by showing how there has been huge change in the size and shape of the Irish fiscal state over the 20th century. In addition to more-or-less doubling as a share of national income, there has been a substantial shift in the balance of taxation; away from consumption and property, towards personal and corporate income. Similarly, there has been a huge increase in the relative importance of expenditure on income transfers at the expense of subsidies, investment and debt interest.

Given they act to redistribute resources from those with higher to those with lower levels of incomes, such extensive taxation and transfers have important implications for the distribution of income. Differences between the pre- and post-tax and transfer Gini coefficients – also known as the Reynolds-Smolensky index of redistributive effect – suggest that net transfers (direct taxes less transfers) do more in Ireland than most other EU countries to reduce levels of income inequality, taking Ireland from among the most unequal countries to mid-table. While

[21] Notable recent exceptions include Redmond *et al.* (2022) – who examine the impact of a reduction in eligibility for one-parent family payment on labour market outcomes, and Doris et al. (2020) – who explore the effects of reductions in rates of jobseekers' payments on the unemployment duration of young adults.

comparable figures are not available for these countries over a prolonged period, estimates of the Reynolds-Smolensky index for Ireland suggest taxes and transfers do more to reduce income inequality now than in the 1980s and 1990s.

However, these measures of redistribution have many limitations, including their exclusion of indirect taxes like VAT and (admittedly conceptually trickier) in-kind transfers like public spending on healthcare. Perhaps most importantly, they also take as given the pre-tax and transfer distribution of income which economic theory and international empirical research tells us can respond – at times significantly – to the design of taxes and transfers.

Yet despite extensive research on the distribution of income and redistribution in Ireland, this paper has argued we still know very little about the extent to which our tax and welfare system actually affects the economic decisions individuals make. In addition to limiting our knowledge on important questions relating to the role of fiscal policy and the distribution of incomes, the lack of research on these topics means we know very little about the welfare costs of taxation given how centrally these depend on the responsiveness of economic behaviour to taxes and transfers.

In one sense, the limited research on the welfare costs of taxation in Ireland is nothing new, with neglect of "the deadweight losses associated with different forms of taxation in Ireland" lamented by Honohan and Irvine (1987). However, while Honohan and Irvine were writing at a time when the same might be said for almost any country outside of the United States and Britain, there has been an enormous growth in empirical public economics research exploring these questions – particularly in neighbouring European countries – over the decades since.

Why has the same not happened here, and can anything be done about it? Speaking to any researcher in the area, the prime culprit they will identify is the lack of access for researchers to Irish administrative data. Research in public economics has – like many other fields – become increasingly empirical, but also is increasingly associated with the use of administrative data (Kleven, 2018). This is in large part because such data provide the large, longitudinal samples – indeed, often populations – required for modern empirical approaches to yield credible results, particularly where the aim is to exploit some quasi-natural experiment affecting perhaps relatively small groups differentially (Card, 2022). The reasons given by the CSO (and other public bodies who hold potentially useful databases) for refusing such access range from resourcing constraints to the GDPR, issues which should be eminently solvable as they have been in other EU countries.

Another factor that might also have contributed to the present dissatisfactory situation is the limited sources of funding available to researchers interested in exploring these questions in an Irish context. Unlike, for example, in Britain, where the Economic and Social Research Council (ESRC) regularly posts calls for medium-to-large sized grants (e.g. "New Investigator Grants" of £100,000-£350,000), such calls are rare for the Irish Research Council. Instead, most funding

schemes are for much more modest amounts which go little way towards funding a PhD or post-doctoral position, let alone covering the costs of any ambitious, multi-year research agenda.

As a result of these and undoubtedly other factors, the number of researchers working on the effects of Irish fiscal policy has in recent times simply been too small. In the years following the lament of Honohan and Irvine (1987), the Foundation for Fiscal Studies commissioned and co-ordinated a series of research programmes on fiscal policy that encouraged "a diversity of researchers working on different ways of modelling economic (and political) behaviour" to "turn their minds to matters fiscal" and engage in research that is "a prerequisite for informed policy debate" (Honohan, 1995). Almost 30 years on, the need for such research continues, as perhaps does the need for some body (or bodies) to encourage and support it, be that through a renewed series of Foundation for Fiscal Studies research programmes or otherwise.

REFERENCES

Acheson, J., Stanley, B., Kennedy, S. and Morgenroth, E.L.W., 2018. *The Elasticity of Taxable Income*. Department of Finance: Dublin.

Adam, S., Phillips, D. and Smith, S., 2011. *A Retrospective Evaluation of the Elements of the VAT System: Full Report*. Brussels: European Commission.

Advani, A. and Summers, A., 2020. "Capital Gains and UK Inequality", CAGE Online Working Paper Series 465, Competitive Advantage in the Global Economy (CAGE).

Alvaredo, F., Atkinson, A.B., Piketty, T. and Saez, E., 2013. "The Top 1 Percent in International and Historical Perspective", *Journal of Economic Perspectives*, 27 (3): 3-20.

Arrigoni, S., Boyd, L. and McIndoe-Calder, T., 2023. "The Long and the Short of it: Inheritance and Wealth in Ireland", *Trinity Economics Papers* tep1223, Trinity College Dublin, Department of Economics.

Banks, J., Diamond, P. and Studies, I.F.F. (Eds.), 2010. "The Base for Direct Taxation", in *Dimensions of Tax Design: The Mirrlees Review* (pp. 548-648). Oxford University Press.

Barofsky, J. and Younger, S., 2022. "The Effect of Government Health Expenditure on the Income Distribution: A Comparison of Valuation Methods in Ghana" in Lustig, N. (Ed.). (2023). *Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality and Poverty* Vol. 2. Brookings Institution Press.

Barrett, A. and Wall, C., 2006. *The Distributional Impact of Ireland's Indirect Tax System*, Dublin: Combat Poverty Agency and the IPA.

Barrett, A., Callan, T., Doris, A., O'Neill, D., Russell, H., Sweetman, O. and McBride, J., 2000. *How Unequal? Men and Women in the Irish Labour Market*, General Research Series 176, Dublin: Oak Tree Press in association with the ESRI.

Bergin, A. and Kearney, I., 2007. "Human Capital Accumulation in an Open Labour Market: Ireland in the 1990s", *Economic Modelling*, 24 (2007) 839-858.

Bergin, A., FitzGerald, J. and Kearney, I., 2013. "The HERMES-13 Macroeconomic Model of the Irish Economy". ESRI Working Paper No. 460.

Bergin, A., Conroy, N., Garcia Rodriguez, A., Holland, D., McInerney, N., Morgenroth, E. and Smith, D., 2017. "COSMO: A new COre Structural MOdel for Ireland," Papers WP553, Economic and Social Research Institute (ESRI).

Blinder, A.S. and Rosen, H.S., 1985. "Notches", *The American Economic Review*, 75(4), 736-747.

Blundell, R. and MaCurdy, T., 1999. "Labor Supply: A Review of Alternative Approaches", *Handbook of Labor Economics*, 3, 1559-1695.

Blundell, R., Duncan, A., McCrae, J. and Meghir, C., 2000. "The Labour Market Impact of the Working Families' Tax Credit", *Fiscal studies*, *21*(1), 75-104.

Brewer, M., Etheridge, B. and O'Dea, C., 2017. "Why are Households that Report the Lowest Incomes So Well-off?", *The Economic Journal*, 127 (605), F24-F49.

Callan, T. and Doris, A., 1999. "Labour Supply Responses", Chapter 4 in *The Impact of the Minimum Wage in Ireland, Report for the Inter-Departmental Group on the Implementation of a National Minimum Wage*, Dublin: Stationery Office.

Callan, T. and Farrell, B., 1991. *Women's Participation in the Irish Labour Market*, NESC Report No. 91, Dublin: NESC.

Callan, T. and Soest, V., 1996. "Family Labour Supply and Taxes in Ireland", ESRI Working Paper 78, Dublin: The Economic and Social Research Institute.

Callan, T., Crilly, N., Keane, C. and Walsh, J., 2011. "Tax, Welfare and Work Incentives", *Budget Perspectives 2012*, Dublin: ESRI.

Callan, T., Keane, C., Savage, M., Timoney, K. and Walsh, J., 2012. "Work Incentives: New Evidence for Ireland", *Budget Perspectives 2013*, Dublin: ESRI.

Callan, T., O'Dea, C., Roantree, B. and Savage, M., 2016. "Financial Incentives to Work: Comparing Ireland and the UK", *Budget Perspectives 2017/2*, Dublin: ESRI.

Card, D., 2022. "Design-Based Research in Empirical Microeconomics", *American Economic Review*, 112 (6): 1773-81.

Chetty, R., 2012. "Bounds on Elasticities With Optimization Frictions: A Synthesis of Micro and Macro Evidence on Labor Supply", *Econometrica*, Econometric Society, Vol. 80(3), pp. 969-1018, May.

Chetty, R., Guren, A., Manoli, D. and Weber, A., 2011. "Are Micro and Macro Labor Supply Elasticities Consistent? A Review of Evidence on the Intensive and Extensive Margins", *American Economic Review Papers & Proceedings*, 101 (3): 471-75.

Coffey, C., Doorley, K., O'Toole, C. and Roantree, B., 2020. "The Effect of the COVID-19 Pandemic on Consumption and Indirect Tax in Ireland", *Budget Perspectives 2021* (3). Economic and Social Research Institute: Dublin.

Collins, M. and Turnbull, D., 2013. "Estimating the Direct and Indirect Tax Contributions of Households in Ireland". NERI Working Paper Series, 2018-08. Nevin Economic Research Institute, Dublin.

Commission on Taxation and Welfare, 2022. *Foundations for the Future: the report of the Commission on Taxation and Welfare*. Government of Ireland: Dublin.

Curtis J. and FitzGerald, J., 1996. "Real Wage Convergence in an Open Labour Market", *The Economic and Social Review*, Vol. 24, No. 4 pp. 321-340.

de Bruin, K. and Yakut, A.M., 2024. "Efficiency – Equity Trade-off in the Irish Carbon Tax: A CGE Investigation of Mixed Revenue Recycling Schemes", *Economic Modelling*, *134*, 106705.

Delestre, I., Kopczuk, W., Miller H. and Smith, K., 2024. "Top income Inequality and Tax Policy", *Oxford Open Economics*, Vol.3, Issue Supplement_1, 2024, pp. i1086–i1112, https://doi.org/10.1093/ooec/odad068.

Diamond, P.A. and Mirrlees, J.A., 1971. "Optimal Taxation and Public Production I: Production Efficiency", *The American Economic Review*, *61*(1), 8-27.

Doolan, M., Roantree, B. and Slaymaker, R., 2022. *Low Income Renters and Housing Supports*, ESRI Research Series 141, Dublin: ESRI.

Doorley, K., 2017. "Taxation, Work and Gender Equality in Ireland", *Journal of the Statistical and Social Inquiry Society of Ireland*, 2017-18, 47, 71-87.

Doorley, K., Duggan, L., Kakoulidou, T. and Roantree, B., 2024. "Equivalisation (once again)," Trinity Economics Papers tep0124, Trinity College Dublin, Department of Economics.

Doorley, K., Tuda, D., McTague, A. and Regan, M., 2023. "Childcare in Ireland: Usage, Affordability and Incentives to Work", *The Economic and Social Review*, 54(4, Winter), 247-283.

Doris, A., 2001. "The Changing Responsiveness of Labour Supply During the 1990s", *ESRI Quarterly Economic Commentary*, 12:68-82. Economic and Social Research Institute: Dublin.

Doris, A., O'Neill, D. and Sweetman, O., 2020. "Does Reducing Unemployment Benefits During a Recession Reduce Youth Unemployment? Evidence from a 50% Cut in Unemployment Assistance", *Journal of Human Resources*, 55 (3):902-925.

Enami, A., Lustig, N. and Aranda, R., 2023. "Analytic Foundations: Measuring the Redistributive Impact of Taxes and Transfers" in Lustig, N. (Ed.). (2023). *Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality And Poverty Volume 1*. Brookings Institution Press.

Family Business Network, 2022. "Submission to the Commission on Taxation and Welfare". FBN: Dublin. Available at https://assets.gov.ie/234131/1579e150-f570-4ad3-b5fc-f4666effa4ca.pdf.

Fitzgerald, J. and Kenny, S., 2018. "Managing a Century of Debt," Trinity Economics Papers tep0118, Trinity College Dublin, Department of Economics.

FitzGerald, J., 1999. "Wage Formation and the Labour Market", in: Barry, F. (eds) *Understanding Ireland's Economic Growth*. Palgrave Macmillan, London.

FitzGerald, J., forthcoming. "Seventy Years of Irish Fiscal Policy 1954-2024". Trinity Economics Papers.

Hargaden, E. and Roantree, B., 2019. *Does Statutory Incidence Matter?: Earnings Responses to Social Security Contributions*. University of Oxford, Saïd Business School, Centre for Business Taxation.

Haywood, L. and Neumann, M., 2021. "Equilibrium Effects of Tax Exemptions for Low Pay," *Labour Economics*, Elsevier, Vol. 69(C).

Honohan, P., 1994. "Basic Income as a Reform of Tax and Social Welfare", Note for the *National Economic and Social Forum.*

Honohan, P., 1995. *Assisting the Process of Tax Reform*. Foundation for Fiscal Studies Available at http://homepage.eircom.net/~phonohan/ffs.pdf.

Honohan, P., 1999. "Fiscal Adjustment and Disinflation in Ireland: Setting the Macro Basis of Economic Recovery and Expansion", in: Barry, F. (eds) *Understanding Ireland's Economic Growth*. Palgrave Macmillan, London.

Honohan, P. and Walsh, B., 2002. "Catching Up with the Leaders: The Irish Hare", *Brookings Papers on Economic Activity*, 33, issue 1, p. 1-78.

Honohan, P. and Ó Gráda, C., 1998. "The Irish Macroeconomic Crisis of 1955-56: How Much Was Due to Monetary Policy?", *Irish Economic and Social History*, Vol. 25(1), pp. 52-80, August.

Honohan, P. and Irvine, I., 1987. "The Marginal Social Cost of Taxation in Ireland", *The Economic and Social Review*, 19(1): 15-41.

Hoynes, H. and Rothstein, J., 2019. "Universal Basic Income in the United States and Advanced Countries", *Annual Review of Economics*, *11*(1), 929-958.

Kakoulidou, T. and Roantree, B., 2021. "Options for Raising Tax Revenue in Ireland", ESRI *Budget Perspectives 2022* paper 1. Economic and Social Research Institute, Dublin.

Keane, C., Doorley, K., Kakoulidou, T. and O'Malley, S., 2023. "SWITCH: A Tax-Benefit Model for Ireland Linked to Survey and Register Data", *International Journal of Microsimulation*; 16(1); 65-88.

Keane, M.P., 2011. "Labor Supply and Taxes: A Survey", *Journal of Economic Literature*, 49(4), 961-1075.

Keane, M. and Rogerson, R., 2012. "Micro and Macro Labor Supply Elasticities: A Reassessment of Conventional Wisdom", *Journal of Economic Literature*, 50 (2): 464-76.

Kleven, H., 2018. *Language Trends in Public Economics.* Presentation available at https://www.henrikkleven.com/uploads/3/7/3/1/37310663/languagetrends_slides_kleven.pdf (accessed 9/9/2024).

Kleven, H., Kreiner, C.T., Larsen, K. and Søgaard, J.E., 2023. *Micro vs Macro Labor Supply Elasticities: The Role of Dynamic Returns to Effort* (No. w31549). National Bureau of Economic Research.

Kleven, H.J., 2014. "How Can Scandinavians Tax So Much?", *Journal of Economic Perspectives*, 28 (4): 77-98.

Kleven, H., Landais, C., Muñoz, M. and Stantcheva, S., 2020. "Taxation and Migration: Evidence and Policy Implications", *Journal of Economic Perspectives*, 34 (2): 119-42.

Lawless, M. and Lynch, D., 2017. "Gifts and Inheritances in Ireland". ESRI WP579, December 2017.

Leahy, E., Lyons, S. and Tol, R.S. (2011). "The Distributional Effects of Value Added Tax in Ireland", *The Economic and Social Review*, 42(2), 213.

Levell, P., Roantree, B. and Shaw, J., 2021. "Mobility and the Lifetime Distributional Impact of Tax and Transfer Reforms", *Int Tax Public Finance* 28, 751-793.

Lindert, P.H., 2004. *Growing Public: Social Spending and Economic Growth since the Eighteenth Century.* Cambridge: Cambridge University Press.

Lustig, N. (Ed.), 2023. *Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality and Poverty*. Brookings Institution Press.

Madden, D., 1989. "Indirect Tax-reform in Ireland", *The Economic and Social Review*, 21(1): 27-47.

Madden, D., 1993. "A New Set of Consumer Demand Estimates for Ireland", *The Economic and Social Review*, 24(2):101-123.

Madden, D., 1995. "An Analysis of Indirect Tax Reform In Ireland in the 1980s", *Fiscal Studies*, *16*(1), 18-37.

Madden, D., 1997. "Conditional Demands and Marginal Tax Reform", *Oxford Bulletin of Economics and Statistics*, 59(2), 237-255.

Madden, D., 2007. "Tobacco Taxes and Starting and Quitting Smoking: Does the Effect Differ by Education?", *Applied Economics*, *39*(5), 613-627.

Meghir, C. and D. Phillips, 2010. "Labour Supply and Taxes", *Dimensions of Tax Design: The Mirrlees Review*, 202-74.

Miller, H., T. Pope and K. Smith, 2024. "Intertemporal Income Shifting and the Taxation of Business Owner-Managers", *The Review of Economics and Statistics* 2024; 106 (1): 184-201.

Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Jonson, P., Myles, G. and Poterba, J., 2011. *Tax by Design: The Mirrlees review*. Oxford University Press: Oxford.

Moriguchi, C. and Saez, E., 2008. "The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics", *The Review of Economics and Statistics*; 90 (4): 713-734.

Müllbacher, S., Hyee, R., Bettendorf, L., Rojas-Romagosa, H., Veenendaal, P., Baldini, M. and M. and Adam, S., 2013. *A Study on the Economic Effects of the current VAT Rates Structure: Final Report*; Study on behalf of the European Commission, TAXUD; in consortium with CAPP, CASE, DEPII, ETLA, IFO, IFS.

NESC, 2020. *The Position of the Self-Employed*. Background Paper (151/2). National Economic and Social Council: Dublin.

Nolan, B. and Maître, B., 2021. "Does Household Worklessness Explain Ireland's High Working-Age Market Income Inequality?", *The Economic and Social Review*, 52(4, Winter), 357-374.

Nolan, B. and Roantree, B., 2023. *Inclusive Growth: the Irish Exception? Paper presented at the Tenth Meeting of the Society for the Study of Economic Inequality*, Aix-en-Provence.

O'Hagan, J.W., 1995. "National Museums: To Charge or Not to Charge?", *Journal of Cultural Economics*, *19*(1), 33-47.

O'Dea, C. and Preston, I., 2012. "The Distributional Impact Of Public Spending in the UK". IFS Working Paper No. W12/06. Institute for Fiscal Studies, London.

Peterman, W.B., 2016. "Reconciling Micro and Macro Estimates of the Frisch Labor Supply Elasticity", *Economic inquiry*, 54(1), 100-120.

Petrov, I., Ryan, L. and Monaca, S.L., 2019. "Vehicle Tax Design and Car Purchase Choices: A Case Study of Ireland", *Eceee Summer Study Proceedings*, 2019-June, 1069-1078.

Redmond, P., McGuinness, S. and Ciprikis, K., 2022. *A Universal Basic Income for Ireland: Lessons from the International Literature*, ESRI Research Series 146, Dublin: ESRI, https://doi.org/10.26504/rs146.

Redmond, P., McGuinness, S. and Keane, C., 2022. "The Impact of One-Parent Family Payment Reforms on the Labour Market Outcomes of Lone Parents", *Oxford Economic Papers*, https://doi.org/10.1093/oep/gpac029.

Revenue Commissioners, 2024. *Cost of Tax Expenditures: 01/08/2024*. Office of the Revenue Commissioners, Dublin.

Roantree, B., 2020. "Understanding Income Inequality in Ireland", *Journal of the Statistical and Social Inquiry Society of Ireland*, 49, 43.

Roantree, B. and Barrett, M., 2024. "Income Inequality in Ireland, 1987-2019", *Fiscal Studies*: Vol. 45, Issue 2.

Roantree, B. and Shaw, J., 2018. "What a Difference a Day Makes: Inequality and the Tax and Benefit System from a Long-run Perspective", *J Econ Inequal* 16, 23-40 (2018). https://doi.org/10.1007/s10888-017-9362-x.

Roantree, B., Maître, B., McTague, A. and Privalko, I., 2021. *Poverty, Income Inequality and Living Standards in Ireland: First Annual Report.* Economic and Social Research Institute and Community Foundation for Ireland, Dublin.

Roine, J. and Waldenström, D., 2012. "On the Role of Capital Gains in Swedish Income Inequality", *Review of Income and Wealth*, 58, 569-587.

Saez, E., Slemrod, J. and Giertz, S.H., 2012. "The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review", *Journal of Economic Literature*, 50 (1): 3-50.

Sarin, N., Summers, L., Zidar, O. and Zwick, E., 2022. "Rethinking How We Score Capital Gains Tax Reform", *Tax Policy and the Economy*, *36*(1), 1-33.

Savage, M., 2016. "Indirect Tax Reform and the Specification of Demand: the Case of Ireland", *International Tax and Public Finance*, Vol. 23, No. 2, April, 2016, pp. 368-399.

Savage, M., Colgan, B., Callan, T. and Walsh, J., 2015. "Making Work Pay More: Recent Initiatives", *Budget Perspectives 2016/2*, Dublin: ESRI.

Tazhitdinova, A., 2020. "Do Only Tax Incentives Matter? Labor Supply and Demand Responses to an Unusually Large and Salient Tax Break", *Journal of Public Economics*, Elsevier, Vol. 184(C).

Thewissen, S., Kenworthy, L., Nolan, B., Roser, M. and Smeeding, T., 2018. "Rising Income Inequality and Living Standards in OECD Countries: How Does the Middle Fare?", *Journal of Income Distribution*, 27 (2), 1-23.

Thomas, A., 2022. "Reassessing the Regressivity of the VAT", *Fiscal Studies*, *43*(1), 23-38.

Timmins, N., 2016. *Universal Credit: From Disaster to Recovery?* Institute for Government: London.

Tovar Reaños, M.A. and Lynch, M.Á., 2022. "Measuring Carbon Tax Incidence Using a Fully Flexible Demand System. Vertical and Horizontal Effects Using Irish Data", *Energy Policy*, 160, 112682.

Weizsäcker, C.C.V., 1978. "Annual Income, Lifetime Income and Other Income Concepts in Measuring Income Distribution", in: Kelle, W.H., Shorrocks, A.F. (eds.) *Personal Income Distribution*, pp. 101-5. North-Holland, Amsterdam.

Zidar, O., 2024. "Discussion of Top Incomes and Tax Policy", *Oxford Open Economics*, Vol. 3, Issue Supplement_1, 2024, Pages i1133-i1138.

APPENDIX

Table A.1: Income Inequality and Redistribution, 2019

Country	*Pre-tax & transfer Gini*	*Post-tax & transfer Gini*	*Reynolds-Smolensky*	*Kakwani*	*Suits progressivity index*	*Musgrave-Thin redistributive effect*	*Atkinson-Plotnick horizontal inequity*
BG	0.536	0.408	0.128	–9.367	–7.985	1.275	0.037
RO	0.525	0.345	0.180	1.175	1.025	1.380	0.104
EL	0.523	0.308	0.215	3.118	2.819	1.450	0.163
IE	0.522	0.281	0.241	12.788	12.265	1.503	0.091
PT	0.520	0.317	0.203	–93.422	–84.927	1.424	0.168
ES	0.512	0.326	0.186	–3.107	–2.864	1.382	0.135
IT	0.512	0.328	0.184	–6.758	–6.253	1.377	0.160
FI	0.507	0.262	0.246	–9.725	–9.081	1.499	0.083
FR	0.505	0.292	0.213	–4.972	–4.533	1.431	0.129
LT	0.505	0.354	0.151	–2.620	–2.396	1.305	0.037
AT	0.501	0.276	0.225	–106.125	–97.180	1.451	0.136
LU	0.496	0.323	0.174	10.032	8.789	1.345	0.189
RS	0.496	0.333	0.163	3.221	2.910	1.323	0.134
BE	0.494	0.251	0.244	9.917	9.428	1.481	0.117
DE	0.494	0.287	0.207	2.995	2.777	1.409	0.118
LV	0.488	0.350	0.138	42.759	40.843	1.269	0.038
SE	0.480	0.271	0.209	8.251	7.863	1.402	0.079
HR	0.477	0.291	0.186	11.965	11.231	1.356	0.077
HU	0.464	0.280	0.185	–15.353	–13.452	1.345	0.106
PL	0.464	0.284	0.180	–15.009	–13.642	1.337	0.086
NL	0.463	0.264	0.199	1.893	1.730	1.370	0.083
NO	0.455	0.253	0.202	6.192	5.771	1.370	0.091
DK	0.453	0.265	0.188	1.037	0.954	1.344	0.061
CY	0.449	0.311	0.137	–2.251	–2.006	1.249	0.103
SI	0.448	0.238	0.210	13.023	12.223	1.380	0.098
CH	0.445	0.306	0.139	1.140	1.004	1.251	0.078
EE	0.444	0.301	0.143	–1.778	–1.669	1.256	0.033
MT	0.438	0.280	0.158	12.943	11.898	1.281	0.047
CZ	0.430	0.240	0.190	–20.586	–18.912	1.334	0.052
SK	0.388	0.228	0.161	–63.176	–59.049	1.263	0.095

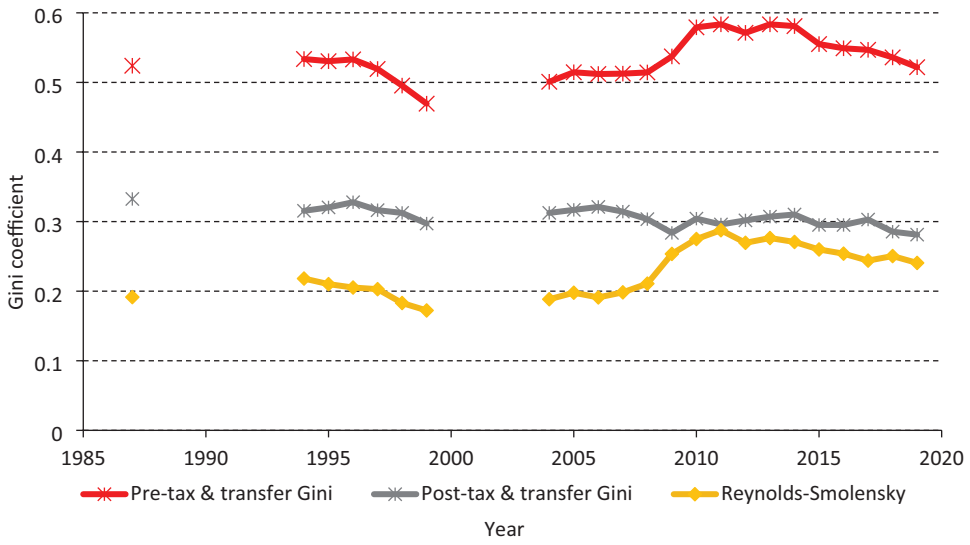
Source: Author's calculations using 2019 EU-SILC microdata.
Note: Incomes equivalised using modified OECD equivalence scale, and countries ranked highest-to-lowest according to pre-tax and transfer income. Includes only those aged 25-55.

Table A.2: Working Age Income Inequality and Redistribution, 2019

Country	*Pre-tax & transfer Gini*	*Post-tax & transfer Gini*	*Reynolds-Smolensky*	*Kakwani*	*Suits progressivity index*	*Musgrave-Thin redistributive effect*	*Atkinson-Plotnick horizontal inequity*
BG	0.453	0.410	0.043	0.530	0.436	1.079	0.017
IE	0.435	0.266	0.168	1.046	1.038	1.298	0.046
ES	0.425	0.323	0.102	1.831	1.805	1.177	0.056
RS	0.417	0.334	0.083	0.444	0.431	1.142	0.056
EL	0.415	0.315	0.100	0.402	0.385	1.171	0.066
LT	0.414	0.349	0.065	1.314	1.233	1.110	0.017
IT	0.407	0.319	0.089	0.720	0.728	1.149	0.063
RO	0.406	0.339	0.067	0.193	0.187	1.112	0.031
PT	0.401	0.298	0.104	0.545	0.537	1.174	0.047
LU	0.400	0.327	0.073	0.337	0.307	1.122	0.057
LV	0.400	0.329	0.071	0.675	0.673	1.119	0.024
AT	0.381	0.268	0.112	0.589	0.575	1.181	0.042
PL	0.379	0.289	0.090	0.735	0.690	1.144	0.040
SE	0.377	0.270	0.106	0.520	0.512	1.171	0.019
HR	0.376	0.278	0.098	0.667	0.660	1.157	0.035
FI	0.375	0.250	0.125	0.706	0.672	1.200	0.024
BE	0.366	0.233	0.133	0.600	0.588	1.211	0.046
DE	0.366	0.282	0.084	0.331	0.315	1.132	0.050
FR	0.362	0.263	0.099	0.642	0.605	1.155	0.033
CY	0.361	0.298	0.063	3.438	3.266	1.099	0.057
HU	0.353	0.291	0.062	0.438	0.390	1.095	0.039
NO	0.352	0.240	0.112	0.640	0.611	1.173	0.038
NL	0.348	0.253	0.095	0.329	0.318	1.145	0.024
EE	0.345	0.285	0.060	3.092	2.936	1.092	0.023
DK	0.341	0.242	0.099	0.289	0.279	1.150	0.019
CH	0.337	0.288	0.048	0.194	0.174	1.073	0.028
SI	0.330	0.230	0.100	0.550	0.536	1.150	0.040
CZ	0.304	0.231	0.073	0.521	0.490	1.105	0.027
SK	0.294	0.224	0.070	0.631	0.608	1.098	0.054

Source: Author's calculations using 2019 EU-SILC microdata.
Note: Incomes equivalised using modified OECD equivalence scale, and countries ranked highest-to-lowest according to pre-tax and transfer income. Includes only those aged 25-55.

Figure A.1: Working Age Income Inequality and Redistribution, Ireland



Source: Author's calculations using EU-SILC microdata (2004-2019), the Living in Ireland Survey (1994-1999) and the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services.
Note: Incomes equivalised using modified OECD equivalence scale.

The Economic and Social Review, Vol. 56, No. 1 Spring 2025, pp. 3-29

POLICY PAPER: FISCAL POLICY

Fiscal Policy and Redistribution in Ireland

Barra Roantree
Trinity College Dublin

Abstract: This paper explores the role fiscal policy plays in shaping the distribution of resources through the tax and transfer system in Ireland. It first shows that there has been a shift towards taxes on income and towards expenditure on income transfers as the size of government has increased. This has implications for the amount of redistribution, which appears relatively high compared to other European countries and has risen over the last three decades. However, the tax and transfer system can also shape the distribution of income through the effects it has on the behaviour of individuals, households and firms. Despite an explosion of international research on these effects in recent decades, we have little credible empirical evidence on the magnitude of these effects in Ireland, in large part due to the lack of access for researchers to administrative data.

Acknowledgements: Thanks to Patrick Honohan, Philip Lane, John FitzGerald, and Cormac O'Dea for suggestions and comments on some of the ideas discussed in this paper, which uses microdata data from the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services, the 1994-1999 Living in Ireland Survey, and the 2004-2019 EU Survey on Income and Living Conditions (https://doi.org/10.2907/EUSILC2004-2021_V.2). The author is solely responsible for the content and the views expressed.

Corresponding author: barra.roantree@tcd.ie.

I INTRODUCTION

A clear message that emerges from the work of Patrick Honohan over the past five decades is the import role fiscal policy has played in Ireland. For example, Honohan and Ó Gráda (1998) point to the role "heavy supplementary import duties on a range of finished and semi-finished consumer goods" introduced in March 1956 had in exacerbating a crisis triggered by a misguided suppression of interest

rates the previous year. Honohan (1999) described how "excessive fiscal expansion brought the state close to the point where partial default might have been considered" before a belated "successful fiscal correction, supported by a political and social consensus, injected a crucial element of long-term confidence about the direction of policy". Lastly, Honohan and Walsh (2002) identify income tax rate reductions in the 1990s as "part and parcel of the fiscal normalization" which contributed – alongside an array of other factors – to help unleash the Irish hare; a far superior metaphor to the more widely touted (and as the authors note, zoologically improbable) "Celtic Tiger".

This paper explores one particular aspect of fiscal policy: the role it plays in shaping the distribution of resources through the tax and transfer system. It begins by outlining the changing size and shape of the Irish fiscal state since independence, as captured by the level and composition of tax revenues and public expenditure. It then proceeds to consider the role of tax and government transfers in shaping the distribution of resources: first – in Section III – in terms of the somewhat mechanical role the tax and transfer system plays in redistributing income from rich to poor, and then – in Section IV – more broadly through the effects the tax and transfer system have on economic behaviour. The paper then concludes in Section V with a summary and some suggestions for future research on fiscal policy and redistribution in Ireland.

II TAXATION AND SPENDING IN IRELAND

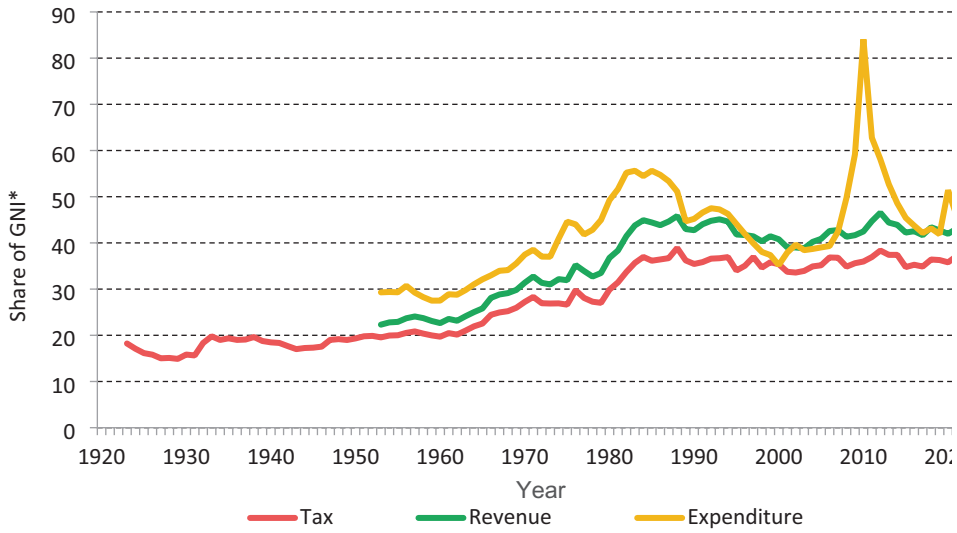
Like other European and advanced economies (Lindert, 2004), there has been an enormous change in the size and shape of the Irish fiscal state over the 20th century. Figure 1 plots the evolution of taxation along with broader measures of government revenue and expenditure as a share of economic activity from 1923 (for taxation) and 1953 (for government revenue and expenditure), drawing on data assembled by FitzGerald (forthcoming) and FitzGerald and Kenny (2018).

This shows that for the first four decades of independence, the Government raised no more than a fifth of economic activity in tax. This share increased to almost 30 per cent over the 1960s, hovering around that level for a decade before increasing again to just over 35 per cent over the 1980s, a level it has fluctuated around since.

Figure 1 also shows that the evolution of broader government revenue and expenditure follow a similar pattern, rising particularly rapidly over the 1960s and 1980s. However, both measures peak at a higher level, in part reflecting the fact that government revenue encompasses sources of income other than taxes (e.g. local government rents and the profits of commercial semi-states).

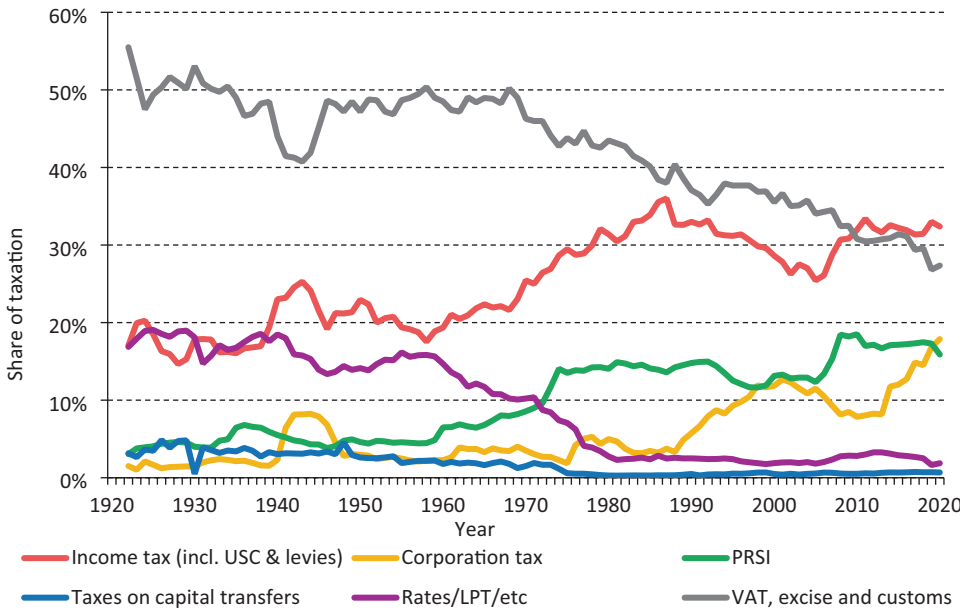
In addition, the expansion of government expenditure was more sustained than revenue through the 1970s. This led to a large deficit opening over this time, which

Figure 1: Taxation, Revenue and Government Expenditure as % GNI*



Source: FitzGerald and Kenny (2018); FitzGerald (forthcoming).
Note: 2010 spike in expenditure as a share of GNI* reflects cost of recapitalising Irish banks.

Figure 2: Composition of Tax Revenue

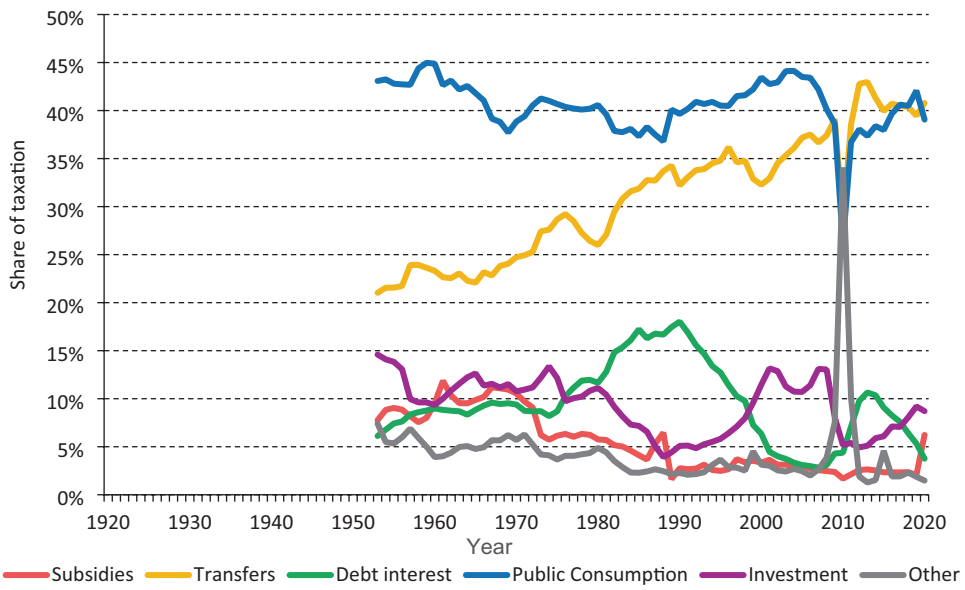


Source: FitzGerald and Kenny (2018); FitzGerald (forthcoming).

was eventually closed with the fiscal consolidation of the late 1980s (Honohan, 1999). While government revenues exceeded expenditure briefly during the late 1990s and early 2000s, generating a short-lived surplus, the onset of the economic crisis saw a much larger – if even more short-lived – deficit open up as revenues initially declined and expenditure (including the costs of recapitalising Ireland's banks) surged. This deficit was again closed through a (painful) fiscal consolidation, before opening up again in a more temporary and unusual form with the COVID-19 pandemic in 2020.

As well as increasing in scale, the composition of both taxation and expenditure has changed dramatically over time. Figure 2 shows that over the past century the balance of taxation has shifted away from taxes on consumption (VAT, excise and customs) and property (Rates/LPT/etc), and towards taxes on income (income tax, PRSI and corporation tax). Indeed, while a similar share of tax receipts was raised in taxes on property as from income tax over the first two decades of independence, the former has fallen to a trivially small 2 per cent of receipts while the latter has risen to a third. With the decline in the importance of VAT, excise and customs, this means that taxes on labour income now make up the single largest source of tax receipts: by some distance if one also includes PRSI receipts, which – given the extremely weak link between contributions and benefits – are in effect just a supplementary tax on income.

Figure 3: Composition of Government Expenditure



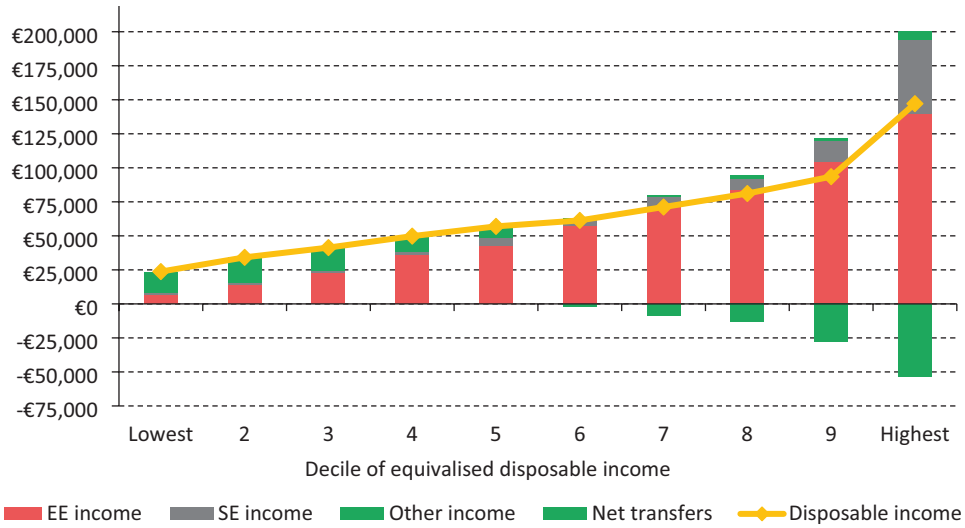
Source: FitzGerald and Kenny (2018); FitzGerald (forthcoming).
Note: 2010 spike in 'other' and dip in 'public consumption' expenditure as a share of total Government expenditure reflects cost of recapitalising Irish banks.

Figure 3 shows (over a shorter horizon) that there has also been a shift in the composition of government expenditure towards transfers. These have increased from just 22 per cent of expenditure in 1953 to about 40 per cent in recent years. The rise in the relative importance of transfers appears to have come at the expense of subsidies, debt interest, and – with the short-lived exception of the 2000s – government investment.

III DIRECT REDISTRIBUTION

A key function of taxes and transfers is to redistribute resources, generally (but not always) from those with higher to those with lower levels of incomes. This is illustrated in Figure 4, which uses data from the 2019 EU Survey of Income and Living Conditions (EU-SILC) to plot the composition of income across each decile (or tenth) of the income distribution, equivalised (or adjusted) for household size.[1]

Figure 4: Composition of Income, by Decile of Equivalised Income



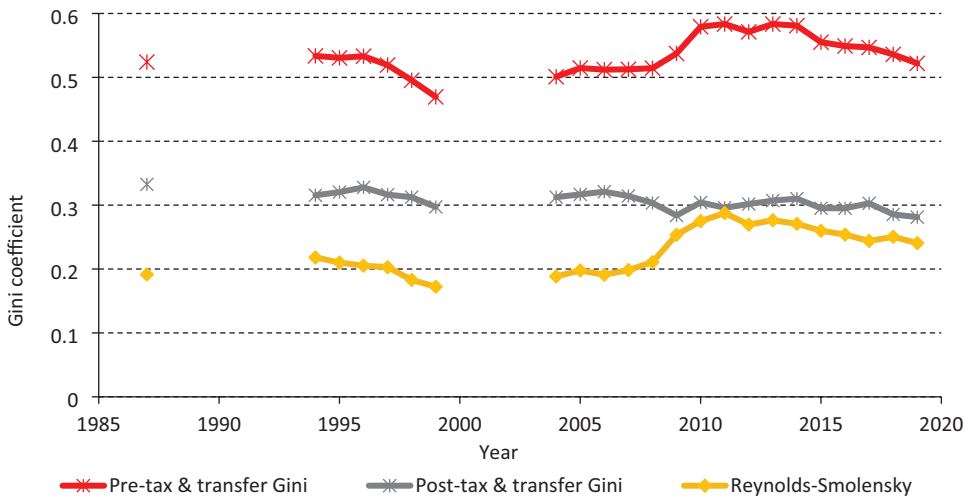
Source: Author's calculations using 2019 EU-SILC microdata.
Note: Deciles based on incomes adjusted for household size and composition using the modified OECD equivalence scales, but income components unequivalised, shown in 2022 prices.

[1] We use the modified OECD equivalence scale 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. This is consistent with the approach of Eurostat – among others – but differs from that of the CSO in official statistics whish used equivalence scales of 1, 0.33 and 0.66 respectively. For what difference this makes to measures of income inequality and poverty, see Doorley *et al*. (2024).

The bars in Figure 4 show the average income from employment, self-employment and other sources (e.g. rental income, dividends) along with net transfers: cash transfers received from government less direct taxes paid to the government.[2] The overlaid connected line shows average annual disposable income – the sum of these four components – which ranges from €23,732 for the lowest income decile to €147,150 for the highest income decile (in 2022 prices, uprated using the CPI).

The bars show that employment income – the red bars – is the most important source of income for deciles 3-10, and that net transfers – the dark green bars – are the most important for those in the lowest two income deciles at €15,386 and €18,570 respectively. While net transfers are on average positive for those in the bottom half of the distribution, they are negative for those in the top half of the distribution, peaking at an average of €53,140 for those in the very highest income decile. This illustrates the extent to which the tax and transfer system redistributes from those with higher to those with lower incomes, at least on average and – for now – assuming the system does not itself affect the distribution of pre-tax and transfer income.

Figure 5: Income Inequality and Redistribution in Ireland, 1987-2019



Source: Author's calculations using the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services, the Living in Ireland Survey (1994-1999) and EU-SILC RMF microdata (2004-2019).
Note: Incomes adjusted for household size and composition using the modified OECD equivalence scales.

[2] SILC does not collect information on certain taxes, most notably those on expenditure (e.g. VAT, customs and excise duties) and capital gains (e.g. CGT for Ireland).

One important effect of this redistribution is to reduce income inequality. Figure 5 illustrates this going back to 1987, the earliest that available microdata allow.[3] The first two series plot 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) – for pre-tax and transfer income and disposable (aka post-tax and transfer) income respectively. The red series shows that the Gini coefficient for pre-tax and transfer income has mostly fluctuated between 0.50 and 0.55, rising sharply over the course of the Great Recession and then falling as the economy recovered from 2014. The grey series shows that the Gini coefficient for post-tax and transfer (aka disposable) income is much lower, and has fallen from 0.33 to 0.28 over the 1987-2019 horizon covered by our data; a relatively rare experience among advanced economies (Thewissen *et al*., 2018), some reasons for which are explored by Nolan and Roantree (2023) and Roantree and Barrett (2024).

The third (yellow) series in Figure 5 plots the difference between the pre- and post-tax and transfer Gini coefficients. This is often called the Reynolds-Smolensky index, and can be thought of as providing a measure of the amount of redistribution carried out by the tax and transfer system (Enami *et al*., 2023). Between 1987 and 2007 this index fluctuated around 0.20, before rising sharply over the course of the financial crisis, peaking at 0.29 in 2011.

This increase in redistribution reflects both the rise in unemployment over this period (which increased pre-tax and transfer income inequality) and the related increase in transfers (which acted to reduce post-tax and transfer income inequality). As the economy has recovered, this rise in unemployment and transfers has unwound, leaving the Reynolds-Smolensky index lower – at 0.24 in 2019 – albeit at a higher level than before the crisis. This suggests that some combination of policy reforms and changes to the distribution of pre-tax and transfer income have acted to increase the amount of redistribution performed by the tax and transfer system.

How do these measures of income inequality and redistribution compare to those for other countries? While harmonised data covering as long a horizon as considered above are quite limited, Figure 6 plots Gini coefficients and the Reynolds-Smolensky index for all countries who participated in the 2019 EU-SILC, ordered highest-to-lowest in terms of their pre-tax and transfer income Gini. These show that of the 30 countries for which we have data (the EU27, Norway, Switzerland and Serbia), Ireland ranked 4th highest in terms of pre-tax and transfer income inequality, behind only Bulgaria, Romania and Greece.[4]

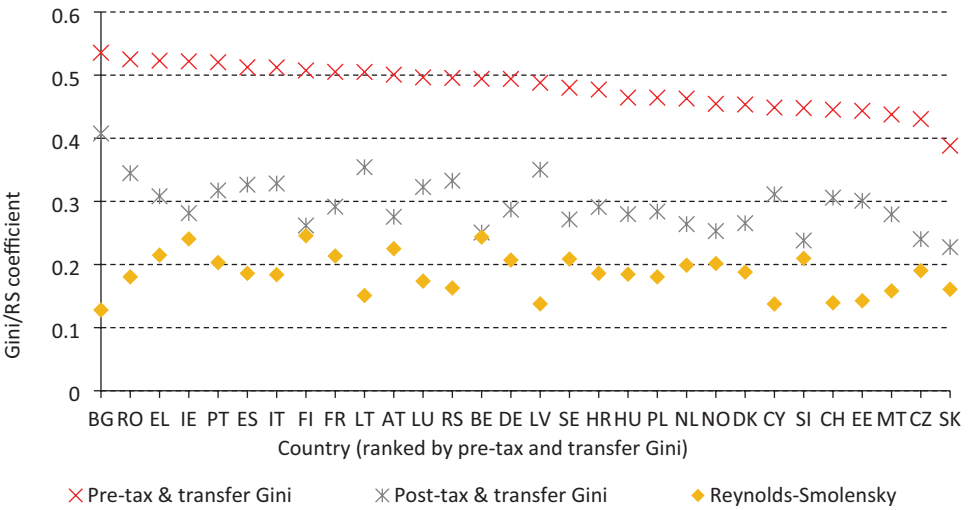
[3] Here we again use data from the EU-SILC along with its predecessors: the Living in Ireland Survey (1994-1999) and the the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services which have been harmonised by Roantree *et al.* (2021).

[4] Both Roantree (2020) and Nolan and Maître (2021) point to the role played by Ireland's relatively high share of working-age households with no income from employment or self-employment, though the latter also highlight the "relatively high levels of dispersion in earnings within one-earner and two-earner households".

Figure 6 also shows that Ireland ranks mid-table (13th of 30) in terms of its post-tax and transfer income Gini coefficient. At 0.28, this is slightly lower than Germany and France (15th and 17th respectively, with Ginis of 0.29) and slightly higher than Denmark and Sweden (8th and 9th respectively, with Ginis of 0.27).

The reason for this is that net transfers – the difference between these two measures of income inequality – do a lot to reduce income inequality in Ireland. This is illustrated by the Reynolds-Smolensky index which, at 0.24 for Ireland, is highest of the high pre-tax and transfer income inequality countries and third highest overall, behind only Belgium and Finland.[5] While sometimes put forward as evidence that Ireland's tax and transfer system is among the – if not the – most progressive of any EU or advanced economy, several factors complicate such an interpretation.

Figure 6: Income Inequality and Redistribution Across the EU, 2019



Source: Author's calculations using 2019 EU-SILC microdata.
Note: Incomes adjusted for household size and composition using the modified OECD equivalence scales.

Firstly, such measures of redistribution do not account for indirect taxes, notably VAT which comprised about a fifth of total tax revenue in 2021. Some research (e.g. Leahy *et al*., 2011; Barrett and Wall, 2006) argues that VAT in Ireland is regressive because it amounts to a greater proportion of income for lower- than for higher-income households. However, Mirrlees *et al*. (2011) – among others –

[5] As appendix Table A.2 shows, this pattern is even more pronounced if one looks only at the working-age population (those aged 25-55), for whom Ireland has the highest Reynolds-Smolensky index. Tables A.1 and A.2 also show that Ireland ranks highest in terms of the Musgrave-Thin index of redistributive effect and among the highest in terms of both the Kakwani index and Suits index of progressivity.

argue that assessing the distributional impact of indirect taxes by comparing them to incomes gives a misleading impression because such patterns are driven by some low-income households who spend more than their income and so pay a lot of VAT relative to their income.

But households cannot spend more than their income indefinitely, as over a lifetime income and expenditure must be equal, save for the bequests and the possibility of dying in debt. Rather, VAT looks large relative to income because of some households who are experiencing temporary periods of low income, but borrowing or drawing down savings to maintain levels of consumption closer to their longer-run level (Brewer *et al*., 2017).[6] A more accurate perception of the distributional impact of indirect taxes like VAT would ideally therefore assess this burden relative to longer-run or lifetime incomes, or failing that (given data limitations) current expenditures.

Indeed, Thomas (2022) finds VAT appears proportional or slightly progressive in most OECD countries – including Ireland – when assessed relative to expenditure. This is in part the result of the zero-rating of much expenditure on food which – as shown by Coffey *et al*. (2020) – makes up a disproportionate share of expenditure for lower income households. Nevertheless, VAT is less progressive than income tax because it does not contain a tax-free allowance (analogous to income tax credits), nor an initial tranche of expenditure subject to a reduced rate of tax (analogous to the standard rate band). As a result, accounting for indirect taxes like VAT would reduce estimates of how much redistribution the tax and transfer system carries out, but by less than is sometimes argued (e.g. Collins and Turnbull, 2013).

A second, related, issue with these measures of redistribution is that they are computed only at a particular point in time. Given individuals' circumstances vary substantially across the lifecycle and over time, it has long been recognised such measures may overstate the degree of interpersonal redistribution the tax and transfer carries out (e.g. Weizsäcker, 1978).

Indeed, Roantree and Shaw (2018) show that the Reynolds-Smolensky index in Britain falls by about a fifth as the income reference period for pre- and post-tax and transfer income is expanded from 1 to 18 years (the maximum possible using the British Household Panel Dataset they draw on). While the absence of comparable long-running, longitudinal data for Ireland means similar estimates are not currently available,[7] it is likely that longer-run measures of redistribution are lower than those displayed above (although to what extent is unclear).

[6] Such temporarily low incomes can arise for a variety of reasons including periods of study, unemployment, and time out of the labour market to raise children, as well as retirees drawing on past savings.

[7] Such estimates might soon be possible to construct using the *Growing Up in Ireland* data as more information on the earnings, taxes and transfers of the (1998) child cohort becomes available.

A third issue with these measures of redistribution is that they do not account for wider public spending, including expenditure on what might be considered in-kind transfers like health or education. Although data on the extent to which people with different levels of income differentially utilise public services does exist (or can be estimated),[8] the cost of provision can differ – substantially – from what we would really like to know to incorporate in-kind transfers to existing measures of redistribution: how much individuals value the service in cash terms. O'Dea and Preston (2012) argue – convincingly – in favour of valuing publicly provided private goods according to an equivalent cash transfer, though recognise the practical difficulties in implementation (especially in terms of data limitations). While well-developed approaches of this type exist (e.g. Barofsky and Younger, 2022), few have been applied to the provision of in-kind transfers in Ireland.

Lastly, such measures of redistribution take as given the distribution of pre-tax and transfer income. In other words, these measures account only for the mechanical impact of taxes and transfers, but not any effect that taxes and transfers have on the decisions of individuals, households and firms, which has the potential to shape the distribution of the pre-tax and transfer income we observe. It is to some of these fundamental questions – and the extent of our knowledge on these effects in Ireland – we now turn to.

IV TAXES, TRANSFERS and ECONOMIC BEHAVIOUR

4.1 Taxes on labour income and consumption

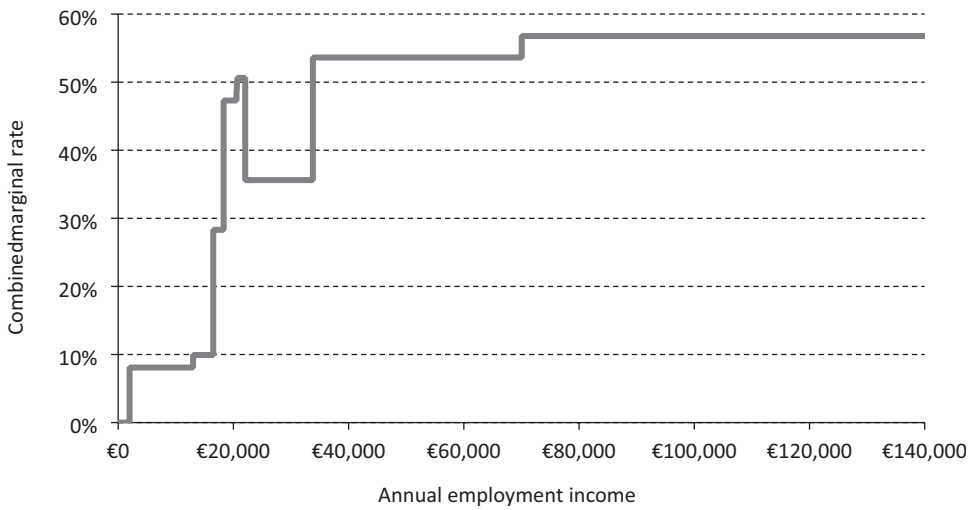
Section II showed that taxes on labour income now account for the largest source of tax receipts in Ireland. These taxes are disparate, encompassing income tax, Pay Related Social Insurance (PRSI) and the Universal Social Charge (USC).

While the tax unit and base for each differs somewhat[9] – with each defined by its own system of allowances, bands and rates – taken together they represent a progressive (in places a heavily progressive) tax schedule. This is shown in Figure 7, which plots the combined marginal rate of income tax, PRSI and USC on employment earnings for a single adult without children in 2021. This quickly rises from 0 per cent as employer PRSI is levied at a rate of 8.8 per cent on the entirety of earnings once they exceed €1,976 per year (€38 per week), representing a jump in the average tax rate or 'notch' in the tax schedule (Blinder and Rosen, 1985). It rises slightly as the USC begins to apply from €13,000 per year (again, with a

[8] For example, SWITCH – the ESRI tax and benefit microsimulation model – allows for the distributional impact of expanding access to medical or GP visit cards to be estimated (Keane *et al*., 2023), while O'Hagan (1995) considers the distributional implications of admission charges to national museums.

[9] For example, income tax is in-part levied on the annual joint income of married couples (unless they elect otherwise), while PRSI is levied on an individual per employment basis and USC an annual individual basis.

Figure 7: Tax Schedule on Employment Income for a Single Adult, 2021



Source: Author's calculations.
Notes: Assumes single adult of working-age with employment income only, paying class A PRSI. Ignores infinite marginal rates created by discrete jumps ('notches') in USC and PRSI schedules.

notched structure), before rising more sharply around €20,000 per year. This is as income tax credits are exhausted, and the 20 per cent rate of income tax applies to earnings above €16,500 per year while the 4 per cent rate of employee PRSI applies on earnings above €18,304 per year (€352 per week).

However, the combined marginal rate rises by more than 24 percentage points because of the way in which employee PRSI is levied, again with a notched structure but one which is partially offset with a credit. This PRSI credit is withdrawn at a rate of 1-in-6 (16.7 per cent) against taxable earnings in addition to income tax, PRSI and USC (whose marginal rate rises from 2 per cent to 4 per cent from €20,687 per year), giving rise to an effective marginal rate of around 50 per cent over a short range of income (from €18,304 to €22,048). While this combined marginal rate falls back down to 35.6 per cent, it quickly rises again to more than 50 per cent as the higher 40 per cent rate of income tax kicks in from €33,800 per year and then the 8 per cent rate of USC from €70,044 per year.

As well as being unnecessarily complicated, such a tax schedule clearly has the potential to affect the choices individuals make about whether, how much, and even how hard to work. In addition, given that no equivalent of employer PRSI applies to income from self-employment, the tax schedule also has the potential to influence the legal form through which this work takes place; an issue highlighted

by NESC (2020), Kakoulidou and Roantree (2021) and the Commission on Taxation and Welfare (2022) among others.

The extent to which the personal tax system affects taxpayers' choices – and so shapes the pre-tax distribution of income – depends crucially on the responsiveness of taxpayers to such incentives. While this question has been central to the field of public economics since its inception, with rapid methodological progress over recent decades giving rise to a voluminous international literature,[10] there has been relatively limited research using modern empirical methods and microdata in Ireland. Notable exceptions include Hargaden and Roantree (2019), Acheson *et al*. (2018) and Doorley (2017), who all find relatively modest responses to PRSI or income tax for most taxpayers. This contrasts somewhat with earlier empirical work using microdata (e.g. Doris, 2001; Barrett *et al*., 2000; Callan and Doris, 1999; Callan and Van Soest, 1996; and Callan and Farrell, 1991) which found a relatively high degree of responsiveness to taxes for women, but also that the degree of responsiveness had fallen over time.

It is more difficult to reconcile microdata-based estimates with the more extensive macro literature which finds or calibrates models so that labour supply is highly responsive to net-of-tax wages (e.g. Bergin *et al*., 2013; 2017; 2013; Bergin and Kearney, 2007; FitzGerald, 1999; Curtis and FitzGerald, 1996). While this issue of divergent macro and micro estimates is not unique to Ireland, with the reasons the subject of – at times heated – debate,[11] it is one of which perhaps there has been limited discussion of to date.

This means it is difficult to say with any certainty what effects the, in places, sharp (dis)incentives created by taxes on labour income have on the distribution of pre-tax income in Ireland. The more responsive – or elastic – taxpayers are to these incentives, the more these incentives will affect the distribution of pre-tax income. As Section V discusses, more research on this topic is therefore vital, not least given concerns about the growing potential for people – particularly those with very high incomes or working in especially mobile occupations – to respond to taxes by moving country; something on which there exists very little empirical evidence beyond small groups like superstar footballers or inventors (Kleven *et al*., 2020).

Empirical evidence about the effects of consumption taxes on economic behaviour in Ireland is also quite limited. A notable exception to this is carbon taxes, which have been the subject of extensive study from both a macroeconomic (e.g. de Bruin and Yakut, 2024) and a microeconomic perspective (e.g. Tovar Reaños and Lynch, 2022) over recent years. There has also been a series of papers by

[10] For an overview, see the surveys of Blundell and MaCurdy (1999), Meghir and Philips (2010), Keane (2011), Saez *et al*. (2012) and Kleven (2014).

[11] See, for example, Keane and Rogerson (2012), Chetty *et al*. (2011), Chetty (2012), Peterman (2016), and Kleven *et al*. (2023).

Madden (1989; 1993; 1995; 1997), and more recently by Savage (2016), which have sought to estimate the elasticity of demand for a variety of goods using the long-running Household Budget Survey.[12]

However, no recent attempt has been made to use these estimates – or others – to calculate the magnitude of the distortion(s) to individuals' consumption behaviour generated by the numerous reduced and zero rates contained in our system of VAT. Nor do we know much about the effects many other taxes on consumption that are levied in Ireland have on behaviour, including Alcohol Products Tax, the Sugar Sweetened Drinks Tax, or the landfill levy to name just a few. As with taxes on income, this makes it very difficult to say much about the welfare costs associated with taxes on consumption in Ireland; a topic we return to in the conclusion.

4.2 Capital income and transfer taxes

As with taxes on personal income, the design of capital income and transfer taxes in Ireland have the potential to significantly affect the behaviour of taxpayers and so shape the distribution of income as well as wealth.

Nowhere is this more evident than with Capital Gains Tax (CGT), which is charged at a rate of 33 per cent on the increase in the value of an asset between its acquisition and when it is sold or otherwise disposed of (e.g. gifted to a child inter vivos). While there are different views among economists on how such capital income should be taxed relative to labour income,[13] the divergence in tax rates with those on labour income clearly has the potential to affect the pre- as well as the post-tax distribution of income.

Perhaps more importantly, CGT contains a multitude of reliefs and reduced rates which it is difficult to believe do not influence the behaviour of taxpayers. For example, the Irish tax code provides for full relief from CGT on assets that are transferred at death, including to the executor or personal representative of a deceased person. This treatment – often referred to as the step-up basis of taxation – means that any unrealised capital gains accrued between the date of purchase and the date of death are effectively exempted from tax.

Death is not the only time of life that reduced – or zero – rates of CGT are applied to otherwise chargeable capital gains. Principal Private Residence (PPR) relief exempts entirely from CGT the gains on disposal of a property that was lived in as an individual's main residence. Retirement Relief provides for relief from CGT on the disposal of certain business or farming assets by those above the age of 55, with this relief restricted for disposals to persons other than children and

[12] Other exceptions include Petrov et al. (2019) – who find that while a 2008 reform to Vehicle Registration Tax and Motor Tax on car sales led to reductions in carbon emissions, it also led to increases in air pollution as consumers switched to diesel vehicles – and Madden (2007) – who finds tobacco taxes effect the likelihood that women start and quit smoking.

[13] See Banks and Diamond (2010) for an accessible discussion of these views.

(since 2014) for disposals to children for those above the age of 65.[14] Revised Entrepreneur relief provides for a 10 per cent reduced rate of CGT on gains from the disposal of certain qualifying business assets (including shares held by an individual in a company in which they were a director or employee) up to a lifetime limit of €1 million.

While there may or may not be some goal of economic or social policy that is well served by these zero and reduced rates of CGT, they undoubtedly create a strong set of incentives for individuals to hold assets in particular tax-favoured forms (especially owner occupied housing) and until certain tax-favoured points in life (especially death). This affects the choices individuals make about when and how to invest, with potential consequences for efficiency and productivity.

Recent research has found that reduced rates of CGT like those described above lead company owner-managers to retain substantial profits in their firm with no evidence this increases business investment (Miller *et al*., 2024). In other words, the effect of such reduced rates is to induce income shifting on the part of company owner-managers, substantially reducing the revenue raised in tax from this group. This suggests reduced rates of CGT may have important consequences for the distribution of income (and wealth), by encouraging individuals to realise income as capital gains rather than dividends or labour income.

Such effects are exacerbated by the exclusion of both realised and accrued capital gains from typical measures of income inequality and redistribution like those considered in Section II. This is particularly as capital gains are disproportionately concentrated among older, higher income individuals (e.g. Delestre *et al*., 2024; Zidar, 2024; Sarin *et al*., 2022), with international research showing that accounting for these can make a substantial difference to measures of income inequality (e.g. Moriguchi and Saez, 2008; Roine and Waldenström, 2012; Alvaredo *et al*., 2013; Advani and Summers, 2020).

However, we again know very little about the extent of these issues in Ireland, other than that a sizeable number of individuals make use of some CGT reliefs each year at what appears to be a substantial cost.[15] A key reason for this is that information on capital gains is not captured in SILC or the Household Finance and

[14] Disposals above certain lifetime thresholds result in 'marginal' rather than full relief from CGT, which limits CGT to half the difference between the sale or market price and the relevant lifetime threshold. For example, an individual who sold a business originally acquired or invested in for €100,000 to someone other than their child for €1,000,000 when aged 54 would pay CGT of €297,000 (33 per cent of €900,000). If they instead sold this business for the same price a year later when aged 55 and availed of (marginal) Retirement Relief, they would pay just €125,000; half the difference between the sales price and the relevant threshold of €750,000. A recently abandoned reform would have introduced a lifetime limit of €10,000,000 on (previously unrestricted) disposals to children when aged between 55 and 65.

[15] For example, statistics from the Revenue Commissioners (2024) show that there were 1,334 claims for Revised Entrepreneur relief in 2022 at an annual cost of €161.7 million (an average of €121,214 in CGT forgone per claimant). There were even more claims in 2022 for Retirement Relief (1,923), though no costing is available while neither a costing nor the number of claims is known for PPR relief.

Consumption Survey (HFCS), while little information on the distribution of capital gains is published by the Office of the Revenue Commissioners. Nor has administrative microdata on CGT returns yet been made available to researchers, meaning we have no credible evidence on the magnitude of responses to CGT rates or reliefs, and so what impact their design has on the distribution of income or wealth.[16]

Similarly, we have little evidence on how the design of Capital Acquisitions Tax (CAT) on gifts or inheritances affects the distribution of income and wealth. This tax is paid at a rate of 33 per cent on the value of inheritances or gifts received that exceed a lifetime threshold determined by the relationship between the person that receives the benefit (the beneficiary) and the person who gives it (the disponer).

As with CGT, there exist numerous reliefs from CAT that create strong incentives to hold wealth in certain forms if someone is considering bequeathing or gifting it to their children. CAT Business Relief and CAT Agricultural Relief both reduce the taxable value of eligible assets by 90 per cent. Combined with the parent-child (group A) lifetime allowance of €335,000, this means that a business or farm worth up to €3.35 million can be left or gifted by a parent to a child without giving rise to any CAT liability, with an effective rate of just 3.3 per cent on anything above that.[17]

There is some suggestive evidence that these reliefs affect the distribution of income.[18] Using data from the HFCS, Lawless and Lynch (2017) find that having received a gift or inheritance of a business or farm is associated with being 26 percentiles higher up the wealth distribution than someone with the same income and demographics who does not receive any gift or inheritance. This relationship is much stronger than for those who inherit money or their principle private residence, which is associated with being 7-8 percentiles higher up the wealth distribution.

Nevertheless, such evidence is merely suggestive and, as with CGT and taxes on labour income, we again know very little about the magnitude of responses to CAT by either beneficiaries or disponers.

[16] This is despite surge in CGT receipts following the halving of the rate from 40 per cent to 20 per cent in 1998, which is often cited as evidence that reducing rates of CGT will increase receipts (e.g. Family Business Network, 2022). Among other things, such claims fail to account for the (substantial) retiming of realisations in response to such a tax cut, as discussed in an US context by Sarin et al. (2022).

[17] Statistics from the Revenue Commissioners (2024) show that in 2023 there were 763 claims for Business Relief at a cost of €224 million (relief of €293,840 per claim on average) and 1,781 claims for Agricultural Relief at a cost of €246 million (relief of €138,462 per claim on average).

[18] The effect of inheritances on wealth inequality more generally is less clear. For example, Arrigoni *et al.* (2023) find that "inheritances and gifts contribute little to the overall distribution of wealth in Ireland" and "may actually have reduced overall wealth inequality over time, as their contribution to net wealth is higher for households in the middle of the wealth distribution than for households at the top".

4.3 Means-tested transfers

Just as taxes on labour or capital income have the potential to shape the distribution of pre-tax income, so too do means-tested transfers by changing the slope and shape of the budget set facing individuals. This can be through the tapering (withdrawal) of transfers against income (and/or assets), as well as through the imposition of (minimum or maximum) work requirements as a condition of eligibility for certain transfers.

Figure 8 provides an illustration of this potential, plotting the distribution of usual weekly hours of work for single women with and without children using data from the 2015-2019 EU-SILC. Those in the latter group may be entitled to an in-work transfer called Working Families Payment (WFP) – a means-tested payment for low-income employees with children – while those the former group are not. Claimants receive 60 per cent of the difference between their average net of tax weekly income and a threshold (that depends on family size) so long as they work at least 19 hours per week. Similar incentives have been shown to affect the distribution of hours worked in the UK (Blundell *et al*., 2000) and earnings in Germany (Haywood and Neumann, 2021).

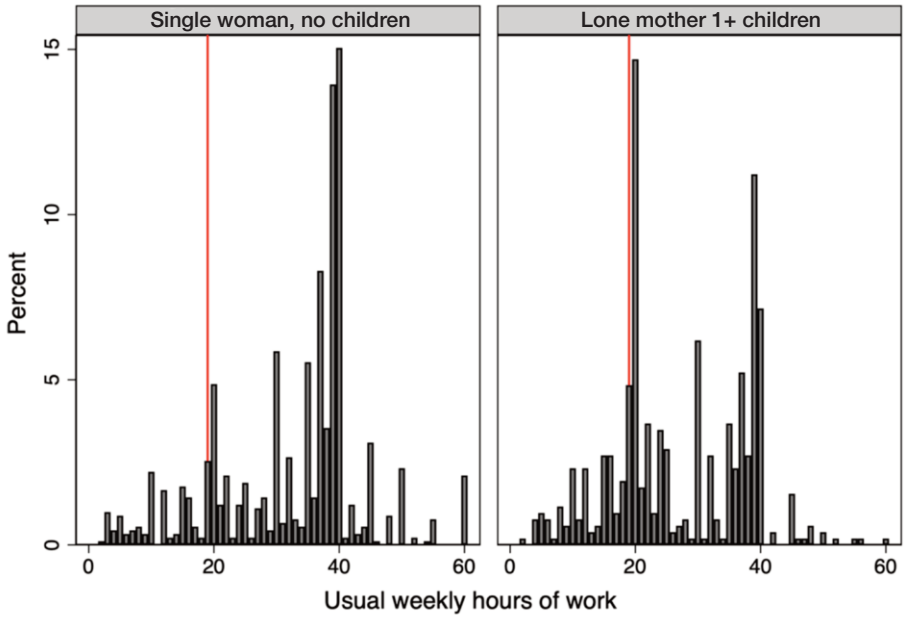
Figure 8 shows that the distribution of hours for single women with children exhibits much sharper bunching at 19 and 20 hours per week compared to 16, ten or even eight hours per week for single women without children. This suggests the design of the WFP affects the distribution of pre-tax earnings for lone parents, encouraging more than would otherwise to work at least (but little more than) 20 hours week.

While the incentives created by the WFP are strong, they are by no means an aberration. For example, to be eligible for the maximum full-time undergraduate student 'maintenance grant' of €7,586, claimants' household income must be no more than €26,200 where there are four or less dependent children in the household and the claimant lives 30 kilometres or more from their college or university. Going even one euro above this threshold can lead to a 43 per cent (€3,294) reduction in the amount of grant a student receives. This creates a strong incentive for parents of children anticipating attending higher education to keep their 'reckonable' income below this threshold, or one of the numerous others present in the system of student grants.[19]

Such discontinuous cliff-edges are also not an uncommon feature of non-cash transfers. The medical card, for example, is subject to a discontinuous means-test and withdrawn from those under age 70 whose income (less some deductions) exceeds a certain level per week that depends on family size, while similarly eligibility for social housing is limited to those with incomes below a maximum income limit. There also exist numerous non-cash benefits that are available only

[19] See https://www.susi.ie/eligibility-criteria/income/full-time-undergraduate-income-thresholds-and-grant-award-rates/ for details on the many discontinuous thresholds the student grant system contains.

Figure 8: Distribution of Usual Weekly Hours of Work for Women



Source: Author's calculations using data from the 2015-2019 EU Survey of Income and Living Conditions.
Note: Vertical red line indicates 19 hours per week.

(i.e. discontinuously) to those of a certain age: for example, the free travel pass for those aged over 65.

In addition to leading to some discontinuous cliff-edges, the operation of the Irish social welfare system can result in high effective marginal tax rates for some claimants, particularly those in receipt of multiple means-tested benefits (Doolan *et al*., 2022; Commission on Taxation and Welfare, 2022). For example, a lone parent with one child earning the minimum wage can face an effective marginal tax rate around 80 per cent when USC and PRSI are taken into account alongside the withdrawal of One Parent Family Payment and WFP; potentially higher if the claimant is also in local authority accommodation (and so paying income-related rents).

Cliff-edges and high effective marginal tax rates plausibly affect the distribution of pre-tax and transfer income by shaping the work (and human capital) decisions of individuals, particularly those at the bottom of the income distribution. Yet while there has been extensive research modelling financial work incentives for the Irish population,[20] there is far less research – particularly making use of modern

[20] Much of this research uses SWITCH, the longstanding tax and benefit microsimulation model developed at the Economic and Social Research Institute, described most recently by Keane *et al.* (2023) e.g.: Doorley *et al.* (2023); Doolan *et al.* (2022); Callan *et al.* (2016; 2012; 2011); and Savage *et al.* (2015).

empirical approaches and microdata – that has sought to estimate the effects these incentives have on individuals' choices.[21]

Such research is essential to assess the likely effects of proposals such as those of the recent Commission on Taxation and Welfare (2022) to reform the transfer system by smoothing out existing cliff-edges and high effective marginal tax rates. This proposal has the potential to improve the economic efficiency of the tax and transfer system for low-income households in addition to addressing the issues of horizontal equity that cliff-edges in particular give rise to. However, these gains must be set against the non-trivial administrative costs that welfare reform can generate, as the experience in Britain with the recent Universal Credit reform illustrates (Timmins, 2016).

This applies equally – if not more so – to the more radical reform of the transfer system that the introduction of a Universal Basic income would constitute. While often put forward as a solution to a whole array of issues with the existing system, a Universal Basic Income – if it is to be more than a relabelling of the existing system – would inevitably involve either redistributing away from households currently deemed to have additional needs (e.g. those with children) or come at an enormous fiscal cost; points made by Honohan (1994) and more recently by both Hoynes and Rothstein (2019) and Redmond *et al*. (2022).

This paper now concludes with a summary of the key points and some suggestions for future research on fiscal policy and redistribution in Ireland.

V CONCLUSION

This paper began by showing how there has been huge change in the size and shape of the Irish fiscal state over the 20th century. In addition to more-or-less doubling as a share of national income, there has been a substantial shift in the balance of taxation; away from consumption and property, towards personal and corporate income. Similarly, there has been a huge increase in the relative importance of expenditure on income transfers at the expense of subsidies, investment and debt interest.

Given they act to redistribute resources from those with higher to those with lower levels of incomes, such extensive taxation and transfers have important implications for the distribution of income. Differences between the pre- and post-tax and transfer Gini coefficients – also known as the Reynolds-Smolensky index of redistributive effect – suggest that net transfers (direct taxes less transfers) do more in Ireland than most other EU countries to reduce levels of income inequality, taking Ireland from among the most unequal countries to mid-table. While

[21] Notable recent exceptions include Redmond *et al.* (2022) – who examine the impact of a reduction in eligibility for one-parent family payment on labour market outcomes, and Doris et al. (2020) – who explore the effects of reductions in rates of jobseekers' payments on the unemployment duration of young adults.

comparable figures are not available for these countries over a prolonged period, estimates of the Reynolds-Smolensky index for Ireland suggest taxes and transfers do more to reduce income inequality now than in the 1980s and 1990s.

However, these measures of redistribution have many limitations, including their exclusion of indirect taxes like VAT and (admittedly conceptually trickier) in-kind transfers like public spending on healthcare. Perhaps most importantly, they also take as given the pre-tax and transfer distribution of income which economic theory and international empirical research tells us can respond – at times significantly – to the design of taxes and transfers.

Yet despite extensive research on the distribution of income and redistribution in Ireland, this paper has argued we still know very little about the extent to which our tax and welfare system actually affects the economic decisions individuals make. In addition to limiting our knowledge on important questions relating to the role of fiscal policy and the distribution of incomes, the lack of research on these topics means we know very little about the welfare costs of taxation given how centrally these depend on the responsiveness of economic behaviour to taxes and transfers.

In one sense, the limited research on the welfare costs of taxation in Ireland is nothing new, with neglect of "the deadweight losses associated with different forms of taxation in Ireland" lamented by Honohan and Irvine (1987). However, while Honohan and Irvine were writing at a time when the same might be said for almost any country outside of the United States and Britain, there has been an enormous growth in empirical public economics research exploring these questions – particularly in neighbouring European countries – over the decades since.

Why has the same not happened here, and can anything be done about it? Speaking to any researcher in the area, the prime culprit they will identify is the lack of access for researchers to Irish administrative data. Research in public economics has – like many other fields – become increasingly empirical, but also is increasingly associated with the use of administrative data (Kleven, 2018). This is in large part because such data provide the large, longitudinal samples – indeed, often populations – required for modern empirical approaches to yield credible results, particularly where the aim is to exploit some quasi-natural experiment affecting perhaps relatively small groups differentially (Card, 2022). The reasons given by the CSO (and other public bodies who hold potentially useful databases) for refusing such access range from resourcing constraints to the GDPR, issues which should be eminently solvable as they have been in other EU countries.

Another factor that might also have contributed to the present dissatisfactory situation is the limited sources of funding available to researchers interested in exploring these questions in an Irish context. Unlike, for example, in Britain, where the Economic and Social Research Council (ESRC) regularly posts calls for medium-to-large sized grants (e.g. "New Investigator Grants" of £100,000-£350,000), such calls are rare for the Irish Research Council. Instead, most funding

schemes are for much more modest amounts which go little way towards funding a PhD or post-doctoral position, let alone covering the costs of any ambitious, multi-year research agenda.

As a result of these and undoubtedly other factors, the number of researchers working on the effects of Irish fiscal policy has in recent times simply been too small. In the years following the lament of Honohan and Irvine (1987), the Foundation for Fiscal Studies commissioned and co-ordinated a series of research programmes on fiscal policy that encouraged "a diversity of researchers working on different ways of modelling economic (and political) behaviour" to "turn their minds to matters fiscal" and engage in research that is "a prerequisite for informed policy debate" (Honohan, 1995). Almost 30 years on, the need for such research continues, as perhaps does the need for some body (or bodies) to encourage and support it, be that through a renewed series of Foundation for Fiscal Studies research programmes or otherwise.

REFERENCES

Acheson, J., Stanley, B., Kennedy, S. and Morgenroth, E.L.W., 2018. *The Elasticity of Taxable Income*. Department of Finance: Dublin.

Adam, S., Phillips, D. and Smith, S., 2011. *A Retrospective Evaluation of the Elements of the VAT System: Full Report*. Brussels: European Commission.

Advani, A. and Summers, A., 2020. "Capital Gains and UK Inequality", CAGE Online Working Paper Series 465, Competitive Advantage in the Global Economy (CAGE).

Alvaredo, F., Atkinson, A.B., Piketty, T. and Saez, E., 2013. "The Top 1 Percent in International and Historical Perspective", *Journal of Economic Perspectives*, 27 (3): 3-20.

Arrigoni, S., Boyd, L. and McIndoe-Calder, T., 2023. "The Long and the Short of it: Inheritance and Wealth in Ireland", *Trinity Economics Papers* tep1223, Trinity College Dublin, Department of Economics.

Banks, J., Diamond, P. and Studies, I.F.F. (Eds.), 2010. "The Base for Direct Taxation", in *Dimensions of Tax Design: The Mirrlees Review* (pp. 548-648). Oxford University Press.

Barofsky, J. and Younger, S., 2022. "The Effect of Government Health Expenditure on the Income Distribution: A Comparison of Valuation Methods in Ghana" in Lustig, N. (Ed.). (2023). *Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality and Poverty* Vol. 2. Brookings Institution Press.

Barrett, A. and Wall, C., 2006. *The Distributional Impact of Ireland's Indirect Tax System*, Dublin: Combat Poverty Agency and the IPA.

Barrett, A., Callan, T., Doris, A., O'Neill, D., Russell, H., Sweetman, O. and McBride, J., 2000. *How Unequal? Men and Women in the Irish Labour Market*, General Research Series 176, Dublin: Oak Tree Press in association with the ESRI.

Bergin, A. and Kearney, I., 2007. "Human Capital Accumulation in an Open Labour Market: Ireland in the 1990s", *Economic Modelling*, 24 (2007) 839-858.

Bergin, A., FitzGerald, J. and Kearney, I., 2013. "The HERMES-13 Macroeconomic Model of the Irish Economy". ESRI Working Paper No. 460.

Bergin, A., Conroy, N., Garcia Rodriguez, A., Holland, D., McInerney, N., Morgenroth, E. and Smith, D., 2017. "COSMO: A new COre Structural MOdel for Ireland," Papers WP553, Economic and Social Research Institute (ESRI).

Blinder, A.S. and Rosen, H.S., 1985. "Notches", *The American Economic Review*, 75(4), 736-747.

Blundell, R. and MaCurdy, T., 1999. "Labor Supply: A Review of Alternative Approaches", *Handbook of Labor Economics*, 3, 1559-1695.

Blundell, R., Duncan, A., McCrae, J. and Meghir, C., 2000. "The Labour Market Impact of the Working Families' Tax Credit", *Fiscal studies*, *21*(1), 75-104.

Brewer, M., Etheridge, B. and O'Dea, C., 2017. "Why are Households that Report the Lowest Incomes So Well-off?", *The Economic Journal*, 127 (605), F24-F49.

Callan, T. and Doris, A., 1999. "Labour Supply Responses", Chapter 4 in *The Impact of the Minimum Wage in Ireland, Report for the Inter-Departmental Group on the Implementation of a National Minimum Wage*, Dublin: Stationery Office.

Callan, T. and Farrell, B., 1991. *Women's Participation in the Irish Labour Market*, NESC Report No. 91, Dublin: NESC.

Callan, T. and Soest, V., 1996. "Family Labour Supply and Taxes in Ireland", ESRI Working Paper 78, Dublin: The Economic and Social Research Institute.

Callan, T., Crilly, N., Keane, C. and Walsh, J., 2011. "Tax, Welfare and Work Incentives", *Budget Perspectives 2012*, Dublin: ESRI.

Callan, T., Keane, C., Savage, M., Timoney, K. and Walsh, J., 2012. "Work Incentives: New Evidence for Ireland", *Budget Perspectives 2013*, Dublin: ESRI.

Callan, T., O'Dea, C., Roantree, B. and Savage, M., 2016. "Financial Incentives to Work: Comparing Ireland and the UK", *Budget Perspectives 2017/2*, Dublin: ESRI.

Card, D., 2022. "Design-Based Research in Empirical Microeconomics", *American Economic Review*, 112 (6): 1773-81.

Chetty, R., 2012. "Bounds on Elasticities With Optimization Frictions: A Synthesis of Micro and Macro Evidence on Labor Supply", *Econometrica*, Econometric Society, Vol. 80(3), pp. 969-1018, May.

Chetty, R., Guren, A., Manoli, D. and Weber, A., 2011. "Are Micro and Macro Labor Supply Elasticities Consistent? A Review of Evidence on the Intensive and Extensive Margins", *American Economic Review Papers & Proceedings*, 101 (3): 471-75.

Coffey, C., Doorley, K., O'Toole, C. and Roantree, B., 2020. "The Effect of the COVID-19 Pandemic on Consumption and Indirect Tax in Ireland", *Budget Perspectives 2021* (3). Economic and Social Research Institute: Dublin.

Collins, M. and Turnbull, D., 2013. "Estimating the Direct and Indirect Tax Contributions of Households in Ireland". NERI Working Paper Series, 2018-08. Nevin Economic Research Institute, Dublin.

Commission on Taxation and Welfare, 2022. *Foundations for the Future: the report of the Commission on Taxation and Welfare*. Government of Ireland: Dublin.

Curtis J. and FitzGerald, J., 1996. "Real Wage Convergence in an Open Labour Market", *The Economic and Social Review*, Vol. 24, No. 4 pp. 321-340.

de Bruin, K. and Yakut, A.M., 2024. "Efficiency – Equity Trade-off in the Irish Carbon Tax: A CGE Investigation of Mixed Revenue Recycling Schemes", *Economic Modelling*, *134*, 106705.

Delestre, I., Kopczuk, W., Miller H. and Smith, K., 2024. "Top income Inequality and Tax Policy", *Oxford Open Economics*, Vol.3, Issue Supplement_1, 2024, pp. i1086–i1112, https://doi.org/10.1093/ooec/odad068.

Diamond, P.A. and Mirrlees, J.A., 1971. "Optimal Taxation and Public Production I: Production Efficiency", *The American Economic Review*, *61*(1), 8-27.

Doolan, M., Roantree, B. and Slaymaker, R., 2022. *Low Income Renters and Housing Supports*, ESRI Research Series 141, Dublin: ESRI.

Doorley, K., 2017. "Taxation, Work and Gender Equality in Ireland", *Journal of the Statistical and Social Inquiry Society of Ireland*, 2017-18, 47, 71-87.

Doorley, K., Duggan, L., Kakoulidou, T. and Roantree, B., 2024. "Equivalisation (once again)," Trinity Economics Papers tep0124, Trinity College Dublin, Department of Economics.

Doorley, K., Tuda, D., McTague, A. and Regan, M., 2023. "Childcare in Ireland: Usage, Affordability and Incentives to Work", *The Economic and Social Review*, 54(4, Winter), 247-283.

Doris, A., 2001. "The Changing Responsiveness of Labour Supply During the 1990s", *ESRI Quarterly Economic Commentary*, 12:68-82. Economic and Social Research Institute: Dublin.

Doris, A., O'Neill, D. and Sweetman, O., 2020. "Does Reducing Unemployment Benefits During a Recession Reduce Youth Unemployment? Evidence from a 50% Cut in Unemployment Assistance", *Journal of Human Resources*, 55 (3):902-925.

Enami, A., Lustig, N. and Aranda, R., 2023. "Analytic Foundations: Measuring the Redistributive Impact of Taxes and Transfers" in Lustig, N. (Ed.). (2023). *Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality And Poverty Volume 1*. Brookings Institution Press.

Family Business Network, 2022. "Submission to the Commission on Taxation and Welfare". FBN: Dublin. Available at https://assets.gov.ie/234131/1579e150-f570-4ad3-b5fc-f4666effa4ca.pdf.

Fitzgerald, J. and Kenny, S., 2018. "Managing a Century of Debt," Trinity Economics Papers tep0118, Trinity College Dublin, Department of Economics.

FitzGerald, J., 1999. "Wage Formation and the Labour Market", in: Barry, F. (eds) *Understanding Ireland's Economic Growth*. Palgrave Macmillan, London.

FitzGerald, J., forthcoming. "Seventy Years of Irish Fiscal Policy 1954-2024". Trinity Economics Papers.

Hargaden, E. and Roantree, B., 2019. *Does Statutory Incidence Matter?: Earnings Responses to Social Security Contributions*. University of Oxford, Saïd Business School, Centre for Business Taxation.

Haywood, L. and Neumann, M., 2021. "Equilibrium Effects of Tax Exemptions for Low Pay," *Labour Economics*, Elsevier, Vol. 69(C).

Honohan, P., 1994. "Basic Income as a Reform of Tax and Social Welfare", Note for the *National Economic and Social Forum.*

Honohan, P., 1995. *Assisting the Process of Tax Reform*. Foundation for Fiscal Studies Available at http://homepage.eircom.net/~phonohan/ffs.pdf.

Honohan, P., 1999. "Fiscal Adjustment and Disinflation in Ireland: Setting the Macro Basis of Economic Recovery and Expansion", in: Barry, F. (eds) *Understanding Ireland's Economic Growth*. Palgrave Macmillan, London.

Honohan, P. and Walsh, B., 2002. "Catching Up with the Leaders: The Irish Hare", *Brookings Papers on Economic Activity*, 33, issue 1, p. 1-78.

Honohan, P. and Ó Gráda, C., 1998. "The Irish Macroeconomic Crisis of 1955-56: How Much Was Due to Monetary Policy?", *Irish Economic and Social History*, Vol. 25(1), pp. 52-80, August.

Honohan, P. and Irvine, I., 1987. "The Marginal Social Cost of Taxation in Ireland", *The Economic and Social Review*, 19(1): 15-41.

Hoynes, H. and Rothstein, J., 2019. "Universal Basic Income in the United States and Advanced Countries", *Annual Review of Economics*, *11*(1), 929-958.

Kakoulidou, T. and Roantree, B., 2021. "Options for Raising Tax Revenue in Ireland", ESRI *Budget Perspectives 2022* paper 1. Economic and Social Research Institute, Dublin.

Keane, C., Doorley, K., Kakoulidou, T. and O'Malley, S., 2023. "SWITCH: A Tax-Benefit Model for Ireland Linked to Survey and Register Data", *International Journal of Microsimulation*; 16(1); 65-88.

Keane, M.P., 2011. "Labor Supply and Taxes: A Survey", *Journal of Economic Literature*, 49(4), 961-1075.

Keane, M. and Rogerson, R., 2012. "Micro and Macro Labor Supply Elasticities: A Reassessment of Conventional Wisdom", *Journal of Economic Literature*, 50 (2): 464-76.

Kleven, H., 2018. *Language Trends in Public Economics.* Presentation available at https://www.henrikkleven.com/uploads/3/7/3/1/37310663/languagetrends_slides_kleven.pdf (accessed 9/9/2024).

Kleven, H., Kreiner, C.T., Larsen, K. and Søgaard, J.E., 2023. *Micro vs Macro Labor Supply Elasticities: The Role of Dynamic Returns to Effort* (No. w31549). National Bureau of Economic Research.

Kleven, H.J., 2014. "How Can Scandinavians Tax So Much?", *Journal of Economic Perspectives*, 28 (4): 77-98.

Kleven, H., Landais, C., Muñoz, M. and Stantcheva, S., 2020. "Taxation and Migration: Evidence and Policy Implications", *Journal of Economic Perspectives*, 34 (2): 119-42.

Lawless, M. and Lynch, D., 2017. "Gifts and Inheritances in Ireland". ESRI WP579, December 2017.

Leahy, E., Lyons, S. and Tol, R.S. (2011). "The Distributional Effects of Value Added Tax in Ireland", *The Economic and Social Review*, 42(2), 213.

Levell, P., Roantree, B. and Shaw, J., 2021. "Mobility and the Lifetime Distributional Impact of Tax and Transfer Reforms", *Int Tax Public Finance* 28, 751-793.

Lindert, P.H., 2004. *Growing Public: Social Spending and Economic Growth since the Eighteenth Century.* Cambridge: Cambridge University Press.

Lustig, N. (Ed.), 2023. *Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality and Poverty*. Brookings Institution Press.

Madden, D., 1989. "Indirect Tax-reform in Ireland", *The Economic and Social Review*, 21(1): 27-47.

Madden, D., 1993. "A New Set of Consumer Demand Estimates for Ireland", *The Economic and Social Review*, 24(2):101-123.

Madden, D., 1995. "An Analysis of Indirect Tax Reform In Ireland in the 1980s", *Fiscal Studies*, *16*(1), 18-37.

Madden, D., 1997. "Conditional Demands and Marginal Tax Reform", *Oxford Bulletin of Economics and Statistics*, 59(2), 237-255.

Madden, D., 2007. "Tobacco Taxes and Starting and Quitting Smoking: Does the Effect Differ by Education?", *Applied Economics*, *39*(5), 613-627.

Meghir, C. and D. Phillips, 2010. "Labour Supply and Taxes", *Dimensions of Tax Design: The Mirrlees Review*, 202-74.

Miller, H., T. Pope and K. Smith, 2024. "Intertemporal Income Shifting and the Taxation of Business Owner-Managers", *The Review of Economics and Statistics* 2024; 106 (1): 184-201.

Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Jonson, P., Myles, G. and Poterba, J., 2011. *Tax by Design: The Mirrlees review*. Oxford University Press: Oxford.

Moriguchi, C. and Saez, E., 2008. "The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics", *The Review of Economics and Statistics*; 90 (4): 713-734.

Müllbacher, S., Hyee, R., Bettendorf, L., Rojas-Romagosa, H., Veenendaal, P., Baldini, M. and M. and Adam, S., 2013. *A Study on the Economic Effects of the current VAT Rates Structure: Final Report*; Study on behalf of the European Commission, TAXUD; in consortium with CAPP, CASE, DEPII, ETLA, IFO, IFS.

NESC, 2020. *The Position of the Self-Employed*. Background Paper (151/2). National Economic and Social Council: Dublin.

Nolan, B. and Maître, B., 2021. "Does Household Worklessness Explain Ireland's High Working-Age Market Income Inequality?", *The Economic and Social Review*, 52(4, Winter), 357-374.

Nolan, B. and Roantree, B., 2023. *Inclusive Growth: the Irish Exception? Paper presented at the Tenth Meeting of the Society for the Study of Economic Inequality*, Aix-en-Provence.

O'Hagan, J.W., 1995. "National Museums: To Charge or Not to Charge?", *Journal of Cultural Economics*, *19*(1), 33-47.

O'Dea, C. and Preston, I., 2012. "The Distributional Impact Of Public Spending in the UK". IFS Working Paper No. W12/06. Institute for Fiscal Studies, London.

Peterman, W.B., 2016. "Reconciling Micro and Macro Estimates of the Frisch Labor Supply Elasticity", *Economic inquiry*, 54(1), 100-120.

Petrov, I., Ryan, L. and Monaca, S.L., 2019. "Vehicle Tax Design and Car Purchase Choices: A Case Study of Ireland", *Eceee Summer Study Proceedings*, 2019-June, 1069-1078.

Redmond, P., McGuinness, S. and Ciprikis, K., 2022. *A Universal Basic Income for Ireland: Lessons from the International Literature*, ESRI Research Series 146, Dublin: ESRI, https://doi.org/10.26504/rs146.

Redmond, P., McGuinness, S. and Keane, C., 2022. "The Impact of One-Parent Family Payment Reforms on the Labour Market Outcomes of Lone Parents", *Oxford Economic Papers*, https://doi.org/10.1093/oep/gpac029.

Revenue Commissioners, 2024. *Cost of Tax Expenditures: 01/08/2024*. Office of the Revenue Commissioners, Dublin.

Roantree, B., 2020. "Understanding Income Inequality in Ireland", *Journal of the Statistical and Social Inquiry Society of Ireland*, 49, 43.

Roantree, B. and Barrett, M., 2024. "Income Inequality in Ireland, 1987-2019", *Fiscal Studies*: Vol. 45, Issue 2.

Roantree, B. and Shaw, J., 2018. "What a Difference a Day Makes: Inequality and the Tax and Benefit System from a Long-run Perspective", *J Econ Inequal* 16, 23-40 (2018). https://doi.org/10.1007/s10888-017-9362-x.

Roantree, B., Maître, B., McTague, A. and Privalko, I., 2021. *Poverty, Income Inequality and Living Standards in Ireland: First Annual Report.* Economic and Social Research Institute and Community Foundation for Ireland, Dublin.

Roine, J. and Waldenström, D., 2012. "On the Role of Capital Gains in Swedish Income Inequality", *Review of Income and Wealth*, 58, 569-587.

Saez, E., Slemrod, J. and Giertz, S.H., 2012. "The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review", *Journal of Economic Literature*, 50 (1): 3-50.

Sarin, N., Summers, L., Zidar, O. and Zwick, E., 2022. "Rethinking How We Score Capital Gains Tax Reform", *Tax Policy and the Economy*, *36*(1), 1-33.

Savage, M., 2016. "Indirect Tax Reform and the Specification of Demand: the Case of Ireland", *International Tax and Public Finance*, Vol. 23, No. 2, April, 2016, pp. 368-399.

Savage, M., Colgan, B., Callan, T. and Walsh, J., 2015. "Making Work Pay More: Recent Initiatives", *Budget Perspectives 2016/2*, Dublin: ESRI.

Tazhitdinova, A., 2020. "Do Only Tax Incentives Matter? Labor Supply and Demand Responses to an Unusually Large and Salient Tax Break", *Journal of Public Economics*, Elsevier, Vol. 184(C).

Thewissen, S., Kenworthy, L., Nolan, B., Roser, M. and Smeeding, T., 2018. "Rising Income Inequality and Living Standards in OECD Countries: How Does the Middle Fare?", *Journal of Income Distribution*, 27 (2), 1-23.

Thomas, A., 2022. "Reassessing the Regressivity of the VAT", *Fiscal Studies*, *43*(1), 23-38.

Timmins, N., 2016. *Universal Credit: From Disaster to Recovery?* Institute for Government: London.

Tovar Reaños, M.A. and Lynch, M.Á., 2022. "Measuring Carbon Tax Incidence Using a Fully Flexible Demand System. Vertical and Horizontal Effects Using Irish Data", *Energy Policy*, 160, 112682.

Weizsäcker, C.C.V., 1978. "Annual Income, Lifetime Income and Other Income Concepts in Measuring Income Distribution", in: Kelle, W.H., Shorrocks, A.F. (eds.) *Personal Income Distribution*, pp. 101-5. North-Holland, Amsterdam.

Zidar, O., 2024. "Discussion of Top Incomes and Tax Policy", *Oxford Open Economics*, Vol. 3, Issue Supplement_1, 2024, Pages i1133-i1138.

APPENDIX

Table A.1: Income Inequality and Redistribution, 2019

Country	*Pre-tax & transfer Gini*	*Post-tax & transfer Gini*	*Reynolds-Smolensky*	*Kakwani*	*Suits progressivity index*	*Musgrave-Thin redistributive effect*	*Atkinson-Plotnick horizontal inequity*
BG	0.536	0.408	0.128	–9.367	–7.985	1.275	0.037
RO	0.525	0.345	0.180	1.175	1.025	1.380	0.104
EL	0.523	0.308	0.215	3.118	2.819	1.450	0.163
IE	0.522	0.281	0.241	12.788	12.265	1.503	0.091
PT	0.520	0.317	0.203	–93.422	–84.927	1.424	0.168
ES	0.512	0.326	0.186	–3.107	–2.864	1.382	0.135
IT	0.512	0.328	0.184	–6.758	–6.253	1.377	0.160
FI	0.507	0.262	0.246	–9.725	–9.081	1.499	0.083
FR	0.505	0.292	0.213	–4.972	–4.533	1.431	0.129
LT	0.505	0.354	0.151	–2.620	–2.396	1.305	0.037
AT	0.501	0.276	0.225	–106.125	–97.180	1.451	0.136
LU	0.496	0.323	0.174	10.032	8.789	1.345	0.189
RS	0.496	0.333	0.163	3.221	2.910	1.323	0.134
BE	0.494	0.251	0.244	9.917	9.428	1.481	0.117
DE	0.494	0.287	0.207	2.995	2.777	1.409	0.118
LV	0.488	0.350	0.138	42.759	40.843	1.269	0.038
SE	0.480	0.271	0.209	8.251	7.863	1.402	0.079
HR	0.477	0.291	0.186	11.965	11.231	1.356	0.077
HU	0.464	0.280	0.185	–15.353	–13.452	1.345	0.106
PL	0.464	0.284	0.180	–15.009	–13.642	1.337	0.086
NL	0.463	0.264	0.199	1.893	1.730	1.370	0.083
NO	0.455	0.253	0.202	6.192	5.771	1.370	0.091
DK	0.453	0.265	0.188	1.037	0.954	1.344	0.061
CY	0.449	0.311	0.137	–2.251	–2.006	1.249	0.103
SI	0.448	0.238	0.210	13.023	12.223	1.380	0.098
CH	0.445	0.306	0.139	1.140	1.004	1.251	0.078
EE	0.444	0.301	0.143	–1.778	–1.669	1.256	0.033
MT	0.438	0.280	0.158	12.943	11.898	1.281	0.047
CZ	0.430	0.240	0.190	–20.586	–18.912	1.334	0.052
SK	0.388	0.228	0.161	–63.176	–59.049	1.263	0.095

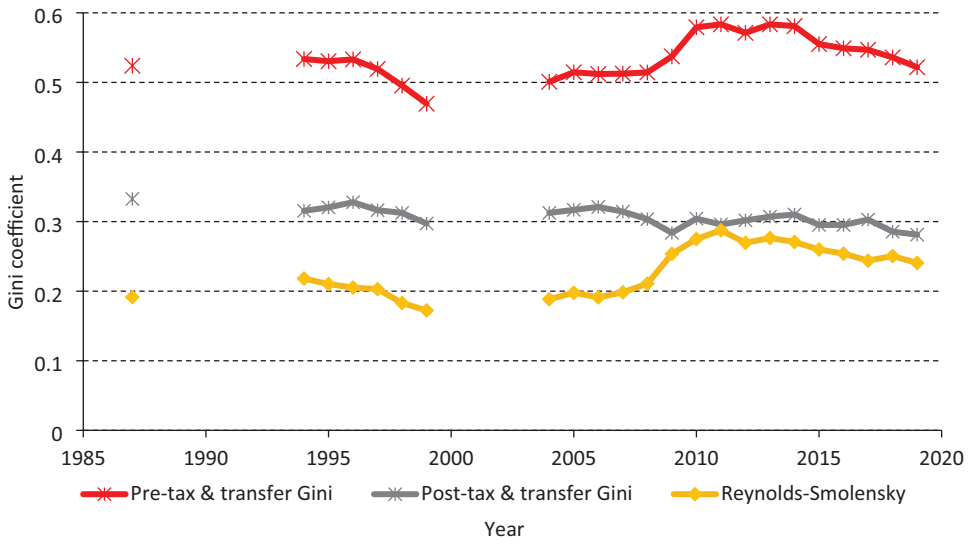
Source: Author's calculations using 2019 EU-SILC microdata.
Note: Incomes equivalised using modified OECD equivalence scale, and countries ranked highest-to-lowest according to pre-tax and transfer income. Includes only those aged 25-55.

Table A.2: Working Age Income Inequality and Redistribution, 2019

Country	*Pre-tax & transfer Gini*	*Post-tax & transfer Gini*	*Reynolds-Smolensky*	*Kakwani*	*Suits progressivity index*	*Musgrave-Thin redistributive effect*	*Atkinson-Plotnick horizontal inequity*
BG	0.453	0.410	0.043	0.530	0.436	1.079	0.017
IE	0.435	0.266	0.168	1.046	1.038	1.298	0.046
ES	0.425	0.323	0.102	1.831	1.805	1.177	0.056
RS	0.417	0.334	0.083	0.444	0.431	1.142	0.056
EL	0.415	0.315	0.100	0.402	0.385	1.171	0.066
LT	0.414	0.349	0.065	1.314	1.233	1.110	0.017
IT	0.407	0.319	0.089	0.720	0.728	1.149	0.063
RO	0.406	0.339	0.067	0.193	0.187	1.112	0.031
PT	0.401	0.298	0.104	0.545	0.537	1.174	0.047
LU	0.400	0.327	0.073	0.337	0.307	1.122	0.057
LV	0.400	0.329	0.071	0.675	0.673	1.119	0.024
AT	0.381	0.268	0.112	0.589	0.575	1.181	0.042
PL	0.379	0.289	0.090	0.735	0.690	1.144	0.040
SE	0.377	0.270	0.106	0.520	0.512	1.171	0.019
HR	0.376	0.278	0.098	0.667	0.660	1.157	0.035
FI	0.375	0.250	0.125	0.706	0.672	1.200	0.024
BE	0.366	0.233	0.133	0.600	0.588	1.211	0.046
DE	0.366	0.282	0.084	0.331	0.315	1.132	0.050
FR	0.362	0.263	0.099	0.642	0.605	1.155	0.033
CY	0.361	0.298	0.063	3.438	3.266	1.099	0.057
HU	0.353	0.291	0.062	0.438	0.390	1.095	0.039
NO	0.352	0.240	0.112	0.640	0.611	1.173	0.038
NL	0.348	0.253	0.095	0.329	0.318	1.145	0.024
EE	0.345	0.285	0.060	3.092	2.936	1.092	0.023
DK	0.341	0.242	0.099	0.289	0.279	1.150	0.019
CH	0.337	0.288	0.048	0.194	0.174	1.073	0.028
SI	0.330	0.230	0.100	0.550	0.536	1.150	0.040
CZ	0.304	0.231	0.073	0.521	0.490	1.105	0.027
SK	0.294	0.224	0.070	0.631	0.608	1.098	0.054

Source: Author's calculations using 2019 EU-SILC microdata.
Note: Incomes equivalised using modified OECD equivalence scale, and countries ranked highest-to-lowest according to pre-tax and transfer income. Includes only those aged 25-55.

Figure A.1: Working Age Income Inequality and Redistribution, Ireland



Source: Author's calculations using EU-SILC microdata (2004-2019), the Living in Ireland Survey (1994-1999) and the 1987 ESRI Survey of Income Distribution, Poverty and Usage of State Services.
Note: Incomes equivalised using modified OECD equivalence scale.