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THE IMPACT OF THE IRISH BUDGETARY POLICY BY DISABILITY STATUS

KARINA DOORLEY AND MARK REGAN

ESRI ECONOMIC & SOCIAL RESEARCH INSTITUTE

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ABBREVIATIONS

CSO	Central Statistics Office
EU-SILC	EU Survey of Income and Living Conditions
EUROMOD	Tax benefit microsimulation model for the EU
ILO	International Labour Organization
ISER	Institute for Social and Economic Research
JRC	Joint Research Centre (of the European Commission)
JST	Jobseekers' Transitional Payment
OECD	Organisation for Economic Co-operation and Development
OPFP	One Parent Family Payment
PRSI	Pay-related social insurance
RMF	Research Microdata Files
RR	Replacement rate
SWITCH	Simulating Welfare, Income Tax, Childcare and Health policies

ABSTRACT

Existing research has shown that disability is costly and can result in an increased risk of living in poverty and a decrease in living standards. In this paper, we expand a framework of equality budgeting, previously applied from a gender perspective, to the population of households affected by disability. Using a microsimulation model linked to data from the EU Survey of Income and Living Conditions (EU-SILC), we show how tax-benefit policy and other market income changes between 2007 and 2019 impacted households affected by disability and households not affected by disability. We find that disposable (or post-tax and transfer) income grew for both types of households but at a faster rate for households affected by disability than households not affected by disability. This income growth was driven by two counteracting forces. On the one hand, tax and welfare policy failed to keep pace with market income growth, reducing the living standards of households affected by disability by more than households not affected by disability. On the other hand, despite having lower average wage levels, wage growth for workers affected by disability outpaced wage growth for workers not affected by disability, while the labour supply of households affected by disability also increased. Future attempts to equality-proof budgetary policy should consider that changes to welfare disproportionally affect households with disabilities.

SECTION 1

Introduction

The proportion of the working age population with a disability in Ireland has been stable over the last number of years. Kelly and Maître (2021) estimated that 13 per cent of the working age population had a disability in 2019, slightly down from 15 per cent in 2004.[1] From an international perspective, Ireland had the fifth lowest prevalence of disability across the EU28 in 2018. However, Ireland also had one of the largest employment gaps between people with and without disabilities. Recent data on employment rates indicates that 36.5 per cent of the population aged 20-64 with a disability are in paid work, compared to 72.8 per cent of the population aged 20-64 without a disability (CSO, 2018). Active government policy, such as the Comprehensive Employment Strategy 2015–2024, aims to increase the labour force participation of those with disabilities. Irish research has consistently shown that households affected by disability tend to have substantially higher poverty rates (Gannon and Nolan, 2007) alongside a significantly lower standard of living (Cullinan et al., 2011). Kelly and Maître (2021) confirm that this is also true in other European countries.

There has been a clear rise in the number of claimants of contributory and non-contributory disability-related social welfare schemes in many industrialised countries. In the Irish case, the number of claimants of Disability Allowance rose from near 90,000 in 2007 to close to 147,000 by 2019, making Disability Allowance the largest working-age payment, with an Exchequer cost of €1.7 billion in 2019 (Department of Employment Affairs, 2013; 2019).

Some policy reforms carried out internationally to reduce the number of disability insurance claimants and increase labour supply have had mixed results. For example, in the UK and the Netherlands, policies which tightened eligibility for disability payments have been criticised for pushing more individuals with ill-health and disability onto unemployment benefits (Berthoud, 2011; Beatty and Fothergill, 2015; Borghans et al., 2014). However, an alternative type of reform in Norway which allowed recipients of disability insurance payments to earn more while retaining their payment resulted in an 8.5 percentage point increase in labour force participation among 18- to 49-year olds in receipt of disability insurance and was associated with a reduction in programme cost (Kostøl and Mogstad, 2014).[2]

It is important to bear in mind that barriers to work aside from ill health, including the accessibility of workplaces and transport and the potential loss of welfare, may provide significant disincentives to work. Kelly and Maître (2021) report that,

[1] Figures differed slightly depending on the data source used. However, the authors conclude that rates of disability have been stable over time, regardless of the data source used.

[2] See also evidence from Sweden (Karlström et al., 2008) and the US (Moore, 2015).

unlike most European countries, the severity of disability in Ireland is not strongly associated with working status. This suggests that in Ireland the barriers to work could be related to factors other than the severity of disability.

Cullinan et al. (2011) estimate that the cost of disability – defined as the extra spending needs that people with a disability face in their day-to-day lives – is 20 to 35 per cent of income, on average. Given the relatively low attachment of people with disabilities in Ireland to the labour force, the social welfare system is critical to their standard of living and monitoring its effect on income can shed light on how this is evolving. Equality budgeting – the practice of examining how budgetary measures affect outcomes for different groups of the population – is a key tool for this purpose. It was introduced in 2017 on a pilot basis in Ireland, with gender as a primary axis of equality. In 2018, the scope of the equality budgeting initiative was extended to additional dimensions of inclusiveness including poverty, socioeconomic inequality and disability. This extension is unique in the Organisation for Economic Co-operation and Development (OECD) context as Ireland is currently the only OECD country that practises equality budgeting, addressing a broad range of equality dimensions beyond gender alone.

Previous ESRI research has contributed evidence for equality budgeting by estimating the gender impact of budgetary policy over a ten-year period encompassing the financial crisis, austerity measures and recovery period. During the financial crisis, many social welfare payments were cut in nominal terms and were not restored in real terms in the post-crisis period. Doorley et al. (2018) show that this failure of social welfare payments to keep up with price and wage growth resulted in women losing relatively more income than men between 2008 and 2018. Here, we build on this research and provide the first estimate of how direct tax and welfare changes enacted between 2007 and 2019 impacted households affected by disability compared to households not affected by disability. This is more complicated than a gender budgeting exercise as data and information in the disability space rely on self-disclosure, and there is substantial variation in the range and nature of disabilities.

This paper is structured as follows. Section 2 provides an overview of how the number of claimants and headline rates of the main social welfare payments, including those related to disability, have evolved since 2007. It also provides a profile of people and households with disabilities in 2007 and 2019 and shows how current financial work incentives compare for the two groups. Section 3 describes the equality budgeting methodology. Section 4 shows how income distributions for households affected and not affected by disability have changed since 2007 and how much of the change is due to discretionary tax and welfare policy. Section 5 concludes.

SECTION 2

Descriptive statistics

2.1 EVOLUTION OF DISABILITY AND NON-DISABILITY RELATED WELFARE PAYMENTS

Administrative records of social welfare receipts, displayed in Table 2.1, show a strong upward trajectory in the number of claimants of schemes targeted towards people with illness or disability: Disability Allowance; Disablement Benefit; Carer's Allowance; Illness Benefit; and Invalidity Pension.

The number of recipients of Disability Allowance, the largest of these schemes, rose from 89,048 in 2007 to 146,755 in 2019, a 65 per cent increase. Callaghan (2017) highlights that close to 40 per cent of the rise in Disability Allowance, from 2012 to 2016, can be explained by a combination of two factors. Firstly, an increase in population size between 2011 and 2016 coupled with relatively constant disability rates, as per Census data,[3] contributed somewhat to the increase in recipients. A second factor was caseload spillover from Illness Benefit claims after the maximum duration was capped at two years in 2009. As such, a large portion of the variation in Disability Allowance rise remains unexplained. The rise in disability-related welfare payments is not exclusive to Ireland. Rapid growth in disability insurance is also evident in the United States (US), with the share of adults aged 25 to 64 in receipt of disability insurance benefits rising from 2.2 per cent in 1985 to 4.1 per cent in 2005 (Autor and Duggan, 2006). This rise has been attributed to less stringent medical criteria, increased generosity of disability payments compared to in-work income and increased female labour force participation, which increased the number of workers eligible for disability benefits.

Data from the United Kingdom (UK) from 2012 show that 43 per cent of disability payments fell under the category of 'mental or behavioural problems' (Beatty and Fothergill, 2015). While a broad category, it points toward increasing recognition and presentation of mental health problems. There are no data delineating type of disability for Disability Allowance in Ireland, which would be an invaluable resource for future research examining trends in the caseload of the scheme.

It is also worth noting that disability and special education needs identification have also increased radically in the education system (Kenny et al., 2020). This ties with findings from Callaghan (2017), which found that close to 20 per cent of the

[3] Callaghan (2017) estimated that if Disability Allowance growth followed population and disability trends, the caseload in 2016 would have been 107,000 as opposed to the observed 126,00.

annual inflow into Disability Allowance was for 16-18 year olds who were previously a qualified child on a separate welfare claim.

In terms of administration, Disability Allowance is a means-tested payment to individuals who have been medically verified as being affected by disability – either physical or related to mental health. The first €140 of an individual's weekly earnings (after pay-related social insurance (PRSI), pension contributions and union dues) is not accounted for in the means testing, with half of any amount earned up to €350 per week assessed and any excess over €350 assessed in full. Recipients of Disability Allowance must be aged between 16 and 66; therefore, the scheme only pertains to the working-age population. Disability Allowance is a non-contributory benefit and can be claimed indefinitely once an individual medically qualifies and remains below the relevant income limits.

In contrast to the precipitous rise of Disability Allowance, Disablement Benefit recipient levels remained stable and below 15,000 in all years from 2007 to 2019. Disablement Benefit is a contributory benefit and is paid where a person suffers loss of physical or mental faculty as a result of an accident at work or contracting an occupational disease. If injured or ill for work-related reasons, workers first avail of Injury Benefit for up to 26 weeks if they have sufficient PRSI contributions. If unable to work after 26 weeks, they transition to Disablement Benefit. The rate of payment of Disablement Benefit is determined by the severity of the loss of faculty. In Table 2.1, we show the maximum payment under Disablement Benefit, i.e. the 100 per cent rate of payment.[4]

The relatively low number of claimants of Disablement Benefit, as compared to Disability Allowance, corroborates evidence from Russell et al. (2016) which ranked Ireland the lowest of EU-15 countries in terms of work-related health problems in 2006 and 2012. This is also evident in social welfare data, as just 1,314 claims of Injury Benefit were made in 2019, and no new claims for Disablement Benefit were made between 2015 and 2019 (Department of Employment Affairs and Social Protection, 2019).

The number of claimants of Carer's Allowance rose well over twofold between 2007 and 2019. Numbers in receipt of Illness Benefit decreased from a starting level of close to 70,000 in 2007 to 50,000 in 2019. Given the nature of Illness Benefit, as an illness insurance scheme to cover short to medium term illness-related work absences, trends in this scheme may have less of a bearing on the welfare of individuals affected by disability, unless a significant portion of recipients are unable to return to work due to serious illness.

[4] For reference, loss of both hands is ranked as an accident warranting a 100% rate, whereas loss of an eye is classified as a 40% payment. Losses of faculty assessed as less than 20% are usually paid as a lump sum gratuity. Injuries assessed above 20% allow for payment of Disablement Benefit to the individual until the end of their life.

For comparison, the number of claimants of state pensions has also risen dramatically in this period, due to well documented trends in life expectancy. Unsurprisingly, jobseeker payments tend to be cyclical. Both Jobseeker's Benefit and Jobseeker's Allowance rose close to threefold between 2007 and 2010, with the caseload decreasing noticeably during the recovery period post-2015.

Table 2.1 also shows the change in headline rates of payments relating to these schemes. During the austerity period in Ireland, most social welfare payment rates were reduced: Disability Allowance, Disablement Benefit, Carer's Allowance, Illness Benefit and Invalidity Pension all saw the maximum personal rate of payment for working age applicants fall by €8 per week between 2010 to 2013. These rates of payments began to return to pre-recession levels when, in successive Budgets from 2017 to 2019, social welfare payments were increased by €5 per week. The personal rates of jobseeker payments were cut and restored in a comparable fashion. The state pension rates were not cut during the recession, which insulated the elderly during the most aggressive part of the austerity period (Watson and Maître, 2013). A key take-away from Table 2.1 is that core rates of payments for most schemes rose by around 9 per cent between 2007 and 2019, with larger increases for the Working Families Payment and the Contributory and Non-Contributory Pension. These increases are ahead of estimated price growth of 5 per cent,[5] but well behind the growth in individual market income reported in the EU Survey of Income and Living Conditions (EU-SILC) data of 24 per cent.

[5] See https://data.cso.ie/table/CPA01.

TABLE 2.1 RECIPIENTS AND CORE RATES OF SELECTED SOCIAL WELFARE PAYMENTS FROM ADMINISTRATIVE RECORDS FOR 2007–2019

Social welfare payments	2007	2010	2013	2016	2019
	Recipients per annum				
Disability Allowance	89,048	101,111	106,279	126,203	146,755
Disablement Benefit	12,874	13,721	14,226	14,342	13,938
Carer's Allowance	33,067	50,577	57,136	70,459	84,028
Illness Benefit	70,404	81,253	58,990	54,492	49,313
Invalidity Pension	53,956	50,766	53,196	55,532	58,168
Jobseeker's Allowance	80,268	261,850	294,570	203,680	123,633
Jobseeker's Benefit	59,167	123,457	51,881	37,025	34,464
Working Family Payment	22,823	28,223	44,159	57,567	53,104
OPFP/JST	85,084	92,326	78,753	54,897	54,680
State Pension (Contributory)	237,599	280,419	329,531	377,062	431,224
State Pension (Non-Contributory)	97,726	97,179	95,801	95,211	94,854
	€ per week, headline personal rate				
Disability Allowance	185.8	196	188	188	203
Disablement Benefit	216.9	227	219	219	234
Carer's Allowance	200	212	204	204	219
Illness Benefit	185.8	196	188	188	203
Invalidity Pension	185.8	196	188	188	203
Jobseeker's Allowance	185.8	196	188	188	203
Jobseeker's Benefit	185.8	196	188	188	203
Working Family Payment:					
1 child	80.4	96	96	99	105
4 children	224.4	286.8	286.8	292.8	292.8
8 children	446.4	571.2	571.2	577.2	577.2
OPFP/JST	185.8	196	188	188	203
State Pension (Contributory)	209.3	230.3	230.3	233.3	248.3
State Pension (Non-Contributory)	200	219	219	222	237

Source: Various annual reports of the Statistical Information on Social Welfare Services published by the Department of Employment Affairs and Social Protection.
Notes: OPFP = One Parent Family Payment; JST = Jobseeker's Transitional Payment.

2.2 A PROFILE OF HOUSEHOLDS AFFECTED BY DISABILITY

This section provides a profile of both individuals and households affected by disability and those not affected by disability in 2007 compared to 2019 using EUROMOD, the harmonised European microsimulation model linked to EU-SILC data.

Disability, as a concept, has evolved over time. There has been a shift in focus in recent years away from a stylised medical model of disability towards a social model. Cullinan et al. (2011) document this paradigm shift and highlight that the

traditional medical model classified individuals with disabilities as having an impairment which precluded them from mainstream social activities. By contrast, a social model of disability stresses societal barriers as a limiting factor rather than the medical diagnosis. As such, disability in this context is classified as a complex function of social attitudes and structures, alongside the interaction between the person and their environment.

We consider two definitions of disability in this part of the analysis, both of which are wholly driven by available indicators in the EU-SILC data. First, we consider that any person aged 16 and over who has self-reported as being 'disabled or/and unfit to work' is affected by disability.[6] However, the sample size of sub-groups using this definition is often not large enough to report robust results. In the second, broader definition, people who are in receipt of Disability Allowance, Invalidity Pension or Illness Benefit are also considered as being affected by disability.[7] The remainder of this report shows results from the second definition. This definition combines elements of both the social and medical model of disability in that individuals either self-report their disability status or disclose it through receipt of a welfare payment for which a medical certification of being unfit to work is a pre-requisite. However, this measure does not capture those with disabilities aged under 16, as they are not asked about being permanently disabled or unfit to work, or those aged over 65 who will receive state pensions rather than disability benefits and are also likely to self-define as retired. As such, it is an imperfect measure but the best available to us in these data. At the household level, we consider any household which includes a person affected by a disability (according to the broader, second definition above) as a household affected by disability.

Table 2.2 provides summary statistics describing differences in labour market outcomes and incomes of individuals and households with and without a disability between 2007 and 2019. The data show that, in 2019, relatively fewer people aged 16-65 affected by disability were employed (43 per cent) compared to those not affected by disability (84 per cent). There are correspondingly higher inactivity rates (50 per cent) for those affected by disability compared to those unaffected by disability (10 per cent). There has been little change in either employment or inactivity rates of those affected by disability since 2007.

Workers with disabilities tend to work at comparable hours per week to workers without a disability, but at a lower hourly wage. However, since 2007, the hourly

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6 This is based on self-defined economic status. This variable is harmonised in the EU-SILC data set. In the Irish wave of SILC, individuals are asked to report their economic status in each of the past 12 months. Respondents can chose from the following categories: 1) employee, full-time; 2) employee, part-time; 3) self-employed, full-time; 4) self-employed, part-time; 5) unemployed; 6) retired/early retired; 7) disabled or/and unfit to work; 8) student; 9) home duties; or 10) other.

7 Carer's Allowance, Carer's Benefit and Disablement Benefit are included in disposable income but are aggregated with other benefits (Deserted Wife's Benefit (contributory) and Deserted Wife's Allowance (non-contributory), respite care, Diet Supplement and Guardian's Payment (contributory and non-contributory)), so we cannot identify recipients of carer's supports separately.

wage of workers with disabilities has increased at a faster rate (51 per cent) than the hourly wage of workers without disabilities (37 per cent). This sub-group was also relatively older on average, in 2019, compared to 2007 and compared to the group without disabilities. This compositional change may partly explain their faster wage progression.[8]

At the household level, the number of households affected by disability has increased by 47 per cent between 2007 and 2019, compared to an increase of 9 per cent for households not affected by disability.[9] Nominal changes to household market income have been higher for households affected by disability (46 per cent) than for households not affected by disability (18 per cent). This is likely to reflect the increase in wages earned by persons with a disability but may also reflect average changes to employment and wages for their family members. Indeed, the average number of workers per household and the average weekly hours worked per household have both grown for households affected by disability, though this has not been the case for households unaffected by disability.

Over the time period, household disposable income also increased more for households affected by disability than for households not affected by disability (21 per cent compared to 5 per cent) so that the average gap in disposable income between these household types was essentially zero in 2019. In 2019, more households affected by disability earned market income compared to 2007 and the size of such households increased, as did the number of children in each. Almost all households affected by disability were in receipt of welfare payments in the two years examined, which is directly related to how these households are defined. However, the average welfare payment increased for households affected by disability over this period but decreased for households not affected by disability. This difference is likely to be driven by a combination of changes in population eligibility for disability payments and policy parameters. The next section will identify the changes that are due solely to policy changes. The proportion of each type of household paying tax increased, albeit to a much larger extent for households affected by disability, reflecting their increased market income.

8 Future work could estimate and decompose the disability wage gap using an Oaxaca-Blinder technique to confirm or refute this explanation.

9 Using the narrower definition of households affected by disability, these figures are 42% and 13% respectively.

TABLE 2.2 SUMMARY STATISTICS FOR INDIVIDUALS WITH AND WITHOUT A DISABILITY AND HOUSEHOLDS CONTAINING/NOT CONTAINING SOMEONE WITH A DISABILITY

	2007	2019	Change (%)
A. Individual level			
No. individuals			
Not affected by disability	3,708,602	4,029,188	9
Affected by disability	635,471	935,012	47
Average age			
Not affected by disability	50.7	48.5	-4
Affected by disability	41.9	46.3	11
Employed (16-65)	**(%)**		
Not affected by disability	78.8	83.9	7
Affected by disability	41.8	42.8	2
Unemployed (16-65)	**(%)**		
Not affected by disability	4.27	3.97	-7
Affected by disability	3.94	3.67	-7
Inactive (16-65)	**(%)**		
Not affected by disability	13.55	9.56	-29
Affected by disability	50.37	50.17	0
Average weekly hours worked, in-work	**Nominal €**		
Not affected by disability	37.0	35.5	-4
Affected by disability	34.0	34.7	2
Average hourly wage, in-work	**Nominal €**		
Not affected by disability	18.7	25.7	37
Affected by disability	14.3	21.6	51
B. Household level			
No. of households			
Not affected by disability	1,779,185	2,083,002	17
Affected by disability	300,962	400,286	33
Average number of household members			
Not affected by disability	2.98	2.73	-9
Affected by disability	2.90	3.22	11
Average number of children			
Not affected by disability	0.8	0.8	-10
Affected by disability	0.7	0.8	12
Average age of eldest household member			
Not affected by disability	45.2	48.1	6
Affected by disability	47.2	48.9	3
Average number of workers			
Not affected by disability	1.3	1.3	-3
Affected by disability	1.0	1.2	19

TABLE 1.2 (CONTD.) SUMMARY STATISTICS FOR INDIVIDUALS WITH AND WITHOUT A DISABILITY AND HOUSEHOLDS CONTAINING/NOT CONTAINING SOMEONE WITH A DISABILITY

	2007	2019	Change (%)
Average weekly hours worked, all in-work			
Not affected by disability	48.8	46.5	-5
Affected by disability	35.6	43.4	22
Average market income	**Nominal €, monthly**		
Not affected by disability	3,942	4,633	18
Affected by disability	2,320	3,393	46
Average disposable income	**Nominal €, monthly**		
Not affected by disability	3,811	3,995	5
Affected by disability	3,276	3,970	21
Average hourly wage, in-work	**Nominal €**		
Not affected by disability	15.4	22.4	45
Affected by disability	14.1	21.3	51
Share with market income	**%**		
Not affected by disability	88	83	-6
Affected by disability	71	72	2
Share in receipt of welfare	**%**		
Not affected by disability	79	77	-1
Affected by disability	97	99	2
Share paying income tax	**%**		
Not affected by disability	78	87	12
Affected by disability	69	79	15
Average benefits	**Nominal €, monthly**		
Not affected by disability	755	692	-8
Affected by disability	1,449	1,553	7
Average tax paid	**Nominal €, monthly**		
Not affected by disability	886	1,330	50
Affected by disability	493	975	98

Source: Authors' calculations using EUROMOD linked to EU-SILC data for 2007 and 2019.
Notes: Monetary amounts are monthly, with wages being hourly rates. All monetary amounts are in current prices and have not been adjusted for inflation. A household with someone affected by a disability is a household in which someone self-declares to be disabled and unfit for work or a household in which someone is in receipt of Disability Allowance, Invalidity Pension or Illness Benefit. Children are classified as children aged less than 14. Unemployment rates are calculated using an ILO definition of unemployment. Employment, unemployment and activity rates are as such calculated for those aged 16-65. Wages are calculated for those aged 16-65 and classified as employed.

2.3 WORK INCENTIVES FOR PEOPLE WITH A DISABILITY AND WITHOUT A DISABILITY

A large body of literature, some of which was discussed in the introduction, has examined how disability benefits affect labour force participation, and many policy makers have enacted reforms to disability insurance to encourage labour supply by improving financial incentives to work. A commonly used measure of the

financial incentive to be in paid work is the replacement rate (RR), which gives an individual's out-of-work income as a percentage of their in-work income. Low (high) numbers indicate that the financial incentive to work is strong (weak).

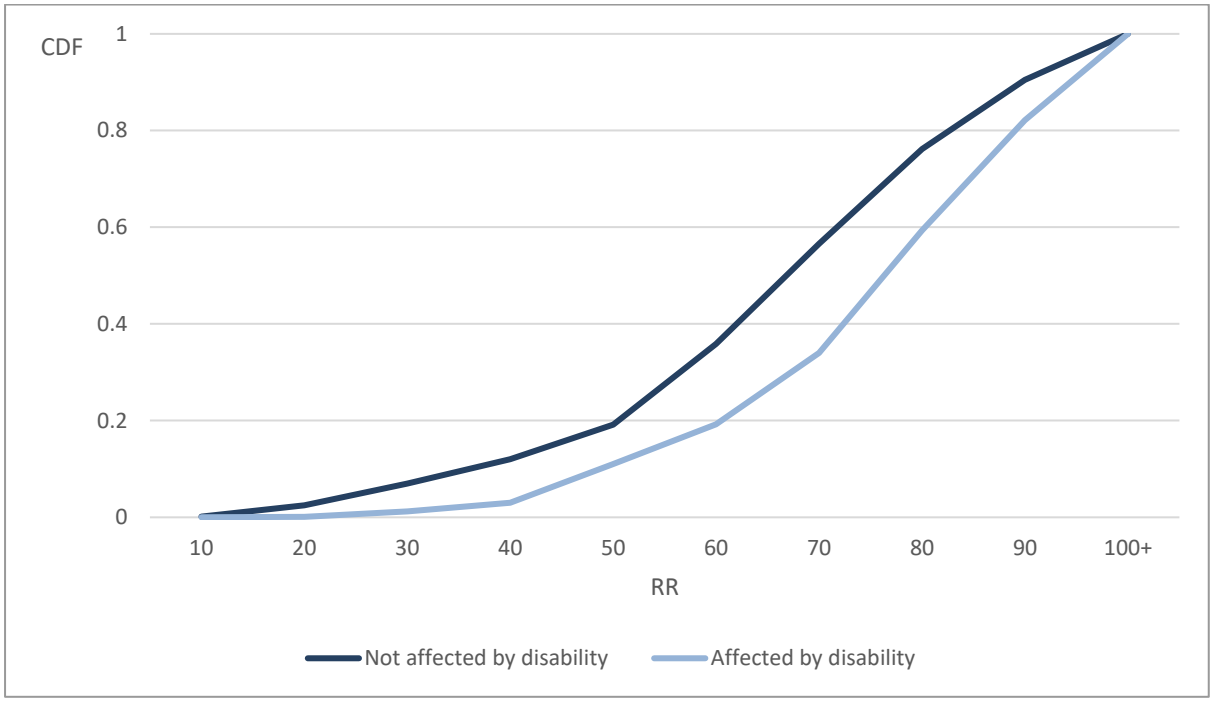
In Figure 2.1 we display the results of RR calculations for households affected by a disability and not affected by a disability in Ireland in 2019 using SWITCH, the ESRI's tax-benefit model. We do not calculate RRs for those who self-declare to be unfit for work, only those in receipt of a disability payment. An important assumption underlying this analysis is that the counterfactual wage of those out of work is the minimum wage. This is a necessary simplification as it is difficult to identify a reasonable counterfactual wage for people with disabilities who do not declare themselves to be unfit for work but do not work, as the sample size is very small.[10] We estimate that individuals in households affected by a disability tend to have weaker financial incentives to be in full-time paid employment than those in households not affected by a disability. There are relatively more households affected by disability with high RRs, indicating that a large share of their in-work income would be replaced if they were out of work. Since the personal rate of payment for Disability Allowance is comparable to Jobseeker's Benefit/Allowance, the level of available benefits is unlikely to be responsible for this result. Rather, the lower earnings of workers with a disability observed in Table 2.2 is likely to be responsible for the weaker financial work incentives observed for this group. The assumption that those out of work would receive the minimum wage if in work may also be driving part of the difference between the RR of those with a disability and those without a disability, as a larger share of the former group are not in work. However, it is still encouraging to note that there are relatively few households – either affected or not affected by disability - with RRs in excess of 90 per cent, which would indicate a very weak financial incentive to work.

To further caveat this finding, it is also important to acknowledge that this RR analysis cannot distinguish between differences in non-financial incentives to be employed; neither does it take into account access to services such as personal assistance services, which may be needed to access employment (Mac Domhnaill et al., 2020). These may differ between households affected by, and those not affected by, disability and are very difficult to quantify. It is also important to highlight that we do not model the cost of disability, which has been shown to be between 20.3 and 37.3 per cent of average weekly income (Cullinan et al., 2011). This has the implication that even in a scenario where there were no income differentials by disability status, households affected by disability would still have a substantially lower standard. This has led to suggestions that equivalence scales should be adjusted so that inequality and poverty estimates can measure the

[10] This could be relaxed in future work by using a Heckman-corrected model to predict wage rates only for those people with disabilities who do not declare to be unfit for work.

higher income requirements of households affected by disability (Cullinan et al., 2011).

FIGURE 2.1 REPLACEMENT RATES FOR INDIVIDUALS IN HOUSEHOLDS AFFECTED AND NOT AFFECTED BY DISABILITY



Source: Authors' calculations using SWITCH linked to 2019 SILC Research Microdata Files (RMF).
Notes: Simulations utilise the tax-benefit rules in place in 2019. RRs are binned into numerous categories to smooth the distribution. The y-axis plots the cumulative distribution function.

SECTION 3
Method and data

To separately identify the effect of policy changes and other factors on the income distribution of households with and without a disability between 2007 and 2019, we use EUROMOD, the harmonised European microsimulation model, linked to data from the EU Survey of Income and Living Conditions (EU-SILC) data.[11] In the first part of the analysis, we use 2007 and 2019 policy systems from the Irish component of EUROMOD to show how changes to direct tax and welfare policies have affected families with and without disabilities differently. Changes in income due to policy changes are separated from changes in income due to behavioural changes (e.g. increased employment), other demographic factors (e.g. population ageing) or wage inflation.

In order to separate income changes due to policy from other income changes between 2007 and 2019, we follow the Bargain–Callan (2010) method of decomposing income distributions. We simulate three income distributions under different policy and population assumptions. These are described in Table 3.1.

TABLE 3.1 DECOMPOSING INCOME DISTRIBUTIONS

Income distribution	Tax-benefit policy system	Population
2007	2007	2007
2007_a	2007, indexed by average 2007-2019 market income growth	2019
2019	2019	2019

Notes: Average market income growth is calculated by the authors using the 2007 and 2019 EU-SILC data and EUROMOD simulations of the 2007 and 2019 with the respective tax-benefit policy rules. The average growth rate was calculated at 24 per cent.

The counterfactual income distribution, 2007_a, is key to isolating the impact of policy from the impact of other changes to income. This scenario (2007_a) simulates what the income distribution would look like for the 2019 population under the 2007 policy system. In line with best practice in this literature, we index the 2007 tax-benefit system in line with estimated market income growth (of 24 per cent between 2007 and 2019), which is a distributionally neutral factor that

[11] The ESRI's tax-benefit model, SWITCH, was overhauled in 2020, making historical comparisons difficult. EUROMOD, for which multiple years of data and policy systems are maintained by the European Commission, is more suited to this task.

holds income inequality and poverty rates constant. This is necessary in order to avoid artificial fiscal drag or bracket creep, which would arise if we applied the parameters of a budget based on 2007 prices to a population whose income is expressed in 2019 prices; see Callan et al. (2019) for a review of indexation. Comparing the income distributions of 2019 and 2007_a gives the change in disposable income that is due to policy changes, while comparing 2007_a to 2007 illustrates the contribution of other factors which changed over the period. These include, but are not limited to, the upward trend in eligibility for disability-related payments, labour supply changes, population ageing and other demographic trends such as upskilling and wage inflation.[12] Future research could investigate these 'other' factors in more detail. As the focus of this research is policy changes, we do not attempt to further disentangle the 'other' factors.

[12] Comparing the income distribution 2007_a to 2007 shows nominal income growth over the period.

SECTION 4

Results

Figure 4.1 shows how disposable – post-tax and transfer – income changed for households affected and not affected by disability between 2007 and 2019. Households are divided into five equally sized groups (or quintiles) based on their equivalised disposable income.

Overall, disposable income has increased for both types of households over the 12-year period, by 5 per cent for households not affected by disability and 21 per cent for households affected by disability. There is substantial variation in these figures across the income distribution. For households not affected by disability, high-income households have gained relatively more while for households affected by disability, the opposite is true.

This change in disposable income is decomposed into the relative contributions of tax policy changes, benefit policy changes and 'other' effects. These 'other' effects include demographic trends such as growth in eligibility for disability payments, upskilling and population ageing, wage growth during the period and changes in labour supply.

For both types of household, the 'other' effect is positive, indicating that there has been strong income growth that is not directly attributable to policy changes. The effect is higher for households affected by disability than households not affected by disability (36 per cent compared to 17 per cent) and this difference is likely to be driven by both growth in average wages for people with disabilities outpacing that of people without disabilities and the labour supplied by households affected by disability increasing between 2007 and 2019 (see Table 2.2). The particularly high 'other' effect for Quintile 2 is explained by the expanded coverage of disability payments – there are many more households in receipt of disability payments in 2019 compared to 2007 and many of these are located in the second quintile of the equivalised disposable income distribution.

For both types of household, welfare policy changes reduced income between 2007 and 2019 compared to an income-adjusted policy, with larger effects for lower-income groups. These changes to benefit policy have impacted households affected by disability more than households not affected by disability (-7.5 per cent compared to -3.6 per cent). Although the nominal rates of payment of social welfare have increased over this period, they have not kept pace with market income growth.[13] In general terms, this results in increased income inequality between those in receipt of social welfare and those in receipt of market income.

[13] Average household market income growth between 2007 and 2019 is estimated to be 24 per cent using EU-SILC data.

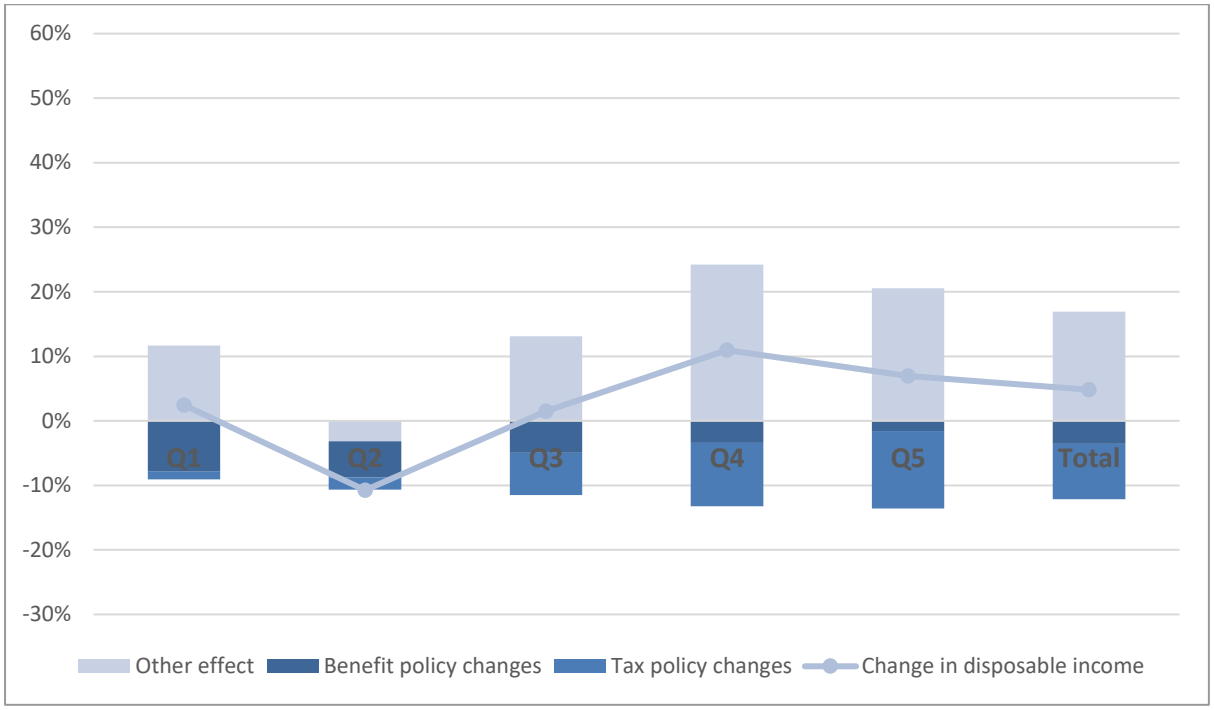
As social welfare payments represent a larger share of income for households affected by disability, the failure of welfare payments to keep pace with market income growth affected them more.

Changes to tax policy have reduced the incomes of households with and without a disability by similar magnitudes (-8.6 per cent compared to -7.4 per cent) compared to an income-indexed scenario, with the majority of the effect coming from higher-income groups. This reflects cuts to tax credits and the standard rate band, as well as the introduction of the Universal Social Charge, during the austerity period.

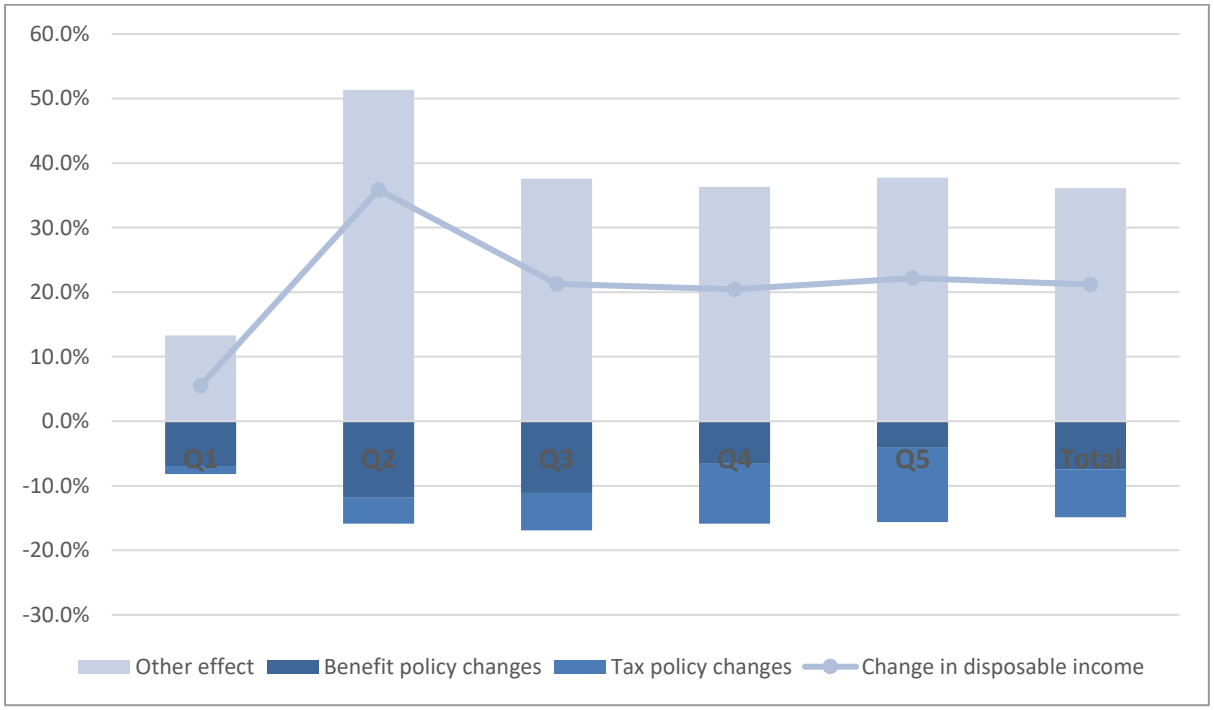
Doorley et al. (2018) examined the gender impact of budgetary policy between 2008 and 2018 and found that austerity policies resulted in income losses between 2008 and 2018 that were larger for women than for men. Comparing households not affected by disability to households affected by disability, the research presented here contributes to this evidence, in that it shows that the failure of tax and welfare parameters to keep pace with market income growth has had a greater impact on households affected by disability. However, the real income losses induced by the evolution of tax and welfare parameters between 2007 and 2019 have been more than counteracted by household market income growth. This market income growth has been stronger for households affected by disability than for households not affected by disability so that, despite real income losses due to direct tax and welfare policy, disposable incomes have increased for households affected by disability more than for households not affected by disability.

FIGURE 4.1 CHANGES IN INCOME DISTIRBUTION BETWEEN 2007 AND 2019

A. Households not affected by disability



B. Households affected by disability



Source: Authors' calculations using EUROMOD linked to EU-SILC data.
Notes: Households are divided into income quintiles using disposable income and income is equivalised using the Irish national equivalence scale.

SECTION 5

Conclusions

Employment rates of people with a disability are around one-half those of people without a disability in Ireland. Active government policy, such as the Comprehensive Employment Strategy 2015–2024, aims to increase the labour force participation of those with disabilities by improving skills, providing bridges to employment, making work pay more, improving job retention and engaging employers. The overarching ambition is to help make the labour market more accessible to those affected by disability. There has been a steady increase in the number of recipients of disability-related welfare payments in Ireland over the last few decades. Why this has occurred is somewhat unclear; previous research has suggested that only 40 per cent of the increase can be explained by policy changes and demographic trends (Callaghan, 2017). However, similar increases are also observable internationally.

Since the onset of the financial crisis, the rate of payment of disability-related schemes has not kept pace with growth in market income. When social welfare payments do not keep pace with market income growth, the purchasing power and standard of living of welfare recipients fall compared to that of workers. Given barriers to employment, social welfare represents a larger component of income for those with disabilities. For this reason and because they also have higher costs of living compared to those without disabilities, the stagnation of social welfare payment rates is likely to impact them more.

Previous research in the area of equality budgeting – the practice of examining how budgetary measures affect outcomes for different groups of the population – has focused on the gender dimension. This research, in estimating the effect of direct tax and welfare policy for households with and without disabilities, represents the first such equality budgeting exercise for Ireland.

We find that disposable – post-tax and transfer – income has grown in nominal terms for both types of household between 2007 and 2019 but at a faster rate for households affected by disability (21 per cent) than without a disability (5 per cent). We investigate the drivers of this income growth and find that, compared to an indexed 2007 policy system, changes to tax and welfare policy between 2007 and 2019 have actually reduced the income of both types of household over the period. Estimating the effect of tax and benefit policy separately, we show that tax policy changes have affected both types of household in a similar manner, reducing disposable income by 7 to 9 per cent on average, compared to an income-adjusted policy. Benefit policy, on the other hand, has reduced the income of households affected by disability by 8 per cent, or twice as much as households not affected by disability, compared to an income-adjusted policy.

Rapid nominal market income growth between 2007 and 2019 has more than counteracted these negative policy effects, aided in part by a slight increase in employment rates and a slight decrease in unemployment and inactivity rates. Wage growth has been particularly strong for workers with a disability, although average hourly wages are still lower for those affected by a disability, possibly due to compositional changes to this sub-population. Combined, these changes have resulted in growth in disposable income, which has been higher for households affected by disabilities than households not affected by disabilities.

Despite some convergence between the wages and disposable incomes of those with a disability and those without a disability, the employment gap has persisted over the last number of years and almost twice as many working age people without a disability are in work compared to people with a disability. In light of this, future attempts to equality-proof budgetary policy should consider that changes to welfare disproportionally affect households with disabilities.

This research has not examined the cost of living of households or individuals affected by disability, which is an important element for their standard of living. If the cost of living for this group has evolved differently to the cost of living for those without a disability, this too will have implications for any attempt to equality-proof budgetary policy. A further caveat to this research is how disability is measured. More detailed measures for households affected by disability would be very useful in survey datasets. Equally, when considering the work incentives faced by those affected and unaffected by disability, we could not model the effect of non-financial factors, such as access to appropriate transport to and from work, which may vary across the population.

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