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Headline Poverty Target Reduction in Ireland and the Role of Work and Social Welfare

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

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SWITCH Simulating Welfare Income Tax Childcare and Health

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We are grateful to the Central Statistics Office for providing access to the Survey of Income and Living Conditions, on which the SWITCH tax-benefit model is based. SWITCH is based on the EUROMOD platform. Originally maintained, developed and managed by the Institute for Social and Economic Research (ISER), since 2021 EUROMOD is maintained, developed and managed by the Joint Research Centre (JRC) of the European Commission, in collaboration with EUROSTAT and national teams from the EU countries. We are indebted to the many people who have contributed to the development of EUROMOD. The SWITCH model is developed and maintained with funding from the ESRI's Tax, Welfare and Pensions Research Programme – supported by the Departments of Public Expenditure and Reform; Social Protection; Health; Children, Equality, Disability, Integration and Youth; and Finance – which is gratefully acknowledged.

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Minister's foreword

The Roadmap for Social Inclusion 2020-2025 ('the Roadmap'), which is the national strategy for poverty reduction and improved social inclusion in Ireland, includes the headline target of reducing the rate of consistent poverty to 2% or lower by 2025. It is welcome to see progress towards this goal, with consistent poverty falling to 4% in the most recent official poverty data for Ireland (SILC 2021). However, there is still work to be done in order to reach this ambitious target.

When commissioning this piece of research, I was eager to progress our efforts to reach our target by eliciting more specific pathways of getting to our destination. Poverty targets have always proven difficult to attain, in part because of the limitations of the annual Government budget process but also the relative nature of our poverty measurement. Commitments in the Roadmap for Social Inclusion on benchmarking aim to assist in this regard. But it is also hoped that this report will bridge some of the information gap between the target and the process of getting to the target.

This report examines how increases (€100m and €1bn) in different types of social welfare package are likely to impact poverty rates. It also examines the likely impacts of increases in employment of various under-represented groups in the labour market.

As Chair of the Roadmap Steering Group, I see this research as a valuable addition to the evidence base as to what are the most effective means of reducing poverty. It will offer a clearer path in the journey to reducing poverty. It will also help inform the implementation of the Roadmap and its Mid-Term Review.

I would like to thank the research team in the ESRI for their detailed analyses in producing this paper: Helen Russell, Bertrand Maître, Karina Doorley, Theano Kakoulidou and Seamus O'Malley. I also want to acknowledge the contribution of the Social Inclusion Division in the Department of Social Protection which managed the study through to its publication.

Joe O'Brien, T.D.

Minister of State with responsibility for Social Inclusion

Réamhrá ón Aire

Cuimsítear i dTreochlár um Chuimsiú Sóisialta 2020 – 2025 (‘an Treochlár’), an straitéis náisiúnta do laghdú bochtaineachta agus cuimsiú sóisialta feabhsaithe in Éirinn, an phríomhsprioc a bhaineann le ráta na bochtaineachta comhsheasmhaí a laghdú go dtí 2% nó níos ísle faoin mbliain 2025. Cúis dóchais an dul chun cinn atá á dhéanamh i ndáil leis an sprioc seo, agus tá bochtaineacht chomhsheasmhach laghdaithe go dtí 4% i sonraí bochtaineachta oifigiúla is déanaí na hÉireann (SILC 2021). Tá obair fós le déanamh, áfach, chun an sprioc uaillmhianach seo a chomhlíonadh.

Nuair a bhí an píosa taighde seo á choimisiúnú agam bhí fonn orm dlús a chur leis na hiarrachtaí atá á ndéanamh againn ár sprioc a chomhlíonadh trí chonairí níos sonraí a shoiléiriú chun cabhrú linn ár gceann scríbe a bhaint amach. Bhain deacrachtaí riamh anall le spriocanna bochtaineachta a chomhlíonadh, mar gheall ar na srianta a bhaineann le próiseas buiséid bhliantúil an Rialtais agus nádúr an mhodha atá in úsáid againn chun bochtaineacht a thomhas. Tá sé mar aidhm le gealltanais maidir le tagarmharcáil sa Treochlár um Chuimsiú Sóisialta cabhrú linn sa chomhthéacs seo. Ach táthar ag súil freisin go gcabhróidh an tuarascáil seo chun cuid den bhearna eolais idir an sprioc agus an próiseas a bhaineann leis an sprioc sin a chomhlíonadh a dhúnadh

Scrúdaítear sa tuarascáil seo an tionchar is dócha a bheidh ag méaduithe (€100m agus €1bn) ar chineálacha difriúla pacáistí leasa shóisialaigh ar rátaí bochtaineachta. Chomh maith leis sin, scrúdaítear an tionchar is dócha a bheidh ag méaduithe ar fhostaíocht grúpaí faoi ghannionadaíocht sa mhargadh fostaíochta.

Mar Chathaoirleach Ghrúpa Stiúrtha an Treochláir, glacaim leis go gcuireann an taighde luachmhar seo leis an mbonn fianaise atá ann maidir leis na modhanna is éifeachtaí chun bochtaineacht a laghdú. Soláthróidh sé conair níos soiléire le haghaidh na n-iarrachtaí a dhéanfar bochtaineacht a laghdú. Chomh maith leis sin, cabhróidh sé le bonn eolais a sholáthar chun an Treochlár agus a Athbhreithniú Lár Téarma a chur i bhfeidhm.

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Joe O’Brien, T.D.
An tAire Stáit atá freagrach as Cuimsiú Sóisialta

EXECUTIVE SUMMARY

Introduction

Independent of the level of economic development and the economic circumstances of the time, all welfare states face challenges in preventing and tackling poverty. In response to these, many welfare states have developed and implemented anti-poverty strategies. In this regard, the Government of Ireland has a long history of anti-poverty strategies, launching its first national anti-poverty strategy in 1997. This strategy, as well as the successive ones, included headline poverty targets. The current headline poverty target aims*: "… to reduce the national consistent poverty rate to 2% or less and to do so over the period up to 2025."* (Government of Ireland, 2020).

The consistent poverty measure identifies people that are at risk of poverty (AROP) (share of people with an equivalised income below 60% of the national median income) and are experiencing basic deprivation (enforced lack of at least two basic goods and services out of a list of 11).

This study sets out to assess how changes in employment and social transfers might contribute to reaching these targets. As consistent poverty combines two different metrics, we cannot simulate the direct effect of policy changes on consistent poverty; instead, we examine the two component parts. The study addresses the following research questions:

1. How has the level of AROP and deprivation, and their overlap, changed over time and across social risk groups?
2. How would a (universal) increase in the value of social transfers influence levels of deprivation?

3. How would reforms to specific social transfers and packages of transfers influence levels of AROP?
4. How would changes in the level and hours of employment among different groups influence levels of AROP?

This study draws on all the waves of the Survey of Income and Living Conditions (SILC) from 2004 to 2019 and the SWITCH microsimulation model to address these questions.

The relationship between at risk of poverty (AROP) and deprivation over time

The stronger the overlap between income poverty and deprivation, the more likely it is that policy measures to address income poverty will also reduce deprivation and therefore consistent poverty. Over the period 2004 to 2019, the level of deprivation has fluctuated much more than the AROP measure. A close examination of the overlap of deprivation with the AROP measure shows that during the Great Recession, the proportion of people AROP who also reported deprivation increased. Consequently, the consistent poverty rate increased almost two-fold during that period.

Lone parents and their children, working-age adults with disabilities and their children experienced distinctively high rates of income poverty, deprivation and consistent poverty, and in 2019 these two groups accounted for just over half of those in consistent poverty. These groups also report the highest degree of overlap between deprivation and income poverty. In 2019, 57 per cent of lone parents who are income poor were also deprived, and it is 49 per cent in the case of people living in a household of working-age adults with disabilities. Therefore, policies addressing income poverty among these groups are also likely to affect many of those in deprivation and thus their exposure to consistent poverty.

The impact of social transfers on deprivation

The analysis in the report applies methods used in previous research (Notten & Guio 2016, 2020) to predict households' level of deprivation based on a range of individual and household characteristics. Using these models, we then assess the effect of a universal increase in the value of social transfers of five per cent on rates of deprivation. The results show that the most vulnerable benefit most from the increases in social transfers even though the reduction in deprivation is quite modest. An increase of five per cent in the value of total social transfers reduces deprivation by almost 0.8 percentage points for people in jobless households (the equivalent of a percentage reduction of 1.6%) and 0.5 for lone parents and their children (a percentage reduction from 1.2%).

Social transfers, employment policy changes and income poverty

Using SWITCH, the ESRI's microsimulation model, the report explores the impact of changes in labour supply and wages, as well as social transfer reforms that are likely to have an impact on the level of AROP.

The results are calculated for 2022. Using specified tax and welfare system parameters as at January 2022, the simulation estimates an overall AROP rate of 14 per cent and rates of 12, 13 and 16 per cent for the elderly, the working-age population and children respectively.

We first simulate an increase in labour force participation for households with low market attachment and an increase in wages for those at work on low pay across a range of scenarios. Regarding people (re-)entering the workforce, we assign to them the wage rate of working people sharing the same characteristics, while for those already working who are earning less than the hourly living wage of €12.90 for 2022, we bring them up to this rate. The simulations do not consider additional costs of employment such as childcare and travel. The results are as follows:

- Providing employment to the head of jobless households reduces the overall AROP rate by two percentage points and by three percentage points for children.
- Increasing the labour market participation and hours of work of the head of a household containing a person with disabilities to match the structure of labour force participation and hours of work of workers from households that do not contain a person with disabilities has little effect. It reduces the overall AROP by 0.2 percentage points.
- Matching the labour market participation and hours of work of married women to those of men has strong effects. It reduces the AROP rate for children by five percentage points and the overall AROP rate by almost three percentage points.
- Matching the labour market participation and hours of work of lone parents to those of similar single individuals without children has almost no effect on the overall AROP rate.
- Introducing a mandatory living wage to €12.90 per hour has very little effect on the overall AROP rate, reducing it by 0.5 percentage points.

The report then examines the effect of a range of reforms to social transfers that are likely to impact the most on the AROP rate for the overall population, but also for the adult, elderly, children and rental tenants sub-populations. These benefits were chosen for their ability to target each of the sub-populations.

We explore the impact of two scenarios of welfare reforms. The first scenario simulates an increase to the rates of specific benefits corresponding to an annual extra spend of €100 million by the Exchequer. This spending increase leads to increases in specific benefits of between 3.5 per cent and 11 per cent for most simulations. The second scenario simulates the equivalent of an annual reform costing €1 billion.

Welfare reforms of €100 million

- Increasing Child Benefit has a very limited effect on the AROP rates, leading to a poverty reduction of just 0.1 percentage points overall and 0.3 for children.

- An increase in Qualified Child payments (QCI) is slightly more effective at reducing overall poverty (-0.3 percentage points) and has a larger effect on child poverty (-0.8 percentage points) but all effects remain quite weak.

- Increasing the Living Alone Allowance or the Fuel Allowance reduces poverty by around 0.3 percentage points overall, with particularly large effects on elderly poverty (-2.2 percentage points).

- Increasing the rate of payment of *core* working-age benefits[1] (Jobseeker's Allowance, Jobseeker's Benefit, One-Parent Family Payment, Jobseeker's Transitional Payment, and Disability Allowance) or Qualified Adult payments (QAI) reduces the overall AROP rate by around 0.3 percentage points. The core benefits reform has a larger effect on child poverty and renters (-0.5 percentage points), while the QAI affects elderly poverty more (-0.8 percentage points).

- Increasing the income limit for the Working Family Payment (WFP) has the largest effect of any of the measures considered above, reducing the overall AROP rate by 0.5 percentage points, the child poverty rate by one percentage point and by 1.1 percentage points for people who rent.

Welfare package reforms of €1 billion

Four sets of reforms are examined:

[1] For the purposes of this paper, core benefits refer to the major working-age benefits listed. Certain other working-age benefits were excluded (e.g., Invalidity Pension) due to their relatively smaller coverage.

- Child benefit increase reform.
- Children's reforms consisting of changes to the Qualified Child and the Working Family Payment.
- Elderly reforms include changes to the Living Alone Allowance, Fuel Allowance and Qualified Adult Increase.
- Working-age adult reforms include increase to core benefits (as in the previous section).

The main findings from the simulations can be summarised as below:

- The child benefit reform is still the least effective at reducing the overall AROP rate (-1.5 percentage points overall) but has a more substantial impact on the child poverty rate (-3.3 percentage points).
- The children's reforms have the greatest effect on the overall AROP rate (-2.3 percentage points) and child poverty rate (-4.8 percentage points). The reduction for renters is also large (-4.4 percentage points).
- The elderly reforms reduce overall poverty by 1.9 percentage points, and elderly poverty by 5.7 percentage points.
- Working-age adult reforms reduce the overall poverty rate by 2.1 percentage points with an even distribution across groups of the population (except the elderly). The largest reduction in poverty is for renters (-4.5 percentage points).

Overall, we find that the children's package and the child benefit reforms have the strongest impacts on child poverty (decreased by 4.8 and 3.3 percentage points respectively) and the working-age reforms and children's package have the largest effect on poverty for people living in private rental accommodation (4.5 percentage points each).

Implications for policy

The findings from the report provide valuable information about the nature and scale of policy interventions required to reduce the overall level of poverty as adopted in the national poverty targets. The findings also highlight the relative importance of access to employment and social welfare to tackle poverty.

Of the labour market reforms considered, the most effective measure in reducing poverty was increasing female labour force participation and hours worked to match those of men with similar characteristics. Contrary to expectations, an increase in labour market participation of lone parents, or of the head of household in a household with a person with a disability, had little effect on income poverty rates overall. This is due to the relatively small sizes of these populations. While reforms may significantly improve the living standards of sub-groups, such as those with a disability and lone parents, the effect on the total AROP rate can be small. Nevertheless, we can expect these labour market changes to have a more significant impact on consistent poverty, first because both groups with their children represent half of those in consistent poverty in 2019, and second because employment status is strongly associated with deprivation.

While the purpose of the report was not to identify the range of policy actions that would increase labour market participation, there is an extensive body of evidence showing the importance of supports such as childcare supports, adult care supports, education, training, pre-employment and job supports for those that are currently excluded (Byrne & Murray, 2017; Kelly & Maître, 2021; Millar & Crosse 2016).

The findings from the simulation exercises on social transfers reforms show that transfers targeting children and their families (Qualified Child Increase, Working Family Payment) produce the largest reduction in child poverty as well as for the overall population and people living in rented accommodation,

a group that has experienced a sharp increase in income poverty over recent years.

It is likely that a package of measures targeting both employment and social transfers is needed to address poverty reduction targets. Investment in services such as health, education and housing, not considered in the current study, also provides leverage for governments to reduce poverty, as these policies have a significant impact on the standard of living of low-income households.

Chapter 1: Social Inclusion and Poverty Reduction

1.1 Introduction

Poverty and social exclusion are major concerns for all countries, poor or wealthy, as the burden of poverty has short and long-term harmful effects on individuals, communities and societies at large. Many welfare states, such as Ireland, have developed anti-poverty strategies to tackle poverty and social exclusion. Setting targets for the reduction of poverty has been identified as an important means of focusing political attention and mobilising action (Nolan, 2006).

1.2 Setting targets for poverty reduction

Since 1997, the Government of Ireland has set a series of targets for poverty reduction in Ireland. The first national strategy against poverty and social exclusion, *National Anti-Poverty Strategy* (NAPS), included a global target for the reduction in poverty to be achieved over the period 1997-2007, as well as a set of supplementary targets (education, unemployment, etc.).

The Irish Government adopted the following definition of poverty in the NAPS 1997:

> *"People are living in poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources, people may be excluded and marginalised from participating in activities which are considered the norm for other people in society."* (Government of Ireland, 1997)

The NAPS 1997 was followed by the National Action Plan for Social Inclusion 2007-2016 (then revised in 2017), which included a target to reduce the number of people experiencing consistent poverty to between two and four per cent by 2012 and eliminating consistent poverty by 2016.[2] The overall poverty target was then reframed in 2012 and became *"to reduce consistent poverty to 4 per cent by 2016 (interim target) and to 2 per cent or less by 2020, from the 2010 baseline rate of 6.3 per cent."* (Department of Social Protection, 2021).

Most recently, in January 2020, the Government adopted the *Roadmap for Social Inclusion*, *2020-2025*. The headline poverty reduction target of the Roadmap is to reduce the **national consistent poverty rate to 2 per cent or less of the population by 2025 from 5.6 per cent in 2018**. The measure of consistent poverty identifies people that are both AROP and are reporting basic deprivation (see section 1.5 below for a detailed description of both measures). There is also a reiteration of the commitment in the previous national action plan to lift 70,000 children (aged 0-17 years) out of consistent poverty by 2020. There are also targets relating to housing and employment.

The Roadmap also includes a set of 'EU targets and measures', such as a target to reduce the percentage of the population that are AROP (AROP) after social transfers, from 14.9 per cent in 2018 to 12.8 per cent in 2025. Other targets are based on the European Commission measure of at risk of poverty and exclusion (AROPE), which combines income poverty, material deprivation and household worklessness.[3] For example, there is a commitment to reduce the AROPE for children under 18 years for 23.9 to 16 per cent in 2018, and for people with disabilities from 36.9 per cent to 28.7 per cent (Government of Ireland 2020, Table 1A). The Roadmap also

[2] In 2006, the ESRI revised the former consistent poverty measure by replacing and adding new deprivation items, going from an eight-items to an 11-items measure. The measure was adopted by the Irish Government in 2007.

[3] The AROPE indicator identifies people who are either living in income poverty (below 60% of the median household income) or who are severely materially deprived (lacking at least four out of nine EU deprivation items) or are living in a household with a very low work intensity. For further details, see Eurostat (2021).

outlines ambitions in terms of Ireland's ranking within the EU on the social inclusion indicators.

These EU poverty reduction targets are connected to wider EU-level commitments contained in the *Europe 2020 Strategy* which was adopted by the EU in 2010 (European Council, 2010) The strategy included a headline target to lift at least 20 million people out of the risk of poverty or social exclusion by 2020 from a 2008 baseline, and each country committed to a numerical target for reducing AROPE in their country.

The successor to *Europe 2020* is the *European Pillar of Social Rights Action Plan.* This sets a target to reduce the number of people AROP or social exclusion across the EU by at least 15 million by 2030, of whom at least five million should be children (European Commission 2021). The Commission has called on Member States to define their own national targets to meet these commitments.

To track progress towards meeting national and European targets and sub-targets on social inclusion and poverty reduction, the Irish Government publishes annual Social Inclusion Monitors (e.g., Department of Social Protection, 2021).

In the context of these commitments, this report aims to assess how specific reforms to social transfer policies and changes to levels of employment and wages among different groups would reduce AROP and contribute towards poverty reduction targets. This is carried out through micro-simulation using SWITCH, the ESRI's tax-benefit model. Unlike income, the second element of consistent poverty – material deprivation – does not share a common metric with social transfers and market income. Therefore, it is more difficult to assess the impact of policy changes. We thus also seek to better understand the relationship between the AROP and the basic deprivation measures, and to apply an innovative technique to assess the impact of broad changes in social transfer values on material deprivation.

1.3 Social transfers and income poverty

Social transfers policies are among the core elements of all welfare states. The distribution of social transfers to the overall population or to a specific targeted group can be operated in cash via the distribution of income, or in kind via the provision of services. In this report we focus on the effect of the distribution of cash benefits. The redistribution of income to households and individuals via social transfers and taxation plays a central role in tackling poverty and reducing income inequality (Atkinson, 1995; Esping-Andersen & Myles, 2009; Causa & Hermansen, 2017). Social transfers are essential instruments to support households and individuals across the life cycle (child benefits, old age pension) as well as when socio-economic circumstances change (unemployment benefits, illness/injury benefits) (Causa & Hermansen, 2017).

Previous research in Ireland and in Europe has evaluated the effectiveness of social transfers policies by comparing the AROP before and after social transfers. In Ireland, the Central Statistics Office (CSO) figures from SILC 2019 show that the AROP rate before all social transfers is 41 per cent and falls to less than 13 per cent after all social transfers, that is a reduction of 69 per cent.[4] As a comparison, in 2019, the EU27 AROP before social transfers was 43 per cent and 17 per cent after social transfers, a reduction of 60 per cent from the baseline poverty rate. Across a longer period covering most of the Great Recession, Watson and Maître (2013) found that social transfers reduced the pre-transfer poverty rate (AROP) by between 53 per cent in 2004 and 71 per cent in 2011. Watson and Maître (2013) found also that social transfers reduced 84 per cent of the poverty gap in 2004 (the difference between market income and the income poverty threshold) and 88 per cent of the gap in 2011.

[4] These results are almost identical in SILC 2020 (CSO, 2021).

There is also a large body of international comparative studies that looks at the relationship between social transfers and poverty (Cohen-Solal et al.,1999; Marlier et al., 1999; Atkinson, 2000; Caminada & Goudswaard, 2009; Bibi & Duclos, 2009; Eurostat, 2010). Most studies find that there is a strong relationship between the level of social expenditure and the poverty level. In general, when the level of social expenditure is high, the poverty level is low (Atkinson, 2000; Förster & d'Ercole, 2005; Leventi at al., 2018; Miežienė & Krutulienė, 2019). Using the European Community Household Panel (ECHP), Head et al. (2001) examined the impact of social transfers on poverty and inequality across thirteen EU Member States. While they found that social transfers reduced income poverty, the effects were more significant in countries with large spending on social transfers (Belgium, Denmark, the Netherlands) and lower in low-spending countries (Greece, Germany). The authors found that the level of expenditure, the extent of means-testing benefits and the distribution of expenditure across different types of transfers (non-pension and pension transfers) all contributed to the reduction of poverty and inequality.

Longford and Nicodemo (2010), using the EU-SILC data, found that Ireland was among the countries where the social transfer systems was most effective at lifting people out of poverty; more than half of those AROP in Hungary, Sweden, Finland, Ireland and Denmark were removed from this risk as a result of social transfers. Also using the EU-SILC data, Miežienė and Krutulienė (2019) drew similar conclusions, finding that Ireland and some Scandinavian countries were the most effective countries in alleviating poverty in spite of Ireland having the lowest level of social expenditure as a percentage of Gross Domestic Product across the EU.[5]

Comparing the structure of welfares systems and their impact on poverty alleviation in five countries (Canada, Germany, Sweden, the UK, the USA), Nelson (2004) found that poverty alleviation was greatest in Sweden, which combined universalism and greater generosity of benefit levels, and lowest

[5] The specificity of the Irish economy makes that GDP might not be the most appropriate measure to estimate the extent of social expenditure.

in the US. Decomposing the post-transfer poverty reduction into the parts due to means-tested benefits, non-means-tested benefits and combined effects, Nelson finds that the high degree of redistribution in the Swedish and German welfare states was mainly due to the structure of non-means-tested provisions. In the UK and Canada, means-tested benefits played a greater role in poverty reduction and universal benefits were less effective. In the UK, especially at lower poverty thresholds, the combination of means-tested and non-means-tested benefits was necessary to lift households out of poverty. Focusing also on the specific impact of some benefits on poverty reduction, Miežienė and Krutulienė (2019) found that transfers targeting children and the family had the greatest overall impact on poverty reduction, compared to other social transfer types.

1.4 Social transfers and deprivation

While there is some research exploring the relationship between income and material deprivation (Fusco, Guio & Marlier, 2010; Whelan & Maître, 2006; Perry, 2002), there is very little research on the impact of social transfers on material deprivation. This is partly due to the different metric i.e., we cannot simply add the effect of a social transfer measured in monetary value directly to an individual's deprivation score based on a list of deprivation items. In addition, the relationship between household income and material deprivation is difficult to formalise, as the extent of overlap between the two measures is not perfect and can vary extensively across countries (Nolan & Whelan, 1996). The experience of material deprivation is the product of the cumulative effect of many factors interacting. These include current income, wealth, indebtedness, savings capacity, access to non-financial resources, the general needs of the household (childcare, elder care, and family size) and individual resource allocation decisions. Therefore, the effect of income or social transfers on deprivation levels is difficult to predict. For example, Nolan and Whelan (1996) found that current household income was a weak indicator of material deprivation for some groups of the population, such as older people, people living in rural areas and the self-employed.

The pioneering work of Notten and Guio (2016; Notten, 2015, 2016, 2020) has however contributed to the formalisation of the relationship between social transfers and material deprivation. Using statistical modelling, Notten and Guio simulate the impact of various social transfer increases on the level of material deprivation across 32 EU-SILC countries. In the context of the EU 2020 poverty strategy to lift 20 million people out of poverty, the authors simulated a modest universal increase of social transfers of €150 and then of €1,500 (in Purchasing Power Standard). The increase of both social transfers reduced deprivation but with large variation across countries. Overall, they found that the small increase of social transfers reduces the number of people in severe material deprivation by 876,000, while it becomes 8.6 million with the largest increase.

Looking specifically at the relationship between social assistance and material deprivation across Europe, Nelson (2012) found that countries with a higher level of social assistance benefits reported lower levels of material deprivation. Based on the methodology developed by Notten and Guio (2016, 2020), Maître, Privalko and Watson (2020) assessed the impact of cash benefits and benefits-in-kind on the reduction of material deprivation. They focused on the impact of access to primary health care services, childcare and housing transfers. Housing transfers were associated with the largest reduction in the level of deprivation and access to primary health care services the least. The impact of cash and non-cash benefits was more beneficial to lone parents and people with disabilities than it was for people aged 65 and over (Maître, Privalko & Watson 2020).

1.5 Data and measurement

The report is based on the analysis of the 2019 Survey of Income and Living Conditions (SILC). In Chapters 3 to 5, the SWITCH analysis also uses SILC 2019 but with simulation results for 2022. The purpose of Ireland's SILC is to provide individual-level and household-level statistics on income, living standards, poverty, deprivation and inequality (CSO, 2017:87). SILC

includes detailed individual and household income information regarding market income (labour income, capital income, private pensions, other income) as well as detailed components of social transfers (unemployment benefits, disability benefits, old age benefits etc.). We can therefore isolate from the total disposable household income the total amount of social transfers received by households for the purpose of our analysis. One important factor to consider for the rest of the analysis is that while the SILC interviews of households are spread throughout the year, the income reference period is the 12 months prior the date of interview. However, the questions about material deprivation generally relate to the time of the interview.[6]

1.5.1 Income poverty, basic deprivation and consistent poverty

The measure of at risk of poverty is based on the disposable household income i.e., household income after tax and social transfers. The measurement of AROP takes account of household size and composition (number of adults and children in the household) by using an equivalence scale. This involves an adjustment to income so that we can compare incomes of households that differ in size and composition. The Irish national equivalence scale gives a weight of 1 for the first adult in a household, 0.66 for each subsequent adult (over the age of 14) and 0.33 for each child (younger than 14). Equivalised disposable household income is therefore the household disposable income divided by their corresponding household equivalence scale. A household is AROP if its equivalised disposable household income is below 60 per cent of the median equivalised income.

During the course of the SILC interview, the CSO interviewer asks the person answering the household questionnaire a wide range of questions relating to the ability of the household to afford access to some basic goods and services and to have social interactions which are considered the norm for people in Ireland.[7] Only a small number of individual deprivation

[6] However, for some questions the period covered relate to the last 12 months.
[7] For example, the question might have the following format “Does each household member...?” or “Does the household…?”

questions are asked to people aged 16 and over and we select the answer of the head of household.[8] The answers about the household and the head of household are then attributed to all members of the household. The ESRI used 11 of these deprivation items to develop the official measure of basic deprivation to capture enforced absence of basic goods and services as described below (Whelan & Maître, 2007).

The eleven items are:

- Two pairs of strong shoes
- A warm waterproof overcoat
- Buy new (not second-hand) clothes
- Eat meal with meat, chicken, fish (or vegetarian equivalent) every second day
- Have a roast joint or its equivalent once a week
- Had to go without heating during the last year through lack of money
- Keep the home adequately warm
- Buy presents for family or friends at least once a year
- Replace any worn out furniture
- Have family or friends for a drink or meal once a month
- Have a morning, afternoon or evening out in the last fortnight for entertainment.

We consider people who are living in a household that is unable to afford two or more of the listed items to be experiencing basic deprivation. This is the measure used for calculating the deprivation rate as reported annually by the CSO as well as in the Social Inclusion Monitor publications.

Finally, we use the measure of consistent poverty as developed by the ESRI (Whelan & Maître, 2007) and used in the successive national anti-poverty strategies (NAPS 97, National Action Plan for Social Inclusion 2007-2017, Roadmap for Social Inclusion). The measure of consistent poverty is based

[8] There is only one individual deprivation item from the head of household used in the measure of basic deprivation (going without heating).

on the AROP and the basic deprivation measures. A household is in consistent poverty if the household is AROP and is deprived on the basic deprivation measure (lacking at least two items out of the eleven).

The successive anti-poverty strategies have formulated headline poverty targets using the consistent poverty rate. The composite nature of the consistent poverty measure means that we cannot evaluate the direct impact of social transfers on this measure but the analysis in the report breaks down the effect on each component separately, namely the AROP and basic deprivation measures, when possible.

1.5.2 Identifying vulnerable groups – Social risk groups

The literature on poverty shows that there is an overwhelming consistency in the groups of the population across countries that are living in poverty and social exclusion (Watson et al., 2018; Chzhen & Bradshaw, 2012). In this report, we are particularly interested in the impact of social transfers lifting these groups out of poverty and deprivation within the context of Ireland's overall poverty target reduction.

In earlier work, which examined the evolution of income poverty and deprivation over the life cycle, Watson et al. (2016) identified social risk groups as those who differ in their risk of poverty due to non-social class, personal, or family factors that restrict their capacity to meet their needs through the market. There are three drivers of social risk:

1. *Life course stage:* Children and people older than working-age are vulnerable to social exclusion and deprivation because of reduced (or no) access to employment in their own right. Young people aged 18-29 also have lower access to the employment due to education participation and the disadvantage faced by entrants to the labour market.

2. *Personal resources:* Illness or disability potentially limits a person's work capacity. Further, illness and recovery involve additional costs in treatment, medication, and aids (Cullinan, Gannon & O'Shea, 2013; Indecon, 2021). Disability may also be penalised in the labour market through discrimination or unaccommodating facilities (Banks et al., 2018).

3. *Non-work caring responsibilities:* responsibility for childcare or care of others limits a person's capacity to engage in employment.

From these drivers the following social risk groups are identified and used in the current research:

- Lone parents and their children
- Working-age adults and their children living in households where at least one working-age member has a disability
- Other children (aged under 18)
- Young adults (aged 18 to 29)
- People aged over 65
- Other working-age adults 30-64 years (the reference group).

In addition to these social risk groups, we explore poverty alleviation among people living in jobless households, as they are particularly exposed to poverty and social exclusion.[9] Ireland is among the European countries where the rate of people living in (quasi-)jobless households is one of the highest, at 12 per cent in 2020 compared to the EU 27 average of nine per cent. Eurostat figures for 2020 show that 47 per cent of people living in (quasi-)jobless[10] households are AROP in Ireland compared to 62 per cent

[9] We define jobless households as those where no one of working-age (18 to 65) is at work excluding from the calculation people aged 18 to 24 whose main activity is education as well as people of working-age with disabilities. People with disabilities are excluded as we do not have enough information to know if they are fit to work.

[10] We use the term 'quasi' because some of the household members can be employed for a short number of hours. The EU measure includes those with very low work intensity defined as households where members of working-age worked were employed for 20 per cent or less of their total work-time potential during the

in the EU27. The relatively large size of the jobless household group and associated high poverty rates is a matter of concern for policymakers in Ireland.

1.6 Report Structure

The remainder of the report is structured as follows:

- In Chapter 2 the relationship between income and basic deprivation over time and across groups is examined and the impact of a five per cent increase in the value of social transfers on deprivation is estimated.
- In Chapter 3 the SWITCH micro-simulation model is used to estimate the level of AROP in 2022 overall and for children, working-age adults and older adults. This chapter also describes the role of different data sources (market income and social transfers) in the incomes of poor and non-poor households.
- In Chapter 4 we use a range of simulations to estimate the impact on AROP of increasing employment levels, hours of work and/or wages for groups that currently have low market income.
- In Chapter 5 the focus shifts to social transfers and set of benefit reform scenarios are examined and their impact on AROP for different groups are assessed. This analysis highlights the specific benefit categories that are most likely to lift households out of poverty (e.g., working-adult supports, pensions, qualified child allowances, child benefit).
- We finish in Chapter 6 with a summary of the findings and lessons for policy.

previous year. However, in this report we restricted this definition to households with no working-age adults in employment.

Chapter 2: Income Poverty, Deprivation and Vulnerable Groups

2.1 Introduction

The micro-simulation analysis presented in Chapters 3, 4 and 5 can only be carried out on the income dimension of poverty and not on deprivation. This is because the analysis in these chapters affects people's cash income and, therefore, directly affects their poverty risk but not directly their risk of deprivation. Thus, in this chapter we look more closely at the relationship between income and deprivation. We examine how the relationship between income poverty (AROP) and deprivation has changed over time and the extent to which it varies across groups. All else being equal, the stronger the overlap between AROP and deprivation the more likely it is that measures to address income poverty will also reduce deprivation and consistent poverty.

The link between deprivation and AROP is considered for the entire population for the period 2004 and 2019, the most recent year for which SILC microdata is available. As poverty risks are not equally distributed across the population, the patterns are also compared for groups that are particularly vulnerable and who are likely to require additional targeted supports to exit poverty.

We distinguish between social risk groups based on their different capacities to meet their needs through paid work, either directly through their own work or indirectly through paid work of other family members (Bonoli, 2007; Pintelon et al., 2013). Challenges and barriers to accessing market income can arise from life-cycle stage, caring responsibilities or personal resources

e.g., illness or disability (see Watson et al., 2016 for further discussion). The social risk groups are:

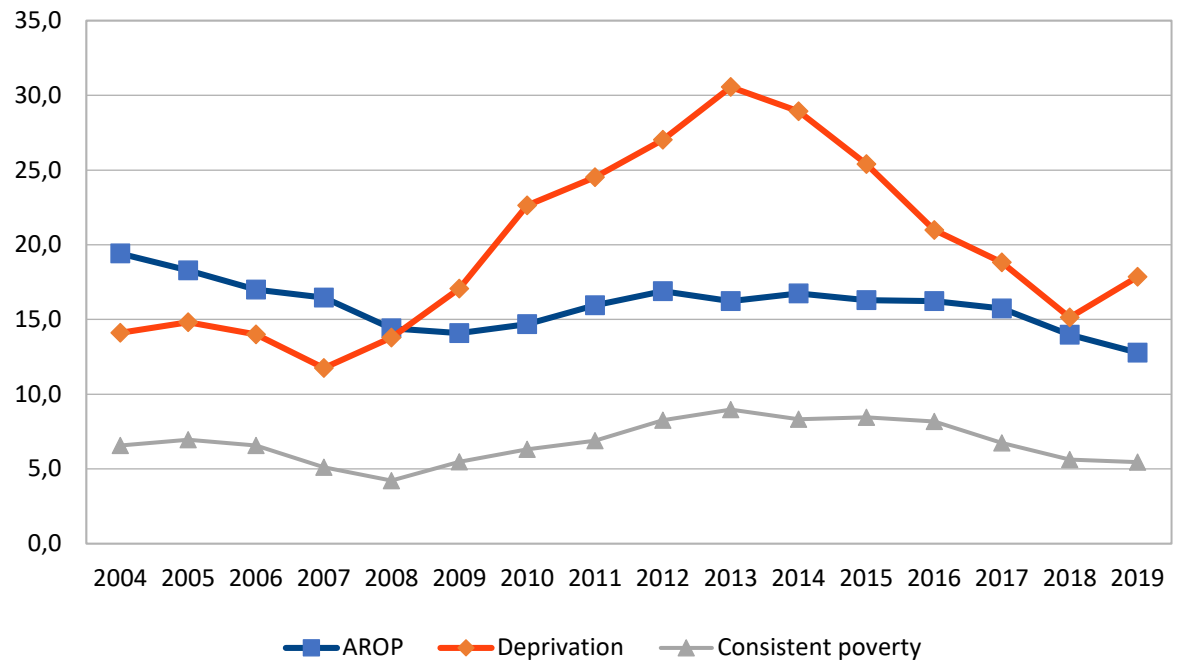
- lone parents and their children
- working-age adults with a disability and their children
- 'other children' under age 18
- young adults (aged 18 to 29)
- 'other working-age adults' (aged 30 to 65) and
- older people (aged 66 and over).

These groups are mutually exclusive and together account for 100 per cent of the population. The problem of exclusion from the labour market is extreme among jobless households. Previous research has demonstrated that household joblessness brings a high risk of poverty (de Graaf-Zijl & Nolan, 2011; Russell et al., 2004; Watson et al., 2012, 2013, 2015) and is associated with a high level of dependence on social welfare transfers (Watson et al., 2013) making it a key issue from a policy perspective. Both the EU and Irish Government have highlighted tackling household joblessness in recent poverty-reduction strategies (e.g., Europe 2020 Strategy; Department of Social Protection, 2021). Therefore, jobless households are also compared as a separate group. In the second half of the chapter (Section 2.5) we further explore the relationship between income poverty and material deprivation to see how much an increase (or a decrease) in the household disposable income reduces (increases) material deprivation.

2.2 Poverty trends 2004-2019

The trends in poverty in Ireland over the last 15 years are complicated by the shock of the Great Recession. The fiscal crisis, rapid increases in unemployment and changes in the tax and welfare systems over the period introduced great volatility into household incomes. Over the period of the Great Recession, unemployment rose from around four per cent to a peak of 15 per cent in 2012 and average household incomes fell by between two and four per cent annually (Callan et al., 2017). This drop in household income meant that the poverty threshold also fell.[11] Consequently, the AROP rate remained relatively stable despite the deep recession, increasing by only three percentage points between 2009 and 2012 (Figure 1).[12] In contrast, the extent of the crisis was picked up in the deprivation figures which jumped from 12 per cent in 2007 to a high of 31 per cent in 2013. Consistent poverty more than doubled between 2008 and 2013 and subsequently fell to 5.5 per cent in 2019, before the onset of the Covid-19 pandemic.

FIGURE 1: TRENDS IN POVERTY 2004-2019

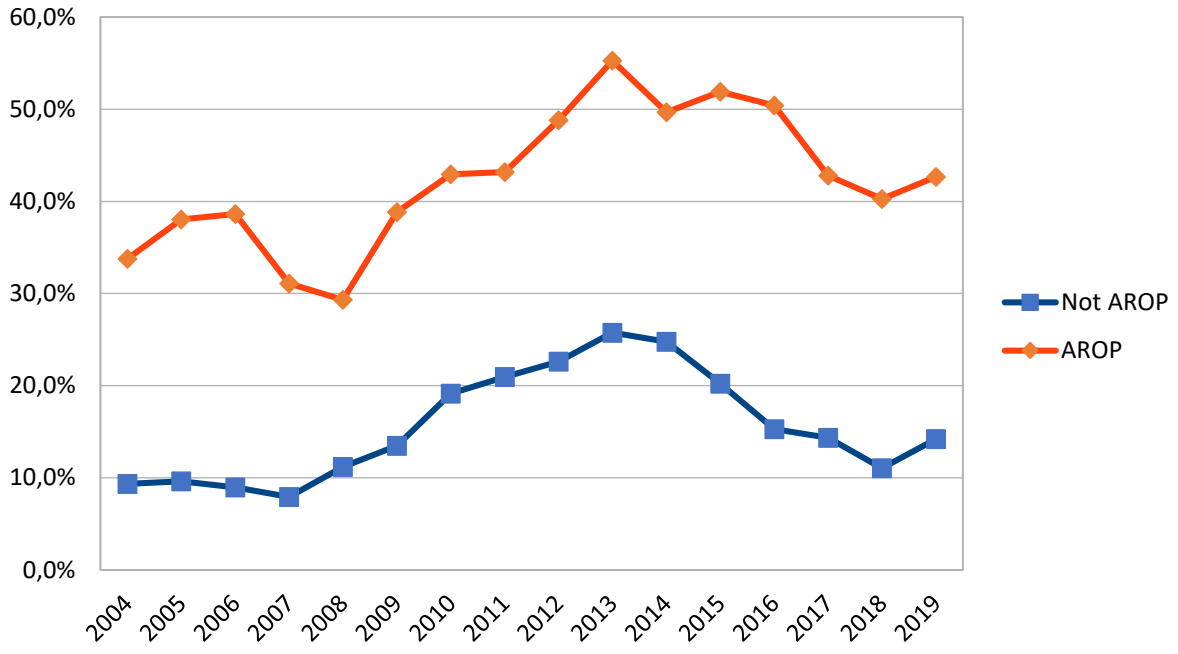


Source: SILC 2004-2019

[11] The poverty threshold itself fell by over ten per cent between 2009 and 2013 (CSO Survey of Income and Living Conditions 2015 (CSO 2017, Table A) and only began to rise again in 2014.
[12] SILC respondents are asked about their income over the last 12 months so there is a time lag before the effects.

The overlap between AROP and deprivation can be considered two ways. First, the proportion of individuals in the AROP group that also experience deprivation, and second, the proportion of those experiencing deprivation that are also AROP. Looking at the first of these (Figure 2), the proportion of those in income poverty that are also deprived fluctuates considerably over the period examined, ranging from 29 per cent in 2008 to 55 per cent in 2013. In the most recent year examined, 2019, 43 per cent of the AROP are also deprived. The trend tracks the overall deprivation trends and shows that the overlap was strongest when deprivation was at its highest. Taking the figure for 2019 suggests that policy measures that reduce income poverty will also target a significant portion of those experiencing deprivation.

FIGURE 2: PROPORTION OF INDIVIDUALS EXPERIENCING DEPRIVATION BY AROP/NOT AROP 2004-2019

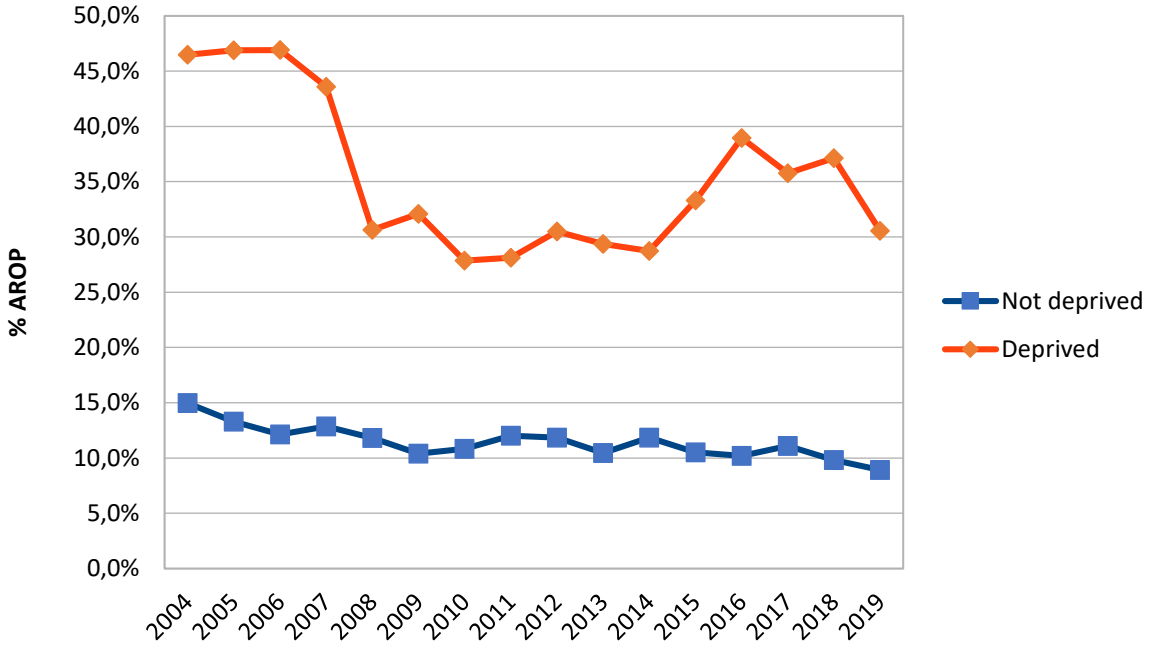


Source: SILC 2004 to 2019

Figure 3 presents the overlap in the opposite direction, as it reports the proportion of those deprived/not deprived who are AROP. There are very

different trends for the two groups. The proportion of the non-deprived who are AROP remains fairly steady at between nine and 14 per cent, with a gradual decline over the period. In contrast, the proportion of those experiencing deprivation that are also income-poor fluctuates widely over the period, falling from 47 per cent in 2004 to around 30 per cent between 2008 and 2015. This coincides with at a time when deprivations rose rapidly, while AROP remained stable which gave rise to a mismatch between the two measures. More substantively, during this period a significant number of those who had previously been well insulated from poverty, such as the self-employed, entered poverty and experienced greater economic stress (Whelan et al., 2018; Maître et al., 2021).

FIGURE 3: PROPORTION OF INDIVIDUALS AROP AMONG DEPRIVED AND NOT DEPRIVED 2004-2019

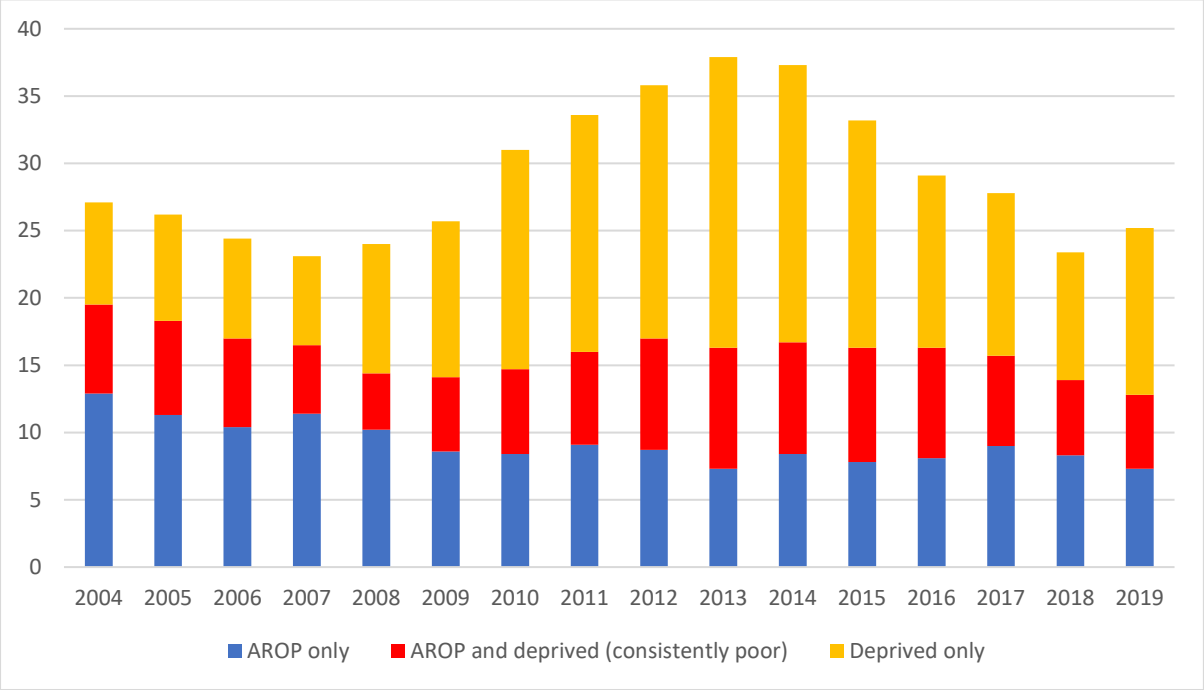


Source: SILC 2004 to 2019

2.3 Poverty outcomes total population 2004-2019

Consistent poverty comprises those that are AROP and materially deprived. Figure 2.4 below shows the combinations of AROP, deprivation and consistent poverty between 2004 and 2019. The sum of those AROP only and consistently poor gives the total AROP percentage. The sum of deprived only and consistently poor is the total deprivation. There has been a decline in the proportion of individuals that are AROP only over time from 13 per cent in 2004 to seven per cent in 2019. Consistent poverty fell from 2004 to 2008, and then rose between 2009 and 2015 before declining again to pre-recession level in 2019 (5.5%). The proportion of those deprived only grew rapidly during the recession before declining to 12 per cent in 2019, which is a level considerably above the pre-recession rate.

FIGURE 4: PROPORTION OF INDIVIDUALS IN AROP ONLY, DEPRIVATION ONLY AND CONSISTENT POVERTY 2004-2019



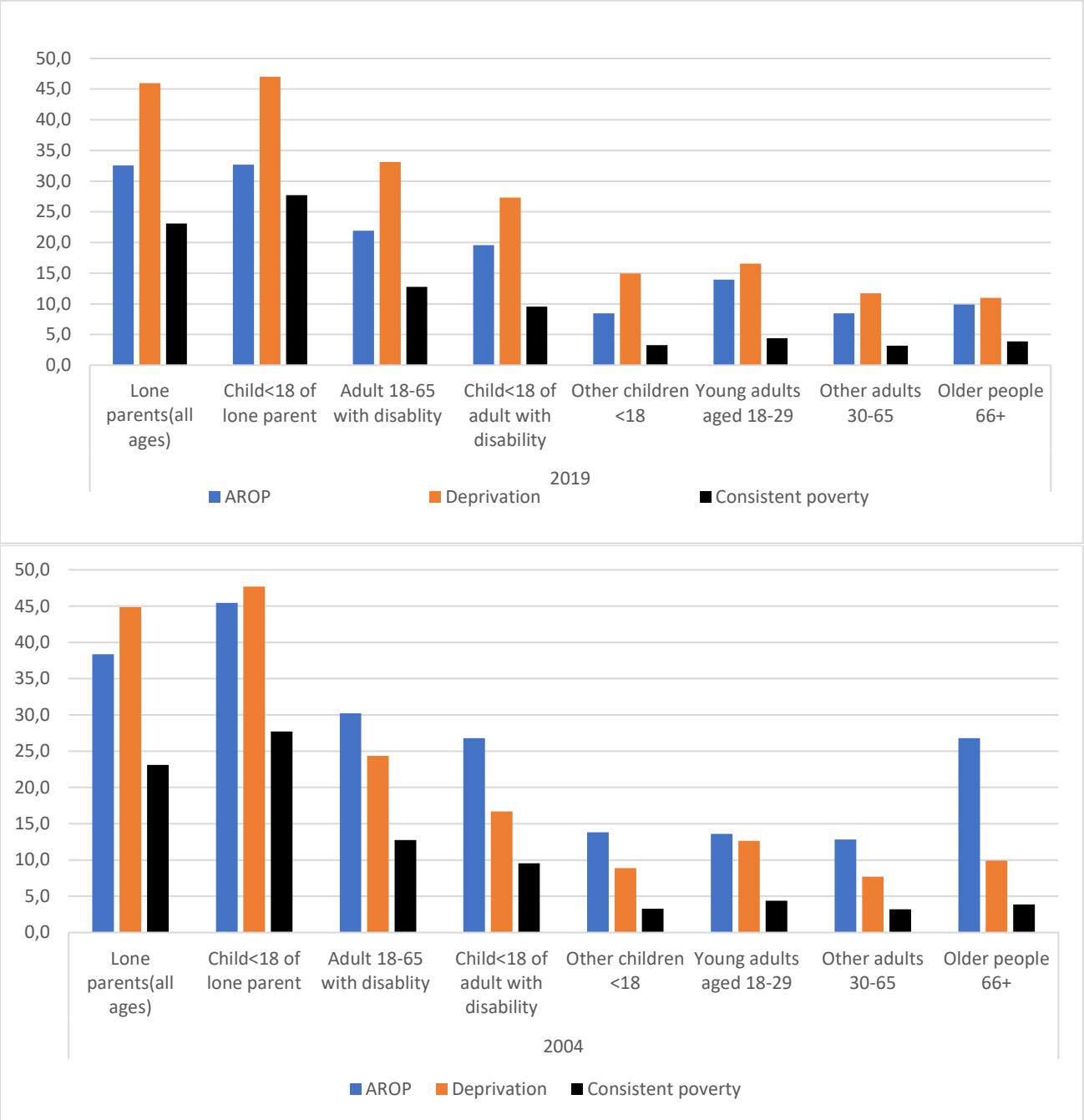
Source: SILC 2004 to 2019

2.4 Vulnerable groups

How does this overlap compare for different vulnerable groups? First, we consider the distribution of deprivation, AROP and consistent poverty across social risk groups in 2014 and 2019 (Figure 5).[13] As noted in previous research, lone parents and their children, and adults with disabilities and their children experience distinctively high rates of deprivation, income poverty and consistent poverty. This is true both at the beginning of the observation period and at the end in 2019

[13] We report the results for the years 2004 and 2019, as it covers the full length of the SILC survey at the time of the analysis.

FIGURE 5: AROP, DEPRIVATION, CONSISTENT POVERTY BY SOCIAL RISK GROUPS 2004 & 2019

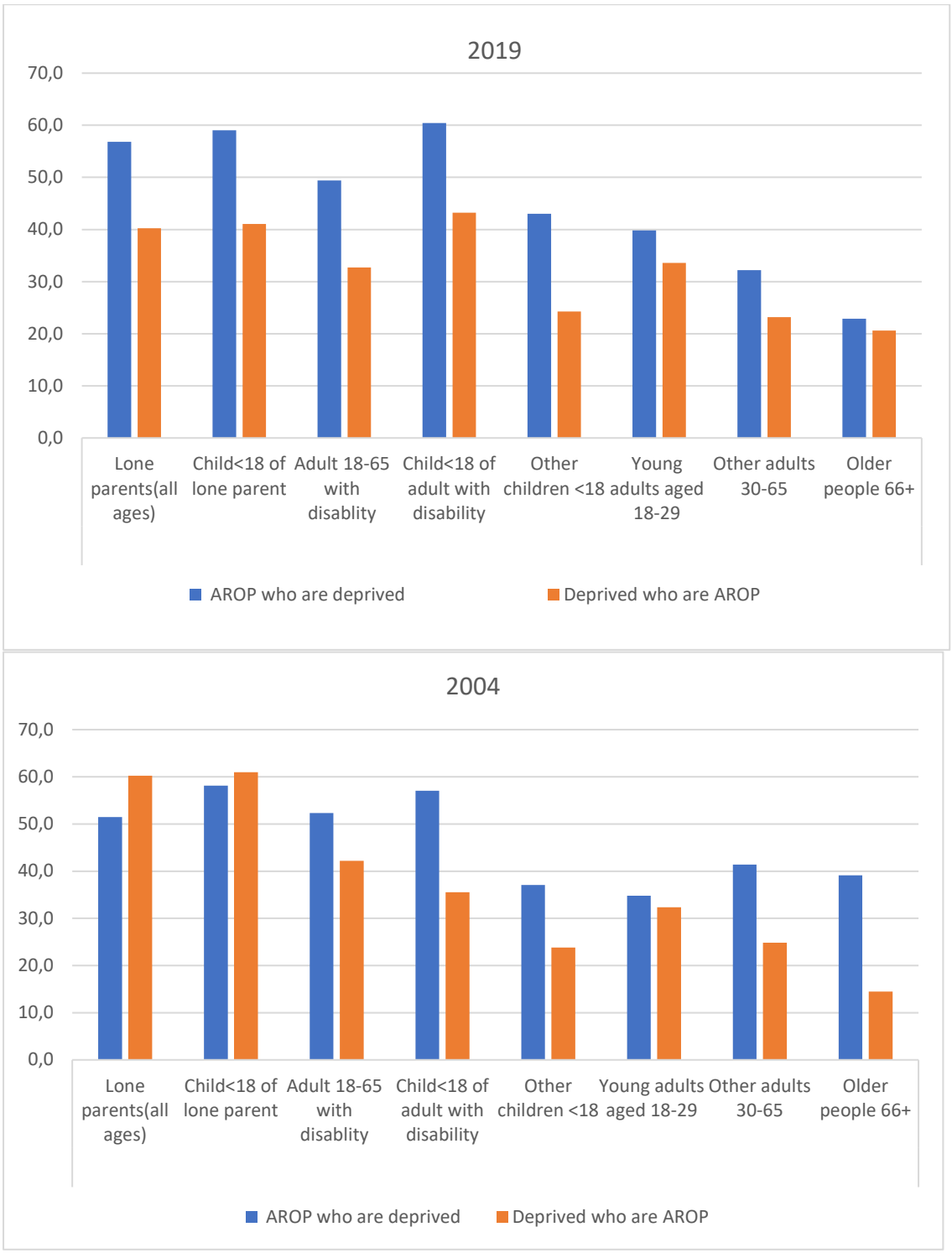


Source: SILC 2004, 2019, authors analysis

These groups also show a greater degree of overlap between deprivation and AROP (Figure 6). For example, 57-59 per cent of lone parents and their children that are income poor are also deprived (blue bar), this was also true for 50 per cent of adults with disabilities and 60 per cent of their children. Therefore, for these groups policies targeting income poverty will also reach

many of those experiencing deprivation. The overlap with deprivation is also relatively strong for other children who are AROP (43%) and young adults (40%).

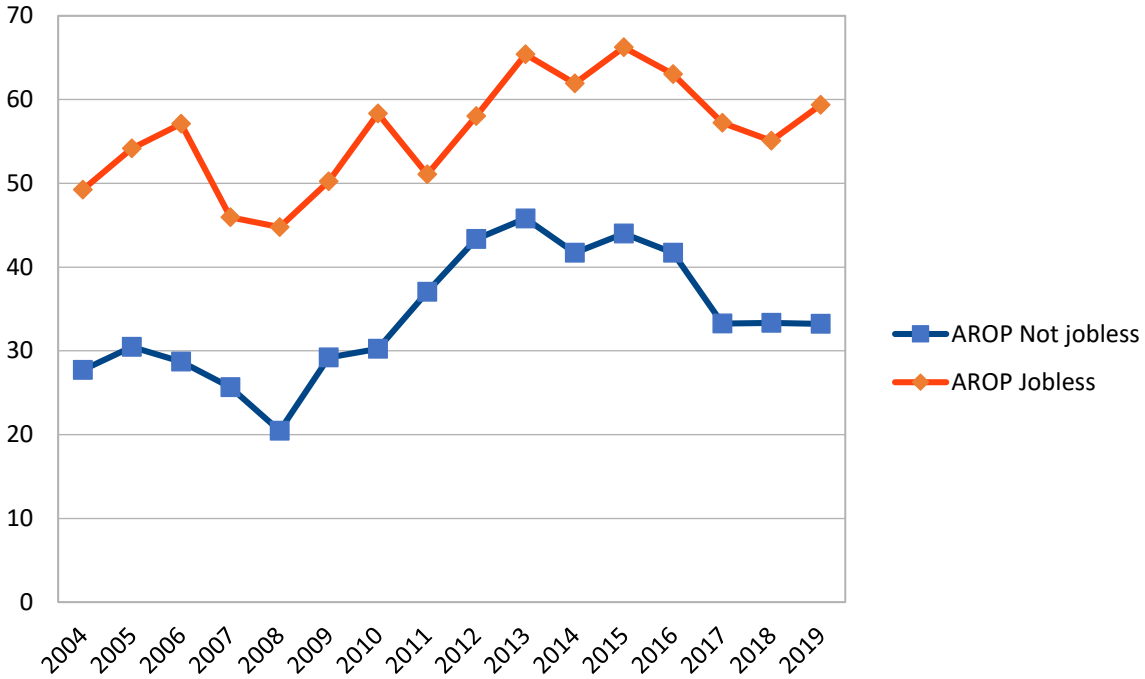
FIGURE 6: AROP AND DEPRIVATION OVERLAPS BY SOCIAL RISK GROUPS 2004 & 2019



Source: SILC 2004, 2019, authors analysis

We next compare the situation for those who are in jobless households and others (Figure 7). Over the whole period the link between income poverty and deprivation is tighter for those in jobless households. At the beginning of the observation period in 2004, 49 per cent of those in jobless households that were AROP were also deprived compared to 27 per cent of those in non-jobless households that were AROP and deprived. The link between AROP and deprivation across all households got stronger in the recession from 2009 and then began to weaken again from 2016. However, this weakening connection was more apparent for those in non-jobless households. In 2019, in jobless households the link between AROP and deprivation increased again (58% were also deprived) and was stronger than it had been at the start of the period, while for those in non-jobless households, the link has remained stable since 2017 (at 33%).

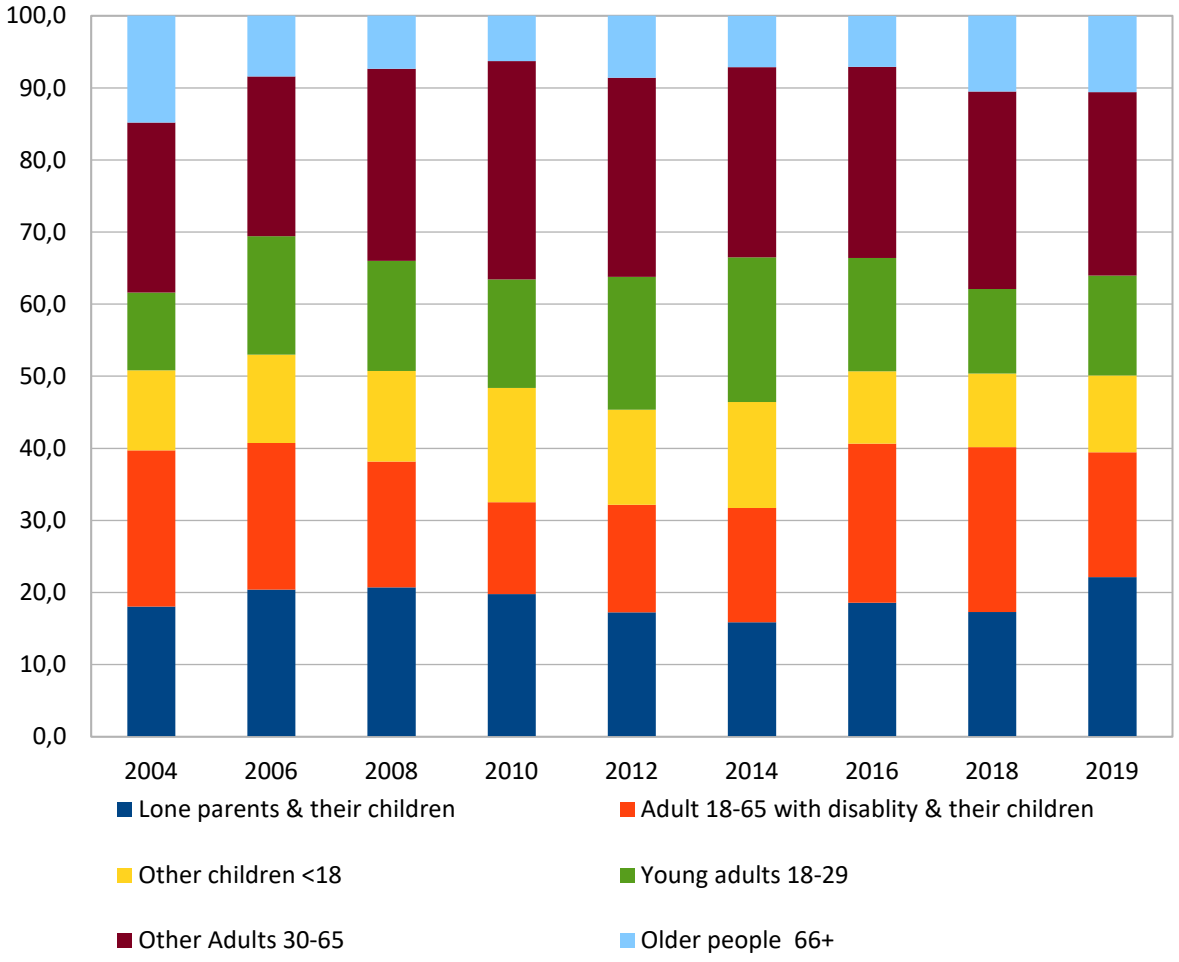
FIGURE 7: PROPORTION OF INDIVIDUALS AROP THAT ARE ALSO DEPRIVED IN JOBLESS AND NON-JOBLESS HOUSEHOLDS 2004-2019



Source: SILC 2004-2019, authors analysis

Finally, we consider the composition of those experiencing income poverty, deprivation and consistent poverty across social risk groups. This provides useful context on the extent to which reducing income poverty for one group is likely to influence the overall level of poverty. Eliminating poverty for a particular vulnerable group is crucial for their current and future quality of life and is important from an equality and human rights perspective. However, if it is a small group in the entire population, or in the population of those experiencing poverty, then this will not necessarily have a significant impact on overall levels of poverty. Figure 8 presents the composition of those AROP over time. In 2019, lone parents and their children account for 22 per cent of those AROP and working-age adults with a disability and their children for a further 17 per cent, children not in either of these household type account for another 11 per cent. Younger adults and older adults account for 14 and 11 per cent of those AROP respectively. Finally, other working-age adults account for a quarter of those in poverty, despite having a low risk, because they are sizeable group of the overall population.

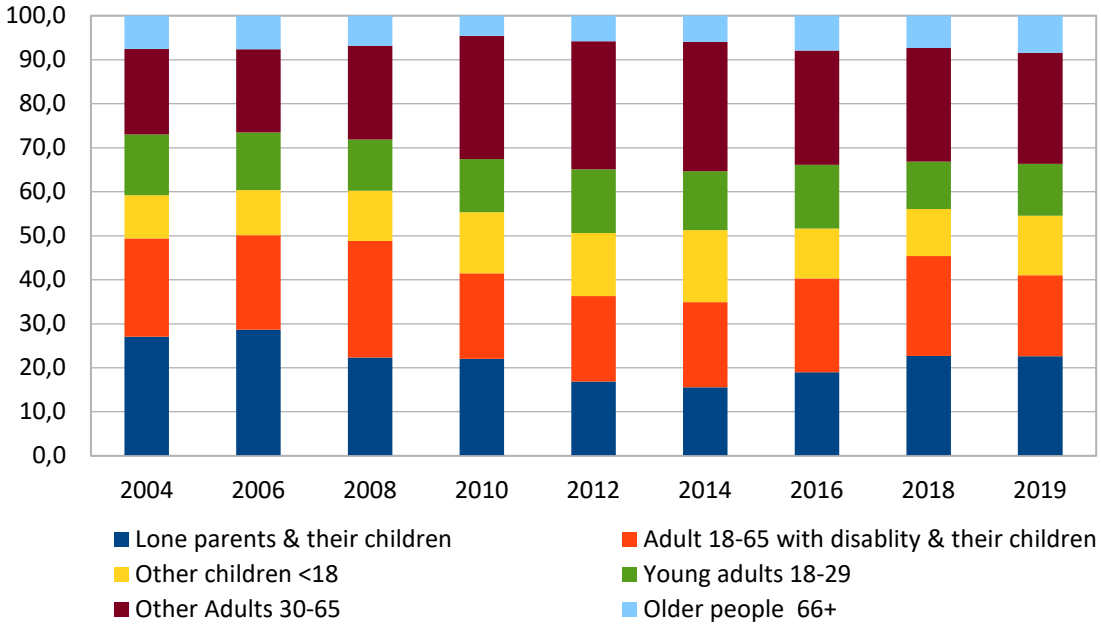
FIGURE 8: COMPOSITION OF THOSE AROP 2004-2019 BY SOCIAL RISK GROUPS



Source: SILC 2004-2019, authors' analysis

The composition of those in deprivation shows a similar pattern. In 2019, lone parents and their children account for 23 per cent of the deprived group and working-age adults with a disability account for 18 per cent. In both cases this represents a decline since 2004/6 when the two groups accounted for almost half of all those experiencing deprivation. The next largest group is other working adults aged 30-65, which is driven by the size of this group in the general population rather than their exposure to deprivation which is lower than average.

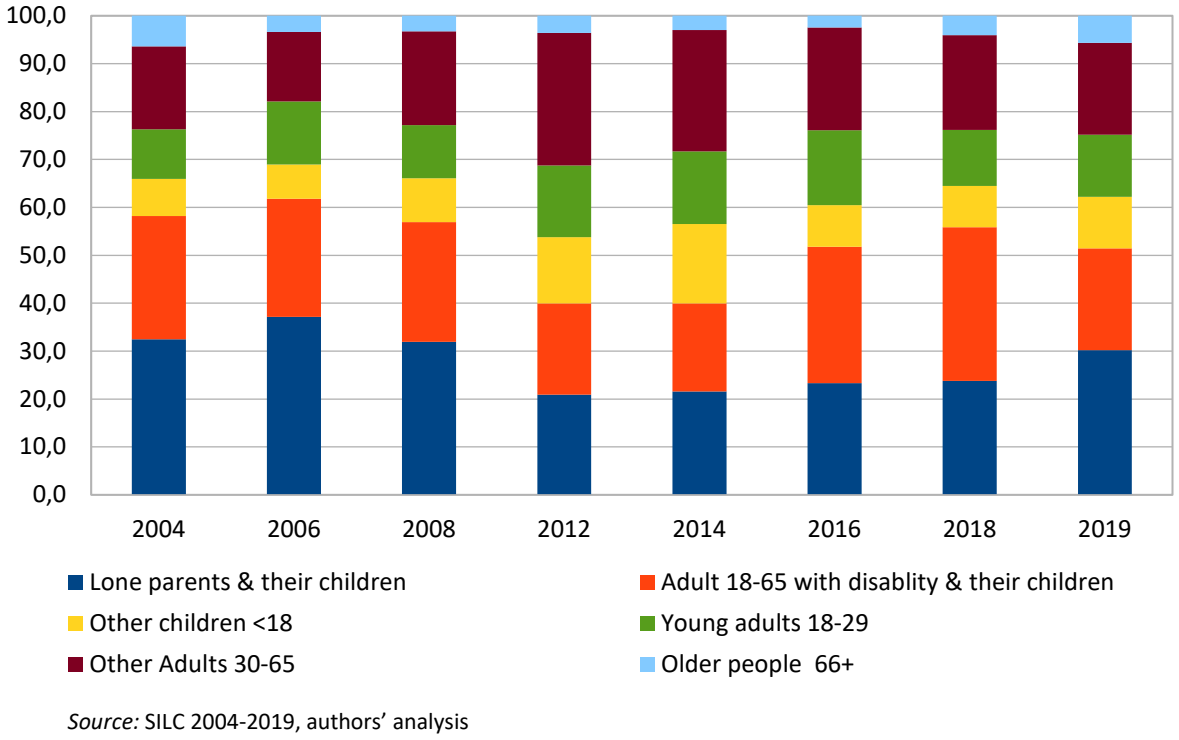
FIGURE 9: COMPOSITION OF THOSE EXPERIENCING DEPRIVATION BY SOCIAL RISK GROUP, 2004-2019



Source: SILC 2004-2019, authors' analysis

When we look at the composition of those in consistent poverty, the vulnerable groups make up an even higher proportion of the total. Lone parents and their children make up 30 per cent of those in consistent poverty in 2019 and working-age adults with a disability and their children account for 21 per cent. This means that tackling income poverty (or deprivation) among these groups would have a relatively large impact on the consistent poverty rate.

FIGURE 10: COMPOSITION OF THOSE EXPERIENCING CONSISTENT POVERTY BY SOCIAL RISK GROUP, 2004-2019



Source: SILC 2004-2019, authors' analysis

2.5 The relationship between household income, social transfers and basic deprivation

We saw in the previous sections that the relationship between income poverty and material deprivation (as measured with the overlap between the two measures) can be weak, as highlighted in the literature (Whelan & Maître, 2006; Saunders & Yuvisthi, 2020).[14] In this section we attempt to formalise this relationship with a statistical modelling exercise. The purpose of the modelling exercise is to predict material deprivation, taking account of the household disposable income, as well as household and individual characteristics that are associated with the experience of poverty (or deprivation), such as housing tenure or a person's principal economic status.

[14] However, if the overlap was a 100% there would be no interest in using both measures as they would be substitute of each other

One way to explore the relationship between income poverty and material deprivation is to see how much an increase (or a decrease) in the household disposable income reduces (or increases) material deprivation.[15]

Depending on people's stage in the life cycle, their capacity to participate in the labour market and other circumstances, social transfers can represent a varying proportion of household income. In this analysis we consider the potential impact of increasing the generosity of social transfers to the total population. We simulate, with a statistical model, several scenarios of increases of social transfers for the overall population. We can therefore measure the direct impact of a policy reform consisting of increased social transfers on material deprivation. This is the methodological approach used by Notten and Guio (2016, 2020) to explore the impact of an increase of social transfers on material deprivation across Europe using EU-SILC 2015. The authors simulate the impact of an increase of social transfers of €150 and then of €1,500 on the level of material deprivation.[16]

In this study we adopt the same methodological approach as Notten and Guio (2016, 2020) to analyse the Irish measure of material deprivation as an ordinal measure.[17] We consider each value of deprivation as a category and estimate the likelihood of moving to a higher value of deprivation for each control (Long & Freese, 2006; Rabe-Hesketh & Skrondal, 2008). Several types of regressions can be applied when using a count dependent variable such as material deprivation. We present in the appendix (Table A.1) the results from several alternative regressions on material deprivation, as suggested by Notten and Guio (2016, 2020). The regressions are an Ordinary Least Squares regression (OLS), a Poisson regression, a Negative binomial regression, a Zero-inflated regression, and an Ordered logit regression. For each of these regressions, the dependant variable is the

[15] The relationship between income and deprivation can be described as a polynomial relationship (a form of linear relationship) where an increase of income has a lower effect on deprivation as we move towards the top of the income distribution (Fusco, 2012).
[16] Notten and Guio (2016, 2020) used a different measure of deprivation based on a different number and set of items and associated deprivation threshold.
[17] However, unlike the analysis done by Notten and Guio (2020) we do not increase social transfers by €150 or €1,500 but by a different amount (see below in the Chapter).

count number of deprivation items ranging from 0 to 11; we include several control variables, such as individual and household characteristics that are likely to be associated with material deprivation. We present the Ordered logit regression here to allow us to compare the findings to Notten and Guio (2016, 2020).

We proceed as follows: we first run the Ordered logit regression on the continuous measure of deprivation controlling for the total household disposable income (in addition to other control variables) and we report post-estimation results of the predicted probability of experiencing each level of deprivation (ranging from 0 to 11).[18] Using the same base model, we increase the amount of total social transfers included in the total household disposable income and report the new post-estimation results of the predicted probability of experiencing each level of deprivation. The difference between the two sets of predicted probabilities represents the impact of an increase of social transfers on each level of deprivation. As we are interested in the impact of social transfers on basic deprivation, we can sum the predicted probabilities for those scoring at least two or more items out of 11 items.

One of the limitations of this simulation as described by Notten and Guio (2021) is that this approach assumes that the increase of household income will not affect the behaviour of the beneficiaries regarding the choices they can make between work, care and spending. Moreover, Notten and Guio (2021) note that in the social protection systems, welfare benefits (cash and non-cash benefits) are also quite linked, and any change in the level of some benefits received might impact on other benefits received either in terms of entitlement or in their levels. Thus, an increase in the amount of one type of benefit could result in a reduction in the amount received for another benefit. The simulation exercise cannot take account of people's behaviour following any change in the level of household income as well as the interactions

[18] The measure of deprivation used in the model is a continuous measure as we have eleven deprivation items so it can takes values going from 0 (not being deprived) to a maximum of 11 (being deprived on all the deprivation items). The indicator of basic deprivation is a binary variable as it identifies people lacking or not two or more deprivation items (takes the values 0 or 1).

between all welfare benefits. The model also relies on the assumption that there is a constant relationship between income and deprivation, while the strength of this relationship can vary for several reasons, such as differences between households in their command over resources and needs (Fusco, Guio & Marlier, 2010).

2.6 Estimating deprivation and social risk group differences in deprivation

We show in Table 1 the results of the Ordered logistic model on levels of deprivation (ranging from 0 to 11, as we have 11 deprivation items). The results are reported as odds ratios. In an Ordered logistic regression, an odds ratio greater than one means that there is a greater likelihood of experiencing the highest level of an event (here a high level of deprivation) versus all the other levels of the event (lower levels of deprivation), and an odds ratio lower than one means that there is a lower likelihood to experience such an event. We report the odds ratios for the characteristics of the households (composition and age of people, tenure, household income, work intensity) as well as the characteristics of the head of households (gender, age, education, principal economic status).

The results reflect the patterns presented in the graphs above. Lone parents and their children, as well as people with disabilities and their children, are more likely to report the highest level of deprivation than older people. The principal economic status of the head of household is also a strong predictor of the likelihood of deprivation. Compared to households where the head of household is working, people living in households where the head is ill/disabled are almost three times more likely to experience the highest level of deprivation and over two times when the head of household is unemployed.

Other strong risk factors are when the head of household has a primary education level, when people live in rented accommodation and in a jobless household. Finally, focusing on the relationship between income and deprivation, we can see that with a one-unit increase in the log of equivalised

household income, the odds of the highest level of deprivation versus all others combined lower levels of deprivation is 0.41 lower, given that the other variables are held constant. In other words, as the equivalised household income increases, the odds of experiencing the highest level of deprivation decreases.

TABLE 1: ORDINAL LOGISTIC REGRESSION ESTIMATING DEPRIVATION COUNT, SILC 2004-2019

	Odds ratio
Ref: Other adults 66 and over	
Lone parents	1.58***
Lone parents' children	1.51***
People with disabilities	1.42***
People with disabilities children	1.19**
Other children	0.69***
Other adults 18-29	0.86**
Other adults 30-65	0.73***
Ref: Head of household male	
Head of household female	1.40***
Age of head of household	0.99***
Ref: Head of household Irish	
Head of household non-Irish	0.92
Ref: Head of household working	
Head of household unemployed	2.29***
Head of household in education	1.12
Head of household in home duties	1.22***
Head of household retired	1.01
Head of household ill/disabled	2.77***
Head of household not yet at work	1.66***
Ref: Head of hh has tertiary degree	
Head of hh has primary education	2.22***
Head of hh has secondary education	1.24***
Log Equivalised household income	0.41***

Number of children <18	1.17***
Number of adults 18-65	0.98
Number of adults 65+	0.67***
Rented accommodation	1.93***
Jobless household	1.56***
Observations	199,648

Note: *** p<0.001, ** p<0.01, * p<0.0
(Also controls for years of survey, reference year=2004. Full results in Appendix table A1)

2.7 Social transfers variations and basic deprivation

In this section we simulate the effect of an increase of total social transfers (and therefore total household income) on predicting different levels of deprivation (0 to 11). We report the results for one scenario of an increase of five per cent of total social transfers for each household. For a comparative purpose, a five per cent increase in the 2019 total expenditure on total social welfare corresponds to €1bn (Table A1, Department of Social Protection, 2020) that is a similar level of increase as in one of the simulations used in Chapter 5. The simulation for this scenario is based on the model presented in Table 2.1 above.

The analysis consists of two stages. In the first stage we run the regression model as shown in Table 2.1 and it provides an estimate of the impact of household income on different levels of deprivation, as well as the associated predicted probability of deprivation for each deprivation level (0 deprivation item to 11 deprivation items). The second stage involves taking the results from the first stage regression (in particular, the coefficient on household income), adding the additional income to households (following the increase in social transfers of 5%) and recalculating the predicted probability of deprivation.

We subtract the difference of these two predicted probabilities and present the results. Before considering the effect of the increase of social transfers

on deprivation, we first show for each of the social risk groups and jobless households the average total social transfers over the period 2004 to 2019, as well as the amounts after the increase in social transfers of five per cent. The average social transfers cover a period of economic growth and recession where the rates of some benefits have increased or have been cut across years.[19]

Jobless households and households of people aged 65 and over receive the largest annual social transfers at almost €25,000.[20] Both groups derive a high proportion of current income from social transfers. Lone parent households, as well as those of people with disabilities, receive the second-largest annual social transfers, approximately €15,500 and €17,700 respectively. Finally, other households receive an average of €11,000, which is slightly less than for the total population at almost €14,000. The amount resulting from these increases can be quite substantial for some households and we might expect that they will have an impact on their expected likelihood of experiencing deprivation as simulated in the model with the results presented below.

19. The average social transfers over the whole period have not been corrected for inflation.
20. In SILC 2019, Family/children transfers are accounting for almost one third of total social transfers received by jobless households, and unemployment and old-age benefits are accounting for one fifth each. Housing transfers such as Rent Allowance or Rent Supplement are included in social transfers but not housing assistance payments, as it is only collected from SILC 2020.

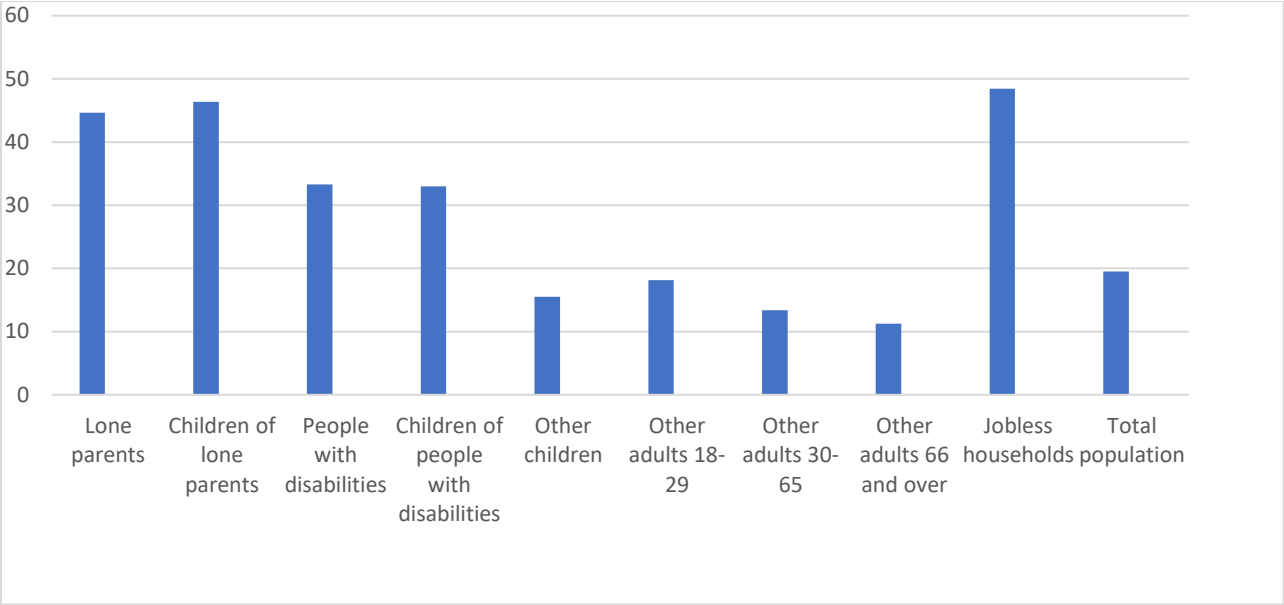
TABLE 2: ANNUAL AVERAGE SOCIAL TRANSFERS IN EUROS BY SOCIAL RISK GROUPS 2004-2019

Social risk groups	Annual average social transfers	Annual average 5% increase social transfers
Lone parents and children	17,541	877
Adults with disabilities and children	17,689	884
Other adults and other children	10,718	536
Others over 65	24,877	1244
Jobless households	24,959	1248
Total population	13,857	693

In Figure 11, rather than showing the predicted probabilities for each level of deprivation (going from 0 to 11 items) we have added the predicted probabilities for being deprived on at least two items which corresponds to the measure of basic deprivation.[21] We show the initial predicted rates of basic deprivation derived from the original model based on the social transfers amounts collected in SILC (that is, before the increase of 5%). Lone parents and their children experience the highest basic deprivation rates at 45 and 46 per cent respectively, followed by people with disabilities and their children, both at 33 per cent. For all the other groups of adults, the basic deprivation rates are lower than for the overall population (19.5%) and it is the lowest for people aged 65 and over.

[21] There are very few differences between the observed and the predicted values from the model.

FIGURE 11: PREDICTED PROBABILITY OF BASIC DEPRIVATION BY SOCIAL RISK GROUPS & JOBLESS HOUSEHOLDS 2004-2029



Source: SILC 2004-2019, authors' analysis

Note: the results are for the full period 2004 to 2019 as specified in the model above in Table 1

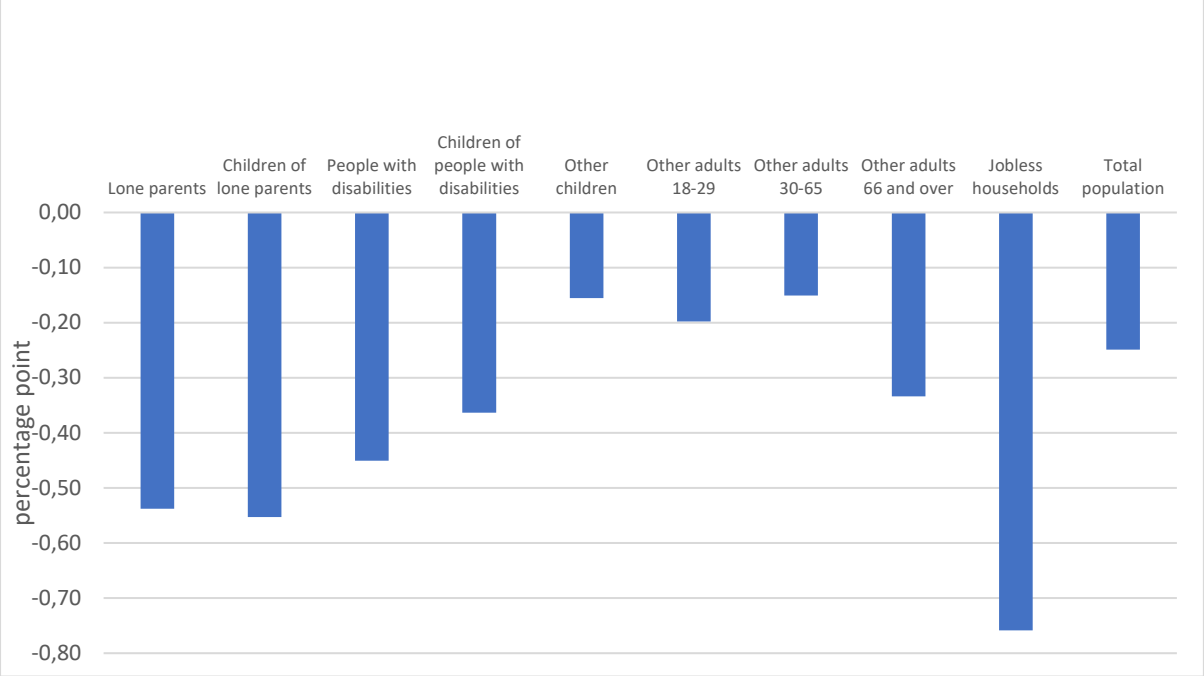
After increasing the amount of total social transfers by five per cent, we run the model to calculate the corresponding predicted probabilities for different levels of deprivation (then added to correspond to the measure of basic deprivation, lacking at least two items). The results of the predicted probabilities of basic deprivation are lower than those shown in Figure 11. We report in Figure 12 the differences of the predicted probabilities in percentage points when total social transfers have increased by five per cent.

Looking at the effects across social risk groups first, children living in lone parent households benefit most from the increases of social transfers and those aged 30 to 65 benefit least. Across all social risk groups, the reduction of basic deprivation is very modest with a five per cent increase in social transfers. It reaches just half a percentage point for lone parents and their children, and it is less than 0.2 for people aged 30 to 65 and other children. The second group to benefit the most from social transfers increases are people with disabilities and their children. Interestingly, while people aged 65 and over report the highest absolute increases (see Table 2 above) they only experience a relatively small reduction in basic deprivation. This is because people aged 65 and over have the lowest basic deprivation rates.

Finally, in comparison to the social risk groups, jobless households experience the greatest reduction from the increases of social transfers. There is a 0.8 percentage point reduction with a five per cent increase of social transfers. For the overall population, the effect of this increase of social transfers is very modest as it is only of one quarter of a percentage. While Notten and Guio (2020) used a different measure of deprivation using different items and deprivation threshold, they found that an increase of €150 and €1,500 (both in Purchasing Power Standard) had little effect on the rate of material deprivation in wealthy European countries and in Ireland.

The reduction was almost nil in Ireland after an increase of €150 and it was approximately one percentage point after an increase of €1,500.

FIGURE 12: CHANGE IN PREDICTED PROBABILITY OF BASIC DEPRIVATION BY SOCIAL RISK GROUPS & JOBLESS HOUSEHOLDS 2004-2019



Source: SILC 2004-2019, authors' analysis

In this chapter we set the context for the micro-simulation modelling that is undertaken in the following chapters. We show that AROP, deprivation, and consistent poverty fluctuated over time as did the level of overlap between

these measures, with the link weakening during the economic recession period. In the latest period, 2019, we see that 43 per cent of those in income poverty are also deprived. This suggests that all else being equal, measures that **tackle** income poverty will reach a significant proportion of those experiencing material deprivation. The analysis also showed the strength of the overlap between AROP and deprivation was greater for those in certain risk groups, namely lone parents and their children, people with disabilities and their children and those in jobless households. It is important to note that measures that tackle poverty among smaller groups may not have a great impact on the overall poverty rate.

The analysis also highlights that increases in social transfers are likely to reduce material deprivation as well as income poverty, though the size of the impact is not large overall. The simulated increase does not differentiate across different types of social transfers and therefore is a very blunt measure. The microsimulation modelling using SWITCH in the following chapters is much more nuanced and allows the impacts of changes in much more specific policy measure to be assessed in the case of income poverty.

Chapter 3: The Role of Different Income Sources in Poverty Rates

3.1 Introduction

In this chapter we explore the role of market income in poverty alleviation. Market income includes all income earned through the labour market and investments. Our focus in this chapter is on labour market earnings. The reason for this is two-fold. First, it makes up most of the market income – over 81 per cent on average for the Irish population, based on 2019 SILC data. Second, it is more straightforward for policymakers to consider influencing this portion of market income through the provision of enhanced work incentives or reducing barriers to work for certain groups.

We conduct our analysis using SWITCH, the ESRI's tax-benefit model. SWITCH is linked to the Survey on Income and Living Conditions Research Microdata File (RMF) for 2019, which contains survey information on household demographic characteristics, family composition and labour force participation, as well as linked administrative information from the Revenue Commissioners on earnings. The data is re-weighted to match the 2019 official statistics on employment, unemployment and the gender-age profile of the population[22] – as reported by the CSO – as well as a forecasted version of the income distribution for employees (Schedule E income) and self-employed (Schedule D income).[23] In the re-weighting process, existing targets for household composition and the regional distribution of the population set by the CSO for SILC are also

[22] CSO sets gender-age targets for the SILC dataset to be representative. In the re-weighting process that we implemented, the age bands for males were kept the same as the ones CSO uses, dividing the male population in four age bands, but for females five-year age bands were set as targets.
[23] The income distribution for 2019 is not available from Revenue so we have to forecast it. The forecasted income distribution is based on the income distributions reported by the Office of the Revenue Commissioners for the years 2015 to 2018.

included. We also uprate incomes from 2019 to 2022 levels using price and earnings growth indices from the Central Statistics Office.

SWITCH simulates the tax-benefit system in place at the beginning of 2022. Given the forecast of 7.1 per cent unemployment for 2022[24] is very close to the pre-pandemic unemployment rate, our central scenario in this analysis is a baseline, post-pandemic 2022 population, which is not affected by unemployment brought about by the Covid-19 pandemic. SWITCH captures the first-round effects of policy changes, without any adjustments in individual behaviour.

3.2 Simulated income poverty

We begin by showing simulated income poverty rates for 2022 using different measures of income in Table 3. The AROP rate for market income shows the poverty rate that would prevail in the absence of the tax and transfer system. Adding taxes and transfers separately, we also produce the AROP rate for gross income (market income plus benefits) and net income (market income minus taxes). Accounting for both taxes and transfers, the AROP rate using disposable income is the commonly reported measure of poverty. Each of the AROP rates are calculated using a poverty line threshold of 60 per cent of median *disposable* income.

Our estimate of the AROP rate using market income is 28 per cent for 2022. It is slightly lower for the working-age population, at 21 per cent, but significantly higher for the elderly population – who typically have very low market income – at 57 per cent. The child poverty rate using market income is estimated to be 30 per cent for 2022.

[24] Department of Finance (2021), Budget 2022 Economic & Fiscal Outlook, available at https://assets.gov.ie/201250/f0886750-a25f-4bf4-9d1d-2918347495f0.pdf

Deducting taxes and social security from market income, we next show the AROP rate based on net income. Taxes and social security result in small increases in poverty rates. The total AROP rate increases by four percentage points with larger proportional increases for children and working-age adults.

Adding benefits to market income allows us to estimate an AROP rate based on gross income of 12 per cent for 2022. This is much lower than the AROP rate based on market income, confirming previous research for Ireland which indicated that the benefits system does much to bring down poverty rates.[25]

The AROP rate is reduced from 28 per cent when based on market income to 14 per cent when based on disposable income. Child poverty remains slightly more elevated than that of other groups at 18 per cent.

TABLE 3: SIMULATED AT RISK OF POVERTY RATES IN 2022

	Total	Working age	Elderly	Child
Market income	28%	21%	57%	30%
Net income (market income less tax and social security)	32%	24%	63%	35%
Gross income (market income plus transfers)	12%	10%	13%	14%
Disposable income (market income less tax and social security plus transfers)	14%	12%	14%	18%

Source: Own calculations using SWITCH v4.4
Note: The AROP rate is the share of persons with an equivalised income below 60% of the national median income. Income is equivalised using the CSO's equivalence scale.

[25]Covering a period of economic growth and recession, Watson and Maître (2013) found that social transfers reduced pre-transfer poverty rate by 53 per cent in 2004 up to 71 per cent in 2011.

3.3 Income sources of AROP and non-AROP households

Table 4 shows the income sources of households, differentiating between those who are AROP and those who are not. Among AROP households, 51 per cent are in receipt of some sort of market income (earnings, investment income or private pension). By contrast, 96 per cent of non-AROP households receive market income. Among those who receive market income, the average amount is €1,441 per month for AROP households compared to €6,572 per month for non-AROP households (in terms of equivalised disposable income, the figures are €1,006 and €2,650, respectively).

Ninety per cent of AROP households are in receipt of welfare benefits, compared to 70 per cent of non-AROP households. Among recipients, the average amount of welfare is higher (€1,257) among AROP households than non-AROP households (€1,084). There is a smaller gap in pension receipt between AROP (30%) and non- AROP (25%) households. Means-tested benefits are more common among AROP households (64%) than non-AROP households (23%) as are non-means-tested benefits (76% vs. 59%). The average amount received in means-tested benefits is slightly higher for AROP households. However, the average amount received in non-means-tested benefits is slightly higher for non-AROP households, reflecting the eligibility of working households for contribution-based benefits.

Sixty-eight per cent of AROP households pay income tax and/or Universal Social Charge (USC) although the average amount is very low, at €83 per month. By contrast, 98 per cent of non-AROP households pay income tax, with an average liability of €1,523 per month. Just 16 per cent of AROP households pay employee social security and 12 per cent pay self-employed social security. The corresponding figures for non-AROP households are 69 per cent and 22 per cent respectively. The average amounts of both employee and self-employed social security are significantly higher for non-AROP households.

TABLE 4: A PROFILE OF INCOME SOURCES AND AMOUNTS FOR AROP AND NON-AROP HOUSEHOLDS IN 2022

	In receipt		Average amount given receipt	
	AROP	Not AROP	AROP	Not AROP
Market income	**51%**	**96%**	**1441**	**6572**
Benefits	**90%**	**70%**	**1257**	**1084**
Pensions	**30%**	**25%**	**1150**	**1370**
Contributory State Pension	18%	15%	1121	1516
Widow's Contributory Pension	7%	8%	1117	1138
Invalidity Pension	5%	2%	1265	1149
Means-tested benefits	**64%**	**23%**	**870**	**798**
Non-Contributory State Pension	4%	3%	1016	1206
One Parent Family Payment	4%	2%	1200	889
Jobseeker's Transitional Payment	5%	2%	1083	832
Widow's Non-Contributory Pension	1%	0%	*	*
Disability Allowance	14%	4%	1071	1071
Supplementary Welfare Allowance	1%	0%	*	*
Working Family Payment	7%	2%	521	209
Jobseeker's Allowance	12%	2%	1212	880
Minor Social Assistance/Benefits	2%	0%	*	*
Fuel Allowance	31%	11%	72	72
Rent Supplement	2%	0%	*	*
Carer's Allowance	4%	4%	948	936
Non-means tested benefits	***76%***	***59%***	***304***	***398***
Maternity Benefit	1%	2%	*	369
Illness Benefit	3%	2%	*	951
Jobseeker's Benefit	1%	2%	*	699
Child Benefit	37%	35%	287	242
Education Grants and Allowances* **	5%	4%	329	405
Household Benefits Package	45%	19%	65	61
Carer's Support Grant	4%	4%	154	158
Tax and USC	**68%**	**98%**	**83**	**1526**
Employee social security	**16%**	**69%**	**309**	**620**
Self-employed social security	**12%**	**22%**	**38**	**119**
Disposable income	**99%**	**100%**	**1779**	**5129**

Source: Own calculations using SWITCH v4.4

Note: AROP households are defined as those with an equivalised household income below 60% of the median, using the CSO's equivalence scale. Some smaller benefits are not listed as they too have too few observations.
* Gray shaded cells have been suppressed as they do not comply with CSO's Statistical Disclosure Controls.
** The Household Benefits Package is means tested for those under the age of 70.
***Some components of this variable (e.g. the Back to Education Allowance) are means tested.

From this analysis, it is evident that market income and the social welfare payments have a major influence on the incomes of AROP households. The next two chapters will examine each in turn. Chapter 4 investigates how increased labour force participation and wages can alleviate poverty, while Chapter 5 investigates the role of social transfers.

Chapter 4: The Role of Labour Force Participation and Wages in Income Poverty Alleviation

4.1 Introduction

To examine the effect of labour force participation and wages in income poverty alleviation, we create counterfactual scenarios for households with low labour market attachment or low wages. We examine the impact of a number of scenarios to improve labour market participation and wages. Although this a hypothetical exercise, there is an argument to be made that with enhanced government support, through reduced barriers to work and better access to affordable caring services, such labour market changes could be induced. The scenarios are as follows:

A. Assigning the head of household in each jobless household to employment provided they do not self-declare to be unfit to work.
B. Increasing the labour market participation and hours of work of the head of a household containing a person with disabilities[26] to match the structure of labour force participation and hours of work of workers from households which do not contain a person with disabilities.[27]
C. Increasing the labour market participation and hours of work of married women[28] so that it matches the structure of male labour force participation and hours of work.
D. Increasing the participation rate and hours of work of lone parents to match that of a similar single individual without children.
E. Introducing a mandatory living wage.

[26] For the purpose of this analysis, a person with disabilities is defined as someone that is self-defined as permanently disabled or/and unfit to work.
[27] If the head of the household is a person with disabilities, then we change the labour supply of the second adult in the household.
[28] Women in cohabiting partnerships are not included in this scenario as we cannot identify them in the SWITCH input dataset.

In each of these scenarios, we create a counterfactual income distribution by matching the group whose labour characteristics is to be increased with a similar adult i.e., an adult with the same demographic features.

4.2 Simulating market income changes

Table 5 shows how the groups identified above differ from each other in their demographic and labour market properties. The average age of the sample is 41 years old, with lone parents having a lower average age (37 years old) and jobless adults or adults in households with a person with disabilities being comparative older – with an average age of 43 and 44.6 years of age respectively.

Regarding the educational attainment of each group, adults in work have the highest percentage of receipt of a university degree (66%), whereas the lowest percentage is among the groups with lower labour market attachment (around 37%). Interestingly, jobless and AROP adults – together with lone parents – have the highest percentage of their population in education (ranging from 16% to 20%) whereas the lower relevant percentages are for adults in work and adults that are members of a household with a person with disabilities.

Most lone parents and jobless adults are women (84% and 62% respectively). Most of our sample is of Irish nationality (86%) with no significant variation between the different sub-groups. Married people are about 45 per cent of the sample, with a higher percentage reported for jobless adults (52%) and the lowest for lone parents (3%). These two groups are also the ones that report some variation in the average size of households. Where most individuals are part of households with 3.3 members on average, lone parents are part of smaller households (3.1 members) and jobless adults of larger households (3.5 members).

The labour force participation rate varies substantially in the sub-groups examined. The average participation rate is 77 per cent but the gender difference is considerable, with the participation rate being at 84 per cent for men and 71 per cent for women. The participation rate of lone parents is lower at 67 per cent, while the lowest rates are those of AROP adults (46%) and adults in households with someone with a disability (39%).[29]

The pattern of hours of work is similar for those in employment. The average for all adults in employment is 36 hours. Men have the highest number of hours worked per week (39 hours), whereas women work on average six hours less per week and lone parents seven hours less. AROP adults have not only the lowest number of hours worked (29 hours) but also the lowest mean hourly wage (€12.90 per hour). The other group that has a comparatively low average hourly wage is that of lone parents (€18.80), whereas all other groups have an average of €22 to €24 per hour, with the highest hourly wage rate being that of men.

Finally, we report the percentage of each sub-group that fall below the income poverty line. The sub-groups identified as potentially being more AROP (lone parents, jobless adults, and adults in households with someone with disabilities) are those with the highest AROP rates: 25 per cent, 30 per cent and 32.5 per cent respectively. As expected, adults in employment have the lowest AROP rate (5.5%), considerably lower than the average AROP rate of all adults (12%).

When interpreting the simulations presented next, one should bear in mind the share of the population they affect. Policies may have a large impact on a particular sub-group but if the size of the group is relatively small, the effect on the overall rate of poverty might be small. For example, policies concentrated

[29] Jobless adults have a labour force participation rate of 14.5%, including those adults that are looking for employment but are currently unemployed.

on alleviating lone parents' poverty or poverty in households with someone with disabilities are concentrated on less than nine per cent of the adult population, of which only a part is poor (25% to 30% in these two cases).[30] Nevertheless, lone parents make up a disproportionately large share of those in consistent poverty (30%), therefore a small impact on poverty rates overall could translate into a more substantial decline in consistent poverty.

[30] The rate of AROP for lone parents in 2019 was 33%. The 25% figure here refers to the simulated rate for 2022.

TABLE 5: DEMOGRAPHIC AND LABOUR MARKET CHARACTERISTICS OF SUBGROUPS OF THE ADULT POPULATION

	All adults	Adults in households with someone with disabilities	Men	Women	Lone parent	Adult AROP	Adults in work	Jobless adults
Age	41.13	44.56	41.25	41.02	37.25	42.37	40.54	42.79
University degree (%)	59	37	54	64	56	36	66	38
In education (%)	11	8	11	12	19	16	08	20
Male (%)	50	53	100	0	16	46	54	38
Irish (%)	86	90	86	86	83	87	86	87
Married (%)	45	46	45	46	3	42	43	52
Household size (number of members)	3.33	3.30	3.32	3.33	3.11	3.26	3.26	3.50
Participation rate (%)	77	39	84	71	67	46	100.	15
Hours worked per week (excl. 0s)	36.11	34.56	39.02	32.73	31.94	29.17	36.11	0.00
Hours worked per week (incl. 0s)	26.60	11.81	31.20	22.07	20.09	9.89	36.11	0.00
Hourly wage (€)	22.86	22.21	23.86	21.69	18.79	12.90	22.86	0.00
AROP (%)	12	33	11	13	25	100	6	30
% of all adults	100	9%	50%	50%	7%	12%	74%	26%
Weighted observations	3,062,931	269,673	1,517,355	1,545,576	204,837	368,358	2,255,702	807,229

Source: Own calculations using SWITCH v4.4
Note: AROP adults are defined as those living in income poor households (with an equivalised household income below 60% of the median, using the CSO's equivalence scale). The age range for adults is 18 to 65 years old.

For each simulation A-E, we create a counterfactual income distribution by matching the group whose labour supply is to be increased with a similar adult. In simulation A we match the head of household in each working-age, jobless household with a similar adult using ten-year age bands, nationality, their current education status, their highest education level, gender, marital status and household size.[31] A household is defined as 'jobless' if no working-age adult (aged 18 to 65 years old) is in employment. In simulation B we do the same for the head of household in a household containing a person with disabilities, provided that adult is not themselves unfit to work. In simulation C we match married women with married men using the same criteria, and in simulation D we match lone parents with singles without children using the same criteria. In each case we assign the individual whose labour supply is to be changed the hours of work and hourly wage of the individual they are matched with. In simulation E we increase the household wage of any worker earning less than the 2022 Living Wage to that level (the Living Wage is calculated as €12.90 for 2021/2022).[32] For each of these simulations, we then reconstruct a counterfactual market income distribution and disposable income distribution using SWITCH and compare it to the baseline 2022 distribution.

4.3 Results

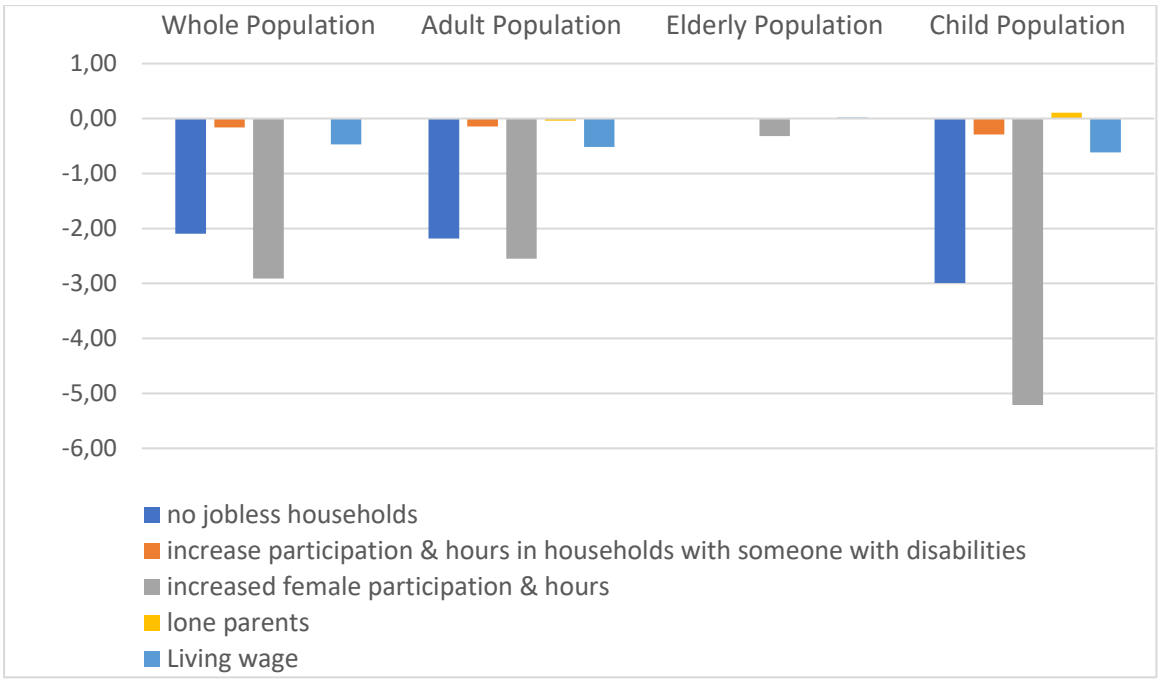
Figure 13 presents the results of the simulated changes to market income on the AROP rate where the poverty line is fixed at the baseline 2022 level. Results using a floating poverty line are presented in Appendix 1. We focus on the fixed poverty line as the relationship between AROP rates and material deprivation is strongest when AROP rates are measured using a fixed poverty line. For instance, Whelan et al. (2002) found that, unlike relative income poverty lines, defining the threshold more stringently made it possible to progressively identify increasingly deprived groups. It is likely therefore that

[31] If no similar individual is found then we limit our identification variables to the age band, the level of highest education attained, the gender and the marital status.
[32] For information about the Living Wage calculation, see https://www.livingwage.ie/

these results are more indicative of the direction that both income poverty and material deprivation will change in because of the reforms.

We first simulate increasing the labour supply of jobless households as jobless adults are disproportionately poor (Table 5). We assign to the head of such households the employment characteristics of a similar working adult. The head of the household is defined as the oldest adult or, if there are adults of the same age, the adult with the highest level of completed education. We do not change the employment status of the head of jobless households if they are a student, declare that they are unfit for work or are a pensioner. In this scenario, the AROP rate (with a fixed poverty line in 2022) for the whole population is estimated to decrease by 2.1 percentage points (Figure 13). The effect is higher for children with child poverty decreasing by three percentage points. The elderly sub-population remains unaffected as this simulation only affects working-age households.

FIGURE 13: PERCENTAGE POINT CHANGE IN AROP RATE DUE TO SIMULATED INCREASE IN LABOUR SUPPLY/WAGE (FIXED POVERTY LINE 2022)



Source: Own calculations using SWITCH v4.4
Note: The poverty rate is calculated based on a poverty line equal to 60% of median equivalised disposable income. The CSO equivalence scale is used. The adult population is defined as aged 18-65,

elderly is over 65 and children are under age 18. Baseline poverty rates: whole population – 13.63%,; adult population – 12.03%, elderly population – 13.94%, child population – 17.51%.

The next simulation investigates the possibility of increasing the labour supply of households containing a person with disabilities, as a large percentage of adults living with a person with disabilities are AROP (33% from Table 5). One of the reasons that households with a person with disabilities are AROP is the reduced opportunity for the adults in the household to undertake paid work. This is also captured in the statistics presented in Table 5, as adults in such households have a relatively low labour force participation (39%). If sufficient support services are provided for these households, their members may be able to increase their labour participation and employment income. In our simulations, we explore the impact of assigning to the head of such households the labour characteristics of a similar adult in work from a household without a person with disabilities.[33] These simulated employment changes lead to higher market income for these households and to a marginal decrease of poverty of 0.2 percentage points.

The impact of the simulation is quite small compared to the nature of the reform, but we should take into consideration the small relative size of the sub-group. Adults in this scenario represent nine per cent of the total number of adults, with 33 per cent of these being below the poverty line. Results for the working-age adult sub-population and children are of the same magnitude, whereas the elderly poverty rate remains unchanged.

In our next simulation we focus on the impact that the gender gap in labour force participation and hours of work have on poverty. Traditional gender divisions of work and caring roles in Ireland have led to a gender gap in labour supply. While childless single men and women have similar labour supply, married women have lower labour supply than men. Estimates from SWITCH

[33] As stated in section 4.1, if the head of the households is a person with disabilities, then for the purpose of our simulations we consider as the head of the household the second in order adult.

indicate that 82.6 per cent of married men work compared to 57.5 per cent of married women. Of those who work, married women work an average of 32.5 hours per week while the corresponding figure for married men is 40.4. We simulate increasing the labour supply of married women so that it mirrors that of married men, both in terms of participation and of hours supplied. In this scenario, the poverty rate decreases by 2.9 percentage points, with a larger effect for children (a decrease of 5.2 percentage points).[34] The change in elderly poverty is very small at -0.3 percentage points.

We next investigate increasing the labour supply of lone parents. Lone parents have increased responsibilities at home, leaving fewer available hours for work. Policies that address the caring needs of the lone parents could enhance labour supply. The lower labour supply of lone parents is depicted in the statistics presented in Table 5. Lone parents have a participation rate of 67 per cent, compared to 77 per cent for all adults, and work fewer hours per week, on average (32 compared to 36 for all adults). Twenty-five per cent of lone parents are AROP, the second largest proportion (after jobless adults) of any of the subgroups displayed in Table 5. We assign to lone parents the employment characteristics of a similar single person without children.[35]

This simulation leaves the whole population poverty rate almost unaffected. One reason for this is that lone parents are a small group (6.7% of adults are lone parents) and their households are smaller in size. Changing the income of these households has a negligible effect on headline poverty indices. Additionally, while the participation rate, hours worked and hourly wage for lone parents may by lower than those of all working adults, they are close to those of women overall.[36] More detailed sub-group analysis, such as the effect

[34] We have not included in our simulations the extra cost of the childcare that may arise, as we present the first-round effect of such policies.
[35] We exclude from our identification variables household size, as they vary very little for lone parents. If there is no match in the first round of our identification strategy, in the second round we exclude gender as a criterion for finding a matching single adult without children.
[36] Almost 85% of lone parents are women, meaning that even with the new assigned labour market characteristics, income changes are small.

of reforms on the poverty rate of lone parent households, is not possible due to the size of the sample involved.

Finally, we examine the effect of increasing the level of the minimum wage on poverty. We simulate increasing the minimum wage from its assumed level in 2022 of €10.50 to €12.90 per hour, the recommended Living Wage for Ireland for 2022.[37] The impact on poverty is small – poverty decreases by 0.5 percentage points, highlighting the fact that policies aimed at tackling low-paid work may not always be effective at tackling poverty. This finding is in line with previous research for Ireland which showed that minimum wage workers do not usually live in low-income households, as they are not usually the main earner of the household (Redmond et al., 2021).

It is useful to link these simulated poverty reductions to the targets set out by the Government – to reduce consistent poverty from 5.6 per cent in 2018 to 2 per cent or less by 2025 and to reduce the AROP rate from 14.9 per cent in 2018 to 12.8 per cent in 2025. Policies aimed at increasing the labour supply of jobless households and increasing the labour-force participation of married women could lead to significant progress towards these targets. We estimate that incentivising one adult in each jobless household to join the labour market could decrease the AROP rate from 13.6 per cent in 2022 to 11.5 per cent, well below the target set for 2025. Increased female labour supply could also have a significant effect, decreasing the AROP rate to 10.7 per cent.

Predicting the effect of such labour market transformations on the rate of consistent poverty is more complicated. Chapter 2 showed that, historically, 30-55 per cent of the AROP population have also been deprived – the figure for 2019 was 43 per cent. A crude extrapolation suggests that the AROP rate decreases of 2.1 percentage points for the jobless household simulation and 2.9 percentage points for the female labour supply simulation would translate into decreases in the rate of consistent poverty of around 0.9 percentage

[37]The Living Wage is calculated by the Living Wage Technical Group. See https://www.livingwage.ie/download/pdf/living_wage_annual_paper_2021-22.pdf

points and 1.2 percentage points, respectively. We conclude that while policies to increase the labour supply of jobless households and married women may help to achieve income poverty targets, they are likely to fall short of reaching consistent poverty targets in the short-term.

Chapter 5: The Role of Social Transfers in Income Poverty Alleviation

5.1 Simulating changes to the tax-benefit system

This chapter examines the effectiveness of a range of social transfers in reducing income poverty. Using SWITCH, we consider how increases in spending on the following transfers impact on the poverty rate of the whole population, as well as the adult, elderly, child and people who rent subpopulations:[38]

- Child Benefit
- Qualified Child Increase (QCI)
- Living Alone Allowance
- Core Benefits[39] (Jobseeker's Allowance, Jobseeker's Benefit, One-Parent Family Payment, Jobseeker's Transitional Payment and Disability Allowance)
- Qualified Adult Increase (QAI)
- Fuel Allowance
- Working Family Payment.

These benefits were chosen due to their ability to target each of the sub-populations, thus allowing for a policy mix which has the potential to alleviate poverty across the whole population. This contrasts with Chapter 2, which considered across-the-board increases in cash transfers. For instance, child benefit, working-family payment and QCI are policies which target child poverty

[38] Given the current policy concerns about rising rental costs and previous findings of affordability problems and poverty after housing costs among those in the private rental and Local Authority rental sectors (Russell et al., 2021), the impact on poverty among renters is also considered.
[39] For the purposes of this paper, core benefits refer to the major working-age benefits listed above. Certain other working-age benefits were excluded (e.g. Invalidity Pension) due to their relatively smaller coverage.

reduction, while the fuel allowance, living alone allowance and QAI cover measures aimed at the elderly sub-population. The core benefits rate is applicable to a range of benefits which target the whole population, and particularly the adult population. Historical increases to many of these benefits have been shown to be effective at alleviating poverty in Ireland (Doorley et al., 2020). Leventi et al. (2019), in a study of seven European countries, find that options that reduce poverty most cost-effectively in most countries are those of increasing child benefits and social assistance. Except for Working Family Payment, the changes made to these benefits in the reform scenarios involve increasing expenditure for existing recipients, rather than including new recipients via increases in the means-test thresholds.[40]

5.2 Results

5.2.1 Individual reforms of €100m each

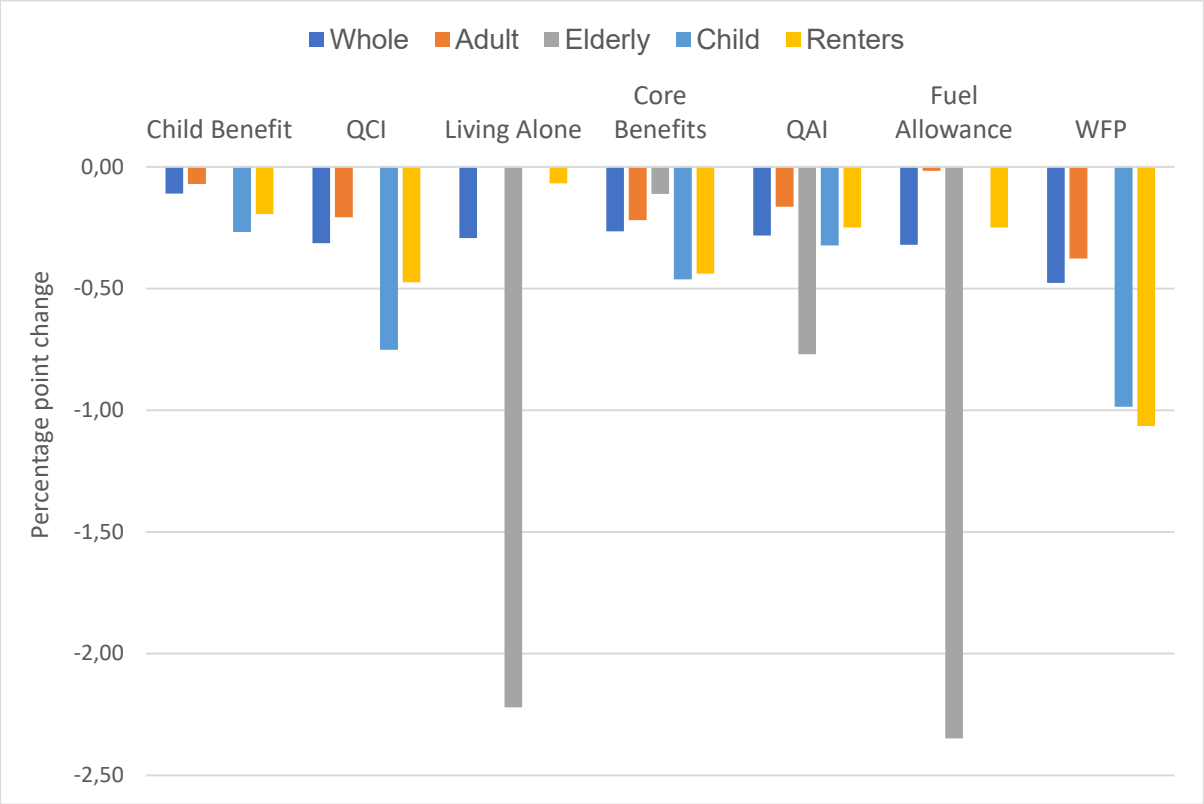
In the first part of our analysis, we present the results of reforms to the above benefits which involve a €100m net revenue spend relative to the baseline (approximately 0.027% of GDP or 0.085% of government current expenditure in 2020).[41] In other words, the rates of payment of each transfer are increased to a level such that the *net* impact on the exchequer is €100m per annum. Although government expenditure may increase by more than €100m in some circumstances, this may be partially offset by an increase in government revenue in other areas, for example, through increased tax revenue. The spending increase leads to increases in benefit payments between 3.5 per cent and 11 per cent for most benefits, except for the fuel and the living alone allowances – which are increased by 45 per cent and 61 per cent respectively

[40] The Working Families Payment is not a flat-rate benefit but is calculated based on the difference between the family's weekly income and the income threshold set according to the family payment. By increasing the income threshold by family payment -to increase the rate to existing recipients-, the benefits eligibility is also expanded.

[41] https://www.cso.ie/en/releasesandpublications/ep/p-nie/nie2020/tables/ See Table A (Gross Domestic Product (GDP) at current market prices) and Table 10 (Current Income and Expenditure of Central and Local Government.

– and the qualified child increases – increased by about 18 per cent.[42] This approach is applied to all of the selected benefits with the exception of the Working Family Payment. Rather than increasing the rate of payment, the income thresholds for eligibility for the payment are increased. The analysis is static in that we assume no behavioural response to the welfare increases. Such responses may affect both the cost of the measures and their effect on poverty rates.

FIGURE 14: PERCENTAGE POINT CHANGE IN AROP RATE DUE TO SIMULATED INCREASE IN SELECTED WELFARE PAYMENTS COSTING €100m EACH (FIXED POVERTY LINE 2022)



Source: Own calculations using SWITCH v4.4
Note: The poverty rate is calculated based on a poverty line equal to 60% of median equivalised disposable income. The CSO equivalence scale is used. The adult population is defined as aged 18-65, elderly is over 65 and children are under age 18. Baseline poverty rates: whole population – 13.63%; adult population – 12.03%, elderly population – 13.94%, child population – 17.51%, renters – 22%.

Figure 14 shows the impact of an extra €100m net spend on each measure on poverty rates – using a fixed poverty line in 2022 – for the whole population and

[42] For a detailed analysis of the benefits increases in each scenario see Table A2 in the Appendix.

four sub-populations: adults, the elderly, children, and rental tenants.[43] Poverty rates among rental tenants are much higher than for those who own their primary residence (mortgage or otherwise); the simulated poverty rate for rental tenants in 2022 is 22 per cent with a corresponding figure for the entire population of 14 per cent.[44] More detailed sub-group analysis, such as the effect of reforms on the poverty rate of households containing someone with a disability, is not possible due to the size of the sample involved.

Child Benefit has a very limited effect on poverty rates with an extra €100m leading to a poverty reduction of just 0.1 percentage points. The universality of child benefit makes it a particularly blunt instrument for tackling poverty. Using the same budget to increase Qualified Child payments is more effective at reducing poverty (-0.3 percentage points) and has a particularly large effect on child poverty (-0.8 percentage points). Increasing the Living Alone Allowance or the Fuel Allowance reduces poverty by around 0.3 percentage points with particularly large effects on elderly poverty. Increasing the rate of payment of core benefits or Qualified Adult payments reduces the AROP rate by around 0.3 percentage points. The former reform has a larger effect on child poverty (-0.5 percentage points) while the latter affects elderly poverty more (-0.8 percentage points).

Although QAI payments are associated with several working-age transfers, the impact on elderly poverty is high due to the prevalence of households receiving QAI payments alongside the state contributory pension. Finally, increasing the income limit for the Working Family Payment has the largest effect of any of the measures considered, reducing the poverty rate by 0.5 percentage points, the child poverty rate by one percentage point and the poverty rate among renters by 1.1 percentage points.

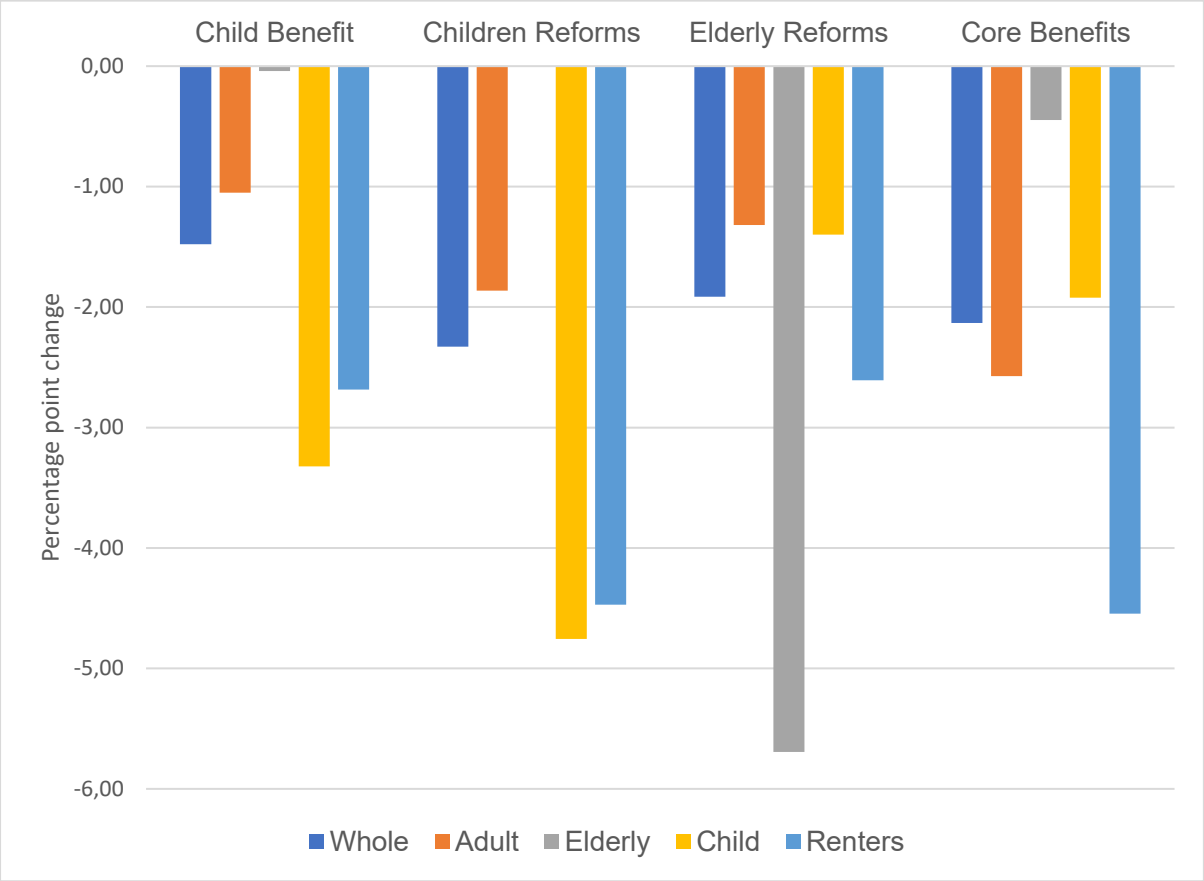
[43] Results using a floating poverty line are shown in Appendix 1.
[44] Households in rental accommodation are defined as those whose main residence tenure status is categorised as either rented, reduced rented or social rented. Housing costs (rent/mortgage) are not deducted from income in calculating disposable income or the poverty line.

5.2.2 Package reforms of €1bn each

The next part of our analysis considers the effect of reforms costing €1bn per annum in net terms (approximately 0.27% of GDP or 0.85% of Government current expenditure in 2020). Contrasting these results to a €100m net spend on individual reforms may indicate whether or not an element of diminishing returns exists with higher spending on different policies. Rather than only considering the effect of increasing the rates to each individual measure, for some measures, we have grouped them into packages based on their target population as follows:

- Child benefit is considered as a stand-alone measure since its simulated effect on poverty is relatively low.
- Children's reforms include changes to QCI and the WFP.
- Elderly reforms include changes to the living alone allowance, fuel allowance and QAI.
- Working-age adult reforms include increase to core benefits (as in the previous section).

FIGURE 15: PERCENTAGE POINT CHANGE IN AROP RATE DUE TO SIMULATED INCREASE IN SELECTED WELFARE PAYMENTS COSTINGP €1bn EACH (FIXED POVERTY LINE 2022)



Source: Own calculations using SWITCH v4.4
Note: The poverty rate is calculated based on a poverty line equal to 60% of median equivalised disposable income. The CSO equivalence scale is used. The adult population is defined as aged 18-65, elderly is over 65 and children are under age 18. Baseline poverty rates: whole population – 13.63%,; adult population – 12.03%, elderly population – 13.94%, child population – 17.51%, renters – 22%.

Figure 15 shows that, of the reforms simulated, the child benefit reform is least effective at reducing poverty. A net spend of €1bn reduces poverty by 1.5 percentage points and child poverty by 3.3 percentage points. The children's reforms have the greatest effect on poverty for the entire population, with a €1bn spend resulting in an overall reduction in poverty of 2.3 percentage points. The reduction in child poverty is significantly higher at -4.8 percentage points, while poverty among rental tenants also shows a strong reduction of -4.4 percentage points. The elderly reforms reduce poverty by 1.9 percentage points with a particularly large effect on elderly poverty (-5.7 percentage points). Finally, while the reduction in poverty resulting from increasing the

rates to core benefits is slightly lower than that of the child reforms (-2.1 percentage points), the balance of the reduction across sub-groups of the population is slightly more even except among people who rent, who experience the largest reduction in poverty under this reform (-4.5 percentage points)

In summary, the children's package and the child benefit reforms have strong impacts on child poverty (decreased by 4.8 and 3.3 percentage points respectively) although elderly poverty remains almost unaffected in both cases, while the reverse is true for the elderly package – in which case child poverty decreases by 1.4 percentage points and elderly poverty by 5.7 percentage points. Comparing the child benefit versus children's package reforms, the latter has a greater effect on child poverty reduction, as child benefit is non-means tested and thus not targeted in the households most in need.

Linking these results to the Government's poverty targets, the children's package, the elderly package and the working-age package would all help to achieve an AROP rate of less than 12.8 per cent, as we estimate that they would decrease the AROP rate by 2.3, 1.9 and 2.4 percentage points respectively. In line with the estimated overlap between AROP and deprivation in 2019, if 43 per cent of these decreases in the AROP rate were translated into decreases in consistent poverty, these packages would result in a decrease in consistent poverty of 1, 0.8 and one percentage point respectively. We conclude that packages of benefit reform of the order of €1bn per annum would not result in substantial progress towards a consistent poverty rate of two per cent if executed alone. It is likely that this type of progress will require a mix of policies to address low market income and welfare reform.

Chapter 6: Conclusions

In 1997, the Government of Ireland launched its first national anti-poverty strategy (NAPS 97), which was followed by a series of revised anti-poverty strategies. In 2020, the Government launched the successor of the previous anti-poverty strategies, the *Roadmap for Social Inclusion 2020-2025*.

The anti-poverty strategies included several headline and sub-targets across a wide range of domains (poverty, education, housing etc.) that were developed and updated over time. The target for 2020 was to reduce consistent poverty to two per cent or less. The headline target in the new Roadmap is similar, that is, to reduce the **national consistent poverty rate from 5.6 per cent in 2018 to two per cent or less of the population by 2025.**

The national measure used for the headline poverty target is the consistent poverty measure. It identifies people that are AROP and are experiencing basic deprivation (enforced lack of at least two items out of a list of 11). Access to labour market income and the distribution of social transfers are the most effective mechanisms to lift people out of poverty and reduce income inequality (along with taxation).

In this report we explore the effects of changes in employment levels and the impact of social transfers policies in supporting the poverty reduction target. The measure of consistent poverty is a composite measure, combining measures of AROP and basic deprivation. Moreover, the relationship between these measures varies extensively across different groups of the population and across time. This changing interaction makes it difficult to assess the overall effect of social transfers on consistent poverty. For this reason, in the

report, we look at the relationship between social transfers and these two measures separately.

Poverty is not equally distributed across the population as some members of the population are more exposed to poverty than others. We classify people into different groups based on their ability in accessing market income from their life-cycle stage (children, older people), caring responsibilities or personal resources.

The social risk groups are:

- lone parents and their children
- working-age adults with a disability and their children
- 'other children' under age 18
- young adults (aged 18 to 29)
- 'other working-age adults' (aged 30 to 65) and
- older people (aged 66 and over).

In addition, we also look at the experience of poverty and deprivation for people living in jobless households, a group customarily exposed to high poverty levels.

6.1 At risk of poverty (AROP) and basic deprivation

The descriptive analysis covers the period 2004 to 2019, a period of economic growth, recession and recovery. In the first part of the period, the rate of basic deprivation mirrored the trend for the AROP period but at the beginning of the Great Recession in 2008 the trends diverged, with basic deprivation increasing sharply to reach a high of 31 per cent in 2013 before falling consistently to a low 15 per cent in 2018. In contrast, the AROP did not vary very much during the overall period. The overlap between those being AROP and reporting basic deprivation increased sharply from 2008 to 2013. Consequently, the rate

of consistent poverty followed the same pattern of increase as for the basic deprivation.

Lone parents and their children, as well as people living in a household with someone with disabilities and their children, experience distinctively high rates of deprivation, income poverty and consistent poverty. Focusing on these vulnerable groups in 2019, 57-59 per cent of lone parents and their children that are AROP are also deprived, and it is 50 per cent for people living in a household with someone with disabilities and 60 per cent for their children. Thus, policies targeting the factors contributing to the risk of poverty of these vulnerable groups will also affect many of those in deprivation.

While it is very useful to look at the groups that are the most vulnerable to AROP or deprivation (rates), it is also very informative to look at who they are i.e., the composition of those AROP or deprived. Starting with the composition in terms of AROP, there has been overall very little variation over time between 2004 and 2019. In 2019, the largest poor group consists of other adults aged 30-65 (25%) while it is one of the groups with the lowest AROP (8.5% in 2019). This is because adults aged 30-65 is the largest group in the overall population (38%). Next, 22 per cent of those AROP are made up of lone parents and their children, another 17 per cent are those living in a household with someone with disabilities with children. So overall, while these two groups are relatively small in the population, they both represent almost 40 per cent of those AROP.

The composition of those who are deprived is very similar. In 2019, over 25 per cent of those deprived are ‘other adults’ aged 30 to 65, followed by lone parents and their children at 23 per cent and 18 per cent children and adults living in a household with someone with disabilities. Interestingly, the composition of those in consistent poverty is slightly different as we observe a greater share among the most vulnerable. In 2019, the largest group is lone

parents and their children at 30 per cent, followed by those living in a household with someone with disabilities with children at 21 per cent. Together these groups represent half of those in consistent poverty.

6.2 The impact of social transfers on material deprivation

There is very little research exploring the impact of social transfers on material deprivation. In Ireland, Maître, Privalko and Watson (2020), using the methodology developed by Noten (2016) and Noten and Guio (2016, 2021) explored the impact of non-cash benefits on the level of basic deprivation. In this report we use the same approach to predict the level of deprivation (i.e., the proportion lacking two or more of the deprivation items) across social-risk groups and jobless households following various increases of social transfers. We use a statistical modelling technique to predict how the level of deprivation would change with a five per cent increase in social transfer payments. The total amount of social transfers is largest for people living in jobless households and people aged 65 and over so they experience the largest absolute increases in income.

The results from the model show that people in jobless households, lone parents and their children, and people living in a household with a working-age adult with disabilities and their children report the highest predicted probabilities of basic deprivation: 49 per cent, 45-46 per cent and 33 per cent respectively.

An increase of five per cent in total social transfers produced a maximum reduction of almost 0.8 percentage points in deprivation for people in jobless households and 0.5 for lone parents and their children. The lowest reduction of 0.15 percentage points is found for other adults aged 30 to 65.

The results from the regression model show that increasing social transfers benefits the most vulnerable groups in terms of reduction of deprivation even though the reductions remain quite modest.

6.3 The impact of employment policy changes and social transfers on AROP

The rest of the report focuses on the AROP measure. The analysis looks at the impact of a change in the level of household income generated through changes in employment and social transfers and assesses the change in the AROP rate. These changes are simulated with the SWITCH model. We explored income changes due to changes in the labour force characteristics of individuals or households as well as changes in a range of different social transfers.

For most households, the largest income component is market income and so the simulations explored the role of market income in poverty alleviation. We first considered the effect of increased labour supply and then the effect of increasing the minimum wage.

Using the SWITCH model, we estimate the AROP rate for 2022. Our estimate of the AROP rate for market income, which estimates the poverty rate that would prevail in the absence of the tax and transfer system, is 28 per cent for 2022. It is slightly lower for the working-age population, at 21 per cent, but significantly higher for the elderly population – who typically have very low market income – at 57 per cent. The child poverty rate using market income is estimated to be 30 per cent for 2022. The poverty rate is reduced to 14 per cent when based on disposable income. Child poverty remains slightly more elevated than that of other groups, at 18 per cent.

Among poor households, 51 per cent are in receipt of some sort of market income (earnings, investment income or private pension). By contrast, 96 per cent of non-poor households receive market income. Ninety per cent of

poor households are in receipt of welfare benefits, compared to 70 per cent of non-poor households. This analysis confirms that market income and the benefit system have a major influence on the incomes of poor households.

To examine the effect of labour force participation and wages in income poverty alleviation we create counterfactual scenarios for households with low labour market attachment or low wages. We focus on the fixed poverty line (2022 baseline) as the relationship between AROP rates and material deprivation is strongest when AROP rates are measured using a fixed poverty line (results with a relative income poverty line are also presented in an Appendix).

We examine the impact of a number of scenarios that adjust labour market participation and wages. These are as follows:

A. Assigning the head of household in each jobless household to employment provided they do not self-declare to be unfit to work.

Under this scenario, the AROP (with a fixed poverty line) is estimated to decrease by 2.1 percentage points. The effect is higher for children with child poverty decreasing by three percentage points. The elderly subpopulation remains unaffected as this simulation only affects working-age households.

B. Matching the non-disabled head of a household containing a disabled person to the labour supply and wages of a worker in a household which does not contain a disabled person.

This scenario leads to a smaller decrease in poverty of 0.2 percentage points because the numbers of households affected by this adjustment is smaller. Nevertheless, as these households account for a disproportionate number of those in poverty, this is a large change for a small increase in employment. Results for the working-age adult sub-population and children

are of the same magnitude, whereas the poverty rate among older people remains unaffected.

C. Increasing the labour market participation and hours of work of married women so that it matches the structure of male labour force participation.

Estimates from SWITCH indicate that 82.8 per cent of married men are in paid employment compared to 62.6 per cent of married women. Of those employed, married women work an average of 31.7 hours per week while the corresponding figure for married men is 40.7. In this scenario, the poverty rate decreases by 2.9 percentage points, with a larger effect for children (a decrease of 5.2 percentage points). The change in elderly poverty is very small at -0.3 percentage points.

D. Increasing the participation rate and hours of work of lone parents to match that of single women without children.

Lone parents have a participation rate of 67 per cent, compared to 77 per cent for all adults. They work fewer hours per week, on average (32 compared to 36 for all adults). Twenty-five per cent of lone parents are AROP, the second largest proportion (after jobless adults) of any of the sub-groups displayed in Table 3. We assign to lone parents the employment characteristics of a similar single person. This simulation leaves the overall AROP rate almost unaffected. One reason for this is that lone parents are a small group (6.7% of adults are lone parents) and their households are smaller in size.

E. Introducing a mandatory living wage.

We examine the effect of increasing the level of the minimum wage on poverty. We simulate increasing the minimum wage from its level in 2022 of €10.50 to €12.90 per hour, the recommended Living Wage for Ireland for 2022. The impact on AROP is small – poverty decreases by 0.5 percentage points. This is likely to reflect the relatively small numbers affected in the population and is in line with previous research for Ireland which showed that minimum wage workers do not usually live in low-income households, as they are not usually the main earner of the household (Redmond et al., 2021).

Following the simulations of changes in labour market participation and wages, we then examined the effectiveness of a range of social transfers in reducing the AROP rate. In our analysis using SWITCH, we consider how increases in spending on the following transfers below impact on the poverty rate of the whole population, as well as the adult, elderly and child subpopulations. Given the current policy concerns about rising rental costs and previous findings of affordability problems and poverty after housing costs among those in the private rental and Local Authority rental sectors (Russell et al., 2021), the impact on poverty among people renting is also considered. These benefits were chosen due to their ability to target each of the main sub-populations:

- Child Benefit
- Qualified Child Increase (QCI)
- Living Alone Allowance
- Core Benefits (Jobseeker's Allowance, Jobseeker's Benefit, One-Parent Family Payment, Jobseeker's Transitional Payment and Disability Allowance)
- Qualified Adult Increase (QAI)
- Fuel Allowance

- Working Family Payment (WFP).

We simulated the impact of two welfare reforms: a simulation with individual reforms of €100 million each per annum and one of €1 billion per annum each. We summarised below the impact of each of these reforms.

6.3.1 Individual reforms of €100m each

We present the results of reforms where the rates of payment of each transfer are increased to a level such that the net impact on the exchequer is €100m per annum:

- Child Benefit has a very limited effect on at risk of AROP rates leading to a poverty reduction of just 0.1 percentage points.
- An increase in Qualified Child payments is more effective at reducing poverty (-0.3 percentage points) and has a particularly large effect on child poverty (-0.8 percentage points).
- Increasing the Living Alone Allowance or the Fuel Allowance reduces poverty by around 0.3 percentage points with particularly large effects on elderly poverty.
- Increasing the rate of payment of core benefits or Qualified Adult payments reduces the AROP rate by around 0.3 percentage points. The former reform has a larger effect on child poverty (-0.5 percentage points) while the latter affects elderly poverty more (-0.8 percentage points)
- Increasing the income limit for the Working Family Payment has the largest effect of any of the measures considered, reducing the overall AROP rate by 0.5 percentage points, the child poverty rate by one percentage point and by 1.1 percentage points for rental tenants.

6.3.2 Package reforms of €1bn each

In addition to considering the effect of increasing the rates to each individual measure, we have also assessed the impact of packages of measures based on their target population as follows:

- Child benefit is considered as a standalone measure since it is a universal benefit and its simulated effect on AROP is relatively low.
- Children's reforms include changes to QCI and the WFP.
- Elderly reforms include changes to the living alone allowance, fuel allowance and QAI.
- Working-age adult reforms include increase to core benefits (as in the previous section).

We summarise the effect of these reforms on each of our population group as described below:

- The child benefit reform is least effective at reducing the overall AROP rate (-1.5 percentage points overall) but has a more substantial impact on the child AROP rate reducing it by 3.3 percentage points.
- The children's reforms have the greatest effect on poverty for the entire population (overall -2.3 percentage points) and child poverty (-4.8 percentage points). The reduction in the AROP for renters is also large at 4.4 percentage points.
- The elderly reforms reduce overall poverty by 1.9 percentage points, and elderly poverty by -5.7 percentage points.
- Working-age adult reforms reduce the overall poverty by 2.1 percentage points with an even distribution across groups of the population (except the elderly). However, people in rented accommodation report the largest reduction of 4.5 percentage points.

In summary, the children's package and the child benefit reforms have strong impacts on child poverty (decreased by 4.8 and 3.3 percentage points respectively) while the working-age adult reforms and the children's package

have the largest impact on poverty rates for people in rented accommodation (4.5 percentage points each).

6.4 Policy implications

The analyses presented here highlights the scale of the policy intervention needed to make significant in-roads into the overall level of poverty as committed to in national targets. A key lesson from the analysis is the importance of access to employment and social welfare in preventing individuals from falling into poverty. Market income accounts for the major part of the household income and considering social transfers (separately from taxes) reduces the AROP rate by 14 percentage points compared to when market income alone is considered.

The analyses in this report demonstrate that of the labour market reforms considered, increasing female labour market participation had the largest impact on AROP. The impact of increases in labour market participation of lone parents or the head of household in a household with a person with a disability have relatively modest effects on the AROP overall. This may appear surprising but reflects the small size of these groups in the overall population. The impact on the poverty rates for the groups themselves cannot be reported as the numbers are too small. Nevertheless, we saw that these two groups and their children account for half of those in consistent poverty, and the overlap between AROP and material deprivation is particularly high for these groups, therefore the impact on consistent poverty is likely to be higher. Increasing lone parent employment in scenario D also has an unexpectedly modest effect because lone parents are assumed to work and be paid at the same rate as a woman with similar educational qualifications and these are relatively low for some lone parents (Byrne & Murray, 2017; Redmond et al., 2021). Increasing the minimum wage to the level of the living wage (and disregarding behavioural effects) has little effect on AROP rates. This finding is in line with previous research for Ireland

which showed that minimum wage workers do not usually live in low-income households, as they are not usually the main earner of the household (Redmond et al., 2021).

It is beyond the scope of the current analyses to identify the range of policy mechanisms that would be needed to increase labour market participation and earnings in the way that was simulated. This would require very significant investments in childcare supports, adult care supports, education, training, pre-employment and job supports for those that are currently excluded (Byrne & Murphy, 2017; Kelly & Maître, 2021; Millar & Crosse 2016).[45] Other reforms to stimulate greater participation include changes to the income taxation system, which is currently part-individual and part-joint (Doorley, 2018), and more generous taper rates of welfare payments (Bargain & Doorley, 2017). Employer policies are also crucial in widening access to currently disadvantaged groups, such as flexible working arrangements, reasonable accommodations, formalised recruitment practices, etc. The analyses provide an insight into the level of change in employment needed to impact poverty rates overall.

Turning to the effect of the simulated labour market changes on consistent poverty, we estimate that the AROP rate decreases by 2.1 percentage points for the jobless household simulation and 2.9 percentage points for the female labour supply simulation. This would translate into decreases in the rate of consistent poverty of around 0.9 percentage points and 1.2 percentage points, respectively. We conclude that, while policies to increase the labour supply of jobless households and married women may help to achieve income poverty targets, they are likely to fall short of reaching consistent poverty targets in the short term.

[45] Recent research by Reagan et al., 2018 found that recently introduced childcare subsidies will have a positive impact on lone parent employment, but also highlights the non-negligible effect that childcare costs net of subsidies will continue to have on the work incentives of lone parents.

Our analysis only assesses the short-term AROP impact of policy changes. Social policies promoting market income changes are more likely to change the risk of material deprivation in the long-term, even if it has small effects on income poverty. We saw in Chapter 2 that unemployment and household joblessness are strongly related to deprivation levels, and previous research shows that household joblessness is particularly associated with persistent deprivation and income poverty. Moreover, earnings levels rise as labour market experience accumulates, again suggesting the poverty reduction impact of employment would be larger in the longer term.

Turning to the social transfers reforms considered, we found that transfers that target children (including Qualified Child Increase, Working Family Payment) have the greatest effect on poverty. This is true for the overall population but particularly for children and people living in rented accommodation, groups that are the most exposed to poverty. Reform of the WFP by increasing the earnings limit was found to be particularly effective in reducing income poverty.

Linking these results to the Government's poverty targets, the children's package, the elderly package and the working-age package could decrease consistent poverty by one, 0.8 and one percentage point respectively. We conclude that packages of benefit reform of the order of €1bn per annum would not result in substantial progress towards a consistent poverty rate of two per cent if executed alone. It is likely that this type of progress will require a mix of policies to address low market income and welfare reform.

The policy measures covered in the study focus on employment and cash benefits, i.e., not the full set of government measures that influence poverty. Research by Maître et al. (2020) highlighted the role of non-cash benefits such as medical cards and childcare support in addressing material deprivation. Also, broader policies to reduce costs of living will have a large impact on families with low levels of resources, this includes actions on affordable housing, affordable childcare, and access to healthcare. The provision of

public services is particularly important for the quality of life and social inclusion of the most disadvantaged groups and for addressing child poverty (NESC, 2005; 2020) though service provision is beyond the scope of the current report.

Finally, while the focus of the report is on the impact on the target headcount rates, increases to social transfers and market incomes could lead to further improvements in people's welfare by reducing the intensity of poverty (the poverty gap), improving people's societal position and reducing overall disparities in incomes. Moreover, all the results suggest that the most efficient policies for lifting people out of poverty, should include a mix of policies supporting an increase of household market income as well as welfare changes.

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Appendix

Alternative models of deprivation estimates

We use two estimates to select the best model for fitting the data, the Akaike Information Criterion ('AIC') and Bayesian Information Criterion ('BIC'). The lower the values of the AIC and BIC, the better the model is. Using this approach, Notten and Guio (2016, 2020) found that the best model to simulate the impact of an increase of social transfers on material deprivation was the Ordered logit regression. The AIC and BIC estimates in Table A.1 suggest that the Ordered logit regression is only the second-best model. However, with AIC and BIC estimates not too far off the best model (Zero inflated model) we are using the Ordered logit regression as selected by Notten and Guio (2016, 2020). This will allow us to compare our findings with those of these authors.

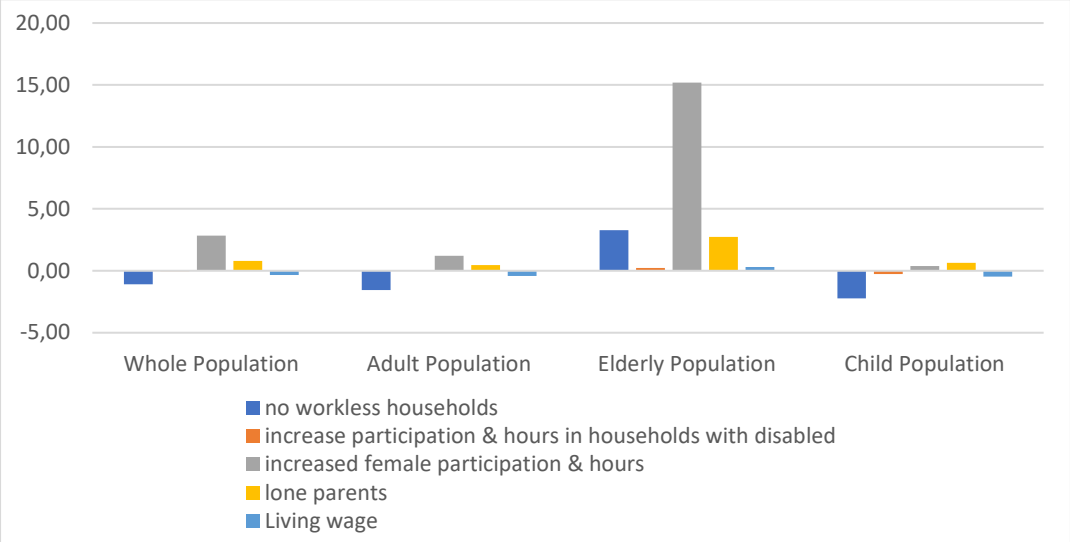
TABLE A.1: MODELS PREDICTING HIGHER LEVELS OF DEPRIVATION, SILC (2004-2019)

VARIABLES	OLS	Poisson	Negative binomial	Zero-inflated	Ordinal
Ref: 2004					
2005	0.00	0.01	-0.02	-0.00	0.02
2006	-0.00	-0.02	-0.01	-0.11	0.11
2007	0.02	-0.02	0.07	-0.09	0.13
2008	0.04	0.05	0.17*	-0.07	0.25**
2009	0.01	0.06	0.23**	-0.14*	0.34***
2010	0.24***	0.35***	0.54***	0.02	0.69***
2011	0.33***	0.43***	0.66***	0.01	0.89***
2012	0.53***	0.61***	0.86***	0.13*	1.09***
2013	0.64***	0.71***	0.98***	0.20***	1.25***
2014	0.63***	0.70***	0.98***	0.20***	1.25***
2015	0.57***	0.66***	0.91***	0.16**	1.21***
2016	0.34***	0.42***	0.65***	0.02	0.87***
2017	0.31***	0.39***	0.62***	0.03	0.82***
2018	0.24***	0.29***	0.55***	-0.03	0.70***
2019	0.34***	0.45***	0.71***	0.12*	0.85***
Ref: Adults 66 +					
Lone parents	0.45***	0.28***	0.29***	0.09*	0.46***
Child of lone parent	0.45***	0.25***	0.25***	0.10**	0.41***

People w/disability	0.23***	0.25***	0.27***	0.11***	0.35***
Children of PWD	0.10*	0.11*	0.14**	0.03	0.17**
Other children	-0.30***	-0.29***	-0.35***	-0.19***	-0.38***
Other adults 18-29	-0.12***	-0.10*	-0.15***	-0.07	-0.15**
Other adults 30-65	-0.23***	-0.26***	-0.28***	-0.13***	-0.32***
Ref: HOH male					
Female HoH	0.14***	0.22***	0.24***	0.06*	0.33***
Age of HoH	-0.00	-0.00*	-0.01***	0.00	-0.01***
Ref: HoH Irish					
HoH non-Irish	-0.14***	-0.03	-0.00	-0.02	-0.09
Ref: HoH working					
HoH unemployed	0.60***	0.59***	0.63***	0.21***	0.83***
HoH in education	0.15	0.27***	0.26**	0.18**	0.12
HoH in home duties	0.15***	0.25***	0.17***	0.09**	0.20***
HoH retired	-0.00	0.01	0.01	0.02	0.01
HoH ill/disabled	1.02***	0.74***	0.75***	0.36***	1.02***
HoH not yet at work	0.36**	0.43***	0.40***	0.13	0.51***
Ref: HoH Degree					
HoH has primary education	0.44***	0.51***	0.58***	0.18***	0.80***
Head of hh has secondary education	0.09***	0.16***	0.18***	0.05*	0.21***
Log Equivalised household income	-0.40***	-0.48***	-0.92***	-0.22***	-0.90***
N of children <18	0.11***	0.10***	0.08***	0.03***	0.15***
N of adults 18-65	-0.01	-0.01	-0.03*	-0.00	-0.02
N of adults 65+	-0.25***	-0.34***	-0.34***	-0.16***	-0.40***
Rented accommodation	0.58***	0.46***	0.47***	0.20***	0.66***
Jobless household	0.69***	0.27***	0.22***	0.17***	0.45***
Constant	4.11***	3.54***	7.83***	2.57***	
Observations	199,648	199,648	199,648	199,648	199,648
AIC	72,5912	50,5325	42,9873	36,3109	41,7410
BIC	72,6320	50,5733	43,0291	36,3946	41,7921

Note: *** p<0.001, ** p<0.01, * p<0.05

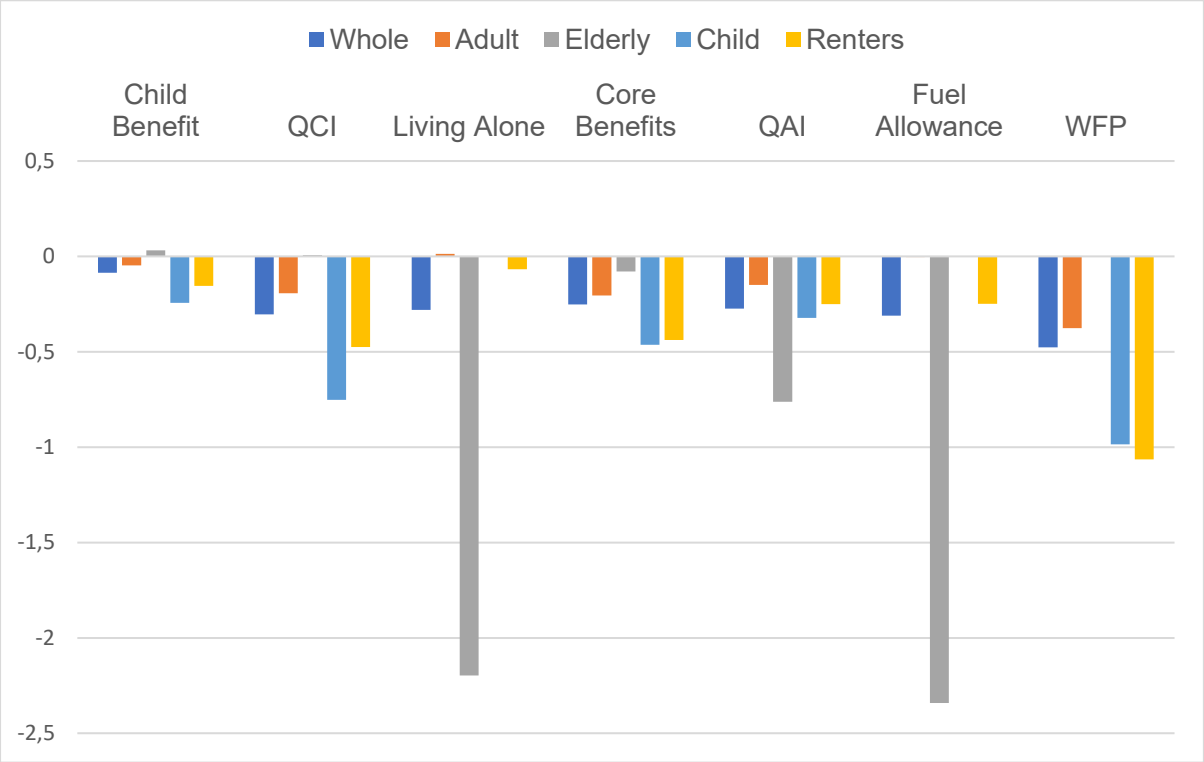
FIGURE A1: PERCENTAGE POINT CHANGE IN AROP RATE DUE TO SIMULATED INCREASE IN LABOUR SUPPLY/WAGES (FLOATING POVERTY LINE)



Source: Own calculations using SWITCH v4.4

Note: The poverty rate is calculated based on a poverty line equal to 60% of median equivalised disposable income. The CSO equivalence scale is used. The adult population is defined as aged 18-65, elderly is over 65 and children are under age 18. Baseline poverty rates: whole population – 13.63%,; adult population – 12.03%, elderly population – 13.94%, child population – 17.51%.

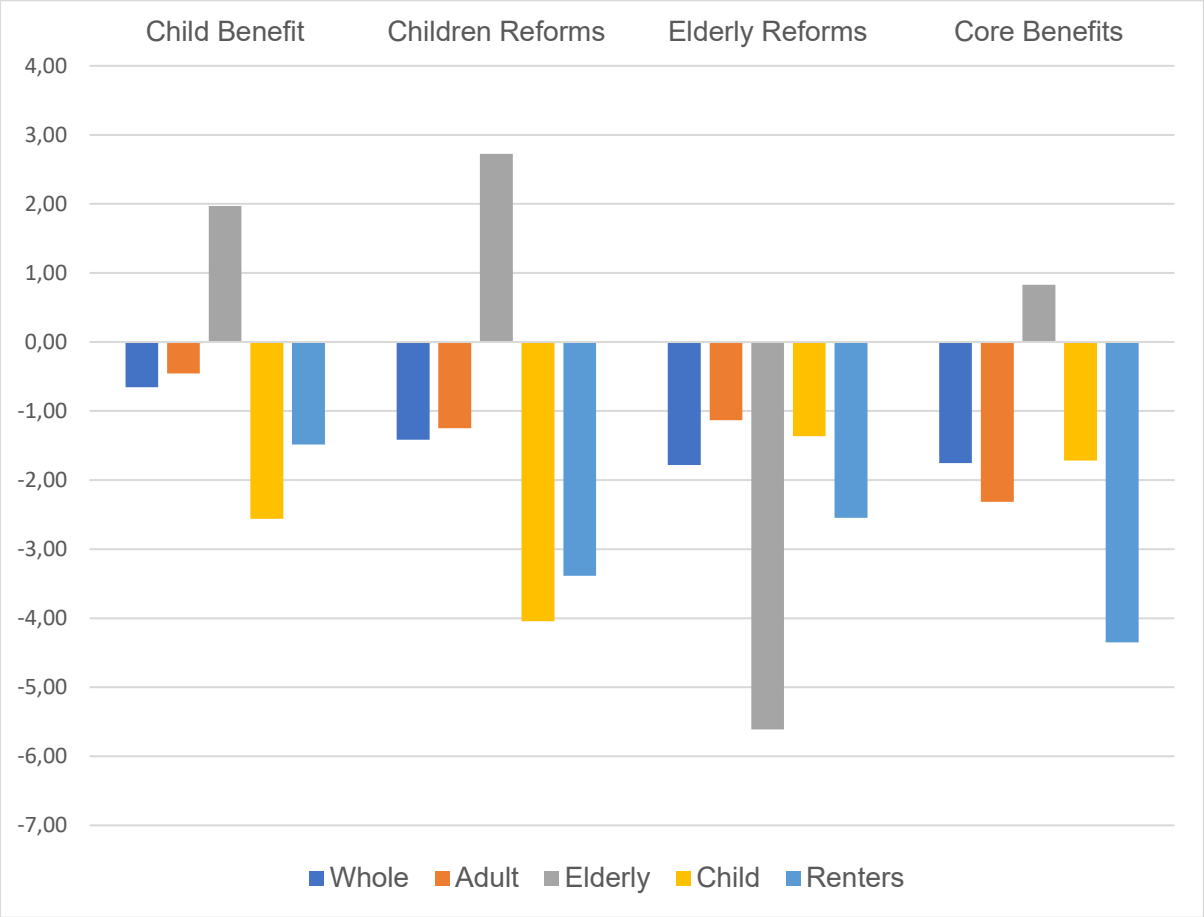
FIGURE A2: PERCENTAGE POINT CHANGE IN AROP RATE DUE TO SELECTED WELFARE PAYMENTDS COSTING €100M EACH (FLOATING POVERTY LINE)



Source: Own calculations using SWITCH v4.4

Note: The poverty rate is calculated based on a poverty line equal to 60% of median equivalised disposable income. The CSO equivalence scale is used. The adult population is defined as aged 18-65, elderly is over 65 and children are under age 18. . Baseline poverty rates: whole population – 13.63%, adult population – 12.03%, elderly population – 13.94%, child population – 17.51%, renters – 22%.

FIGURE A3: PERCENTAGE POINT CHANGE IN AROP RATE DUE TO SIMULATED WELFARE PAYMENTS COSTING €1BN EACH (FLOATING POVERTY LINE)



Source: Own calculations using SWITCH v4.4

Note: The poverty rate is calculated based on a poverty line equal to 60% of median equivalised disposable income. The CSO equivalence scale is used. The adult population is defined as aged 18-65, elderly is over 65 and children are under age 18. Baseline poverty rates: whole population – 13.63%,; adult population – 12.03%, elderly population – 13.94%, child population – 17.51%, renters – 22%.

TABLE A.2: SUMMARY OF SWITCH PARAMETER CHANGES

	Baseline	€100m Spend	Change	€1bn Spend	Change
Child Benefit	140	147	5%	210.5	50%
Core Benefits	208	215.3	4%	283.1	36%
Fuel Allowance	33	47.7	45%	49.8	51%
Living Alone Allowance	24.5	39.5	61%	59.3	142%

QAI					
Full Rate	138	152.5	11%	228.8	66%
Reduced Rate	117.7	130.5	11%	195.8	66%
State Pension, Working Age Rates:					
1	168.7	185.57	10%	278.4	65%
2	160.6	176.66	10%	265	65%
3	152.8	160.08	5%	252.1	65%
4	142.9	157.19	10%	235.8	65%
5	110	121	10%	181.5	65%
6	67	73.7	10%	110.6	65%
State Pension, Retirement Age Rates:					
1	227	249.7	10%	374.6	65%
2	215.7	237.27	10%	355.9	65%
3	204.5	224.95	10%	337.4	65%
4	192.5	211.75	10%	317.6	65%
5	147.4	162.14	10%	243.2	65%
6	91.3	100.43	10%	150.6	65%
QCI					
Standard Rate	40	47.3	18%	54.6	37%
Higher Rate	48	56.3	17%	65.5	36%
WFP Income Limits					
1	551	597	8%	771.4	40%
2	652	708	9%	912.8	40%
3	753	819	9%	1054.2	40%
4	844	919	9%	1181.6	40%
5	970	1058	9%	1358	40%
6	1086	1185	9%	1520.4	40%
7	1222	1335	9%	1710.8	40%
8	1318	1440	9%	1845.2	40%

TABLE A3: SUMMARY OF POVERTY RATE CHANGES

Adult Population	**Baseline Poverty Rate: 12.03%**			
	Fixed		*Floating*	
	New Rate	Change	New Rate	Change
Employment Simulations				
No Jobless Households	9.85%	-2.18%	10.47%	-1.55%
Increase hours & participation in households with someone with disabilities	11.88%	-0.15%	12.06%	0.03%
Increased Female Hours & Participation	9.48%	-2.55%	13.23%	1.20%
Living Wage	11.51%	-0.52%	11.61%	-0.42%
Lone Parents	11.99%	-0.04%	12.48%	0.45%
Tax-Benefit Simulations (€100m)				
Child Benefit	11.96%	-0.07%	11.98%	-0.05%
Qualified Child Increase	11.82%	-0.21%	11.83%	-0.20%
Living Alone	12.03%	0.00%	12.04%	0.01%
Core Benefits	11.81%	-0.22%	11.82%	-0.21%
Qualified Adult Increase	11.86%	-0.17%	11.88%	-0.15%
Fuel Allowance	12.01%	-0.02%	12.02%	-0.01%
Working Family Payment	11.65%	-0.38%	11.65%	-0.38%
Tax-Benefit Simulations (€1bn)				
Child Benefit	10.97%	-1.06%	11.57%	-0.46%
Children Reforms	10.16%	-1.87%	10.78%	-1.25%
Elderly Reforms	10.71%	-1.32%	10.89%	-1.14%
Core Benefits	9.45%	-2.58%	9.71%	-2.32%

Elderly Population	**Baseline Poverty Rate: 13.94%**			
	Fixed		*Floating*	
	New Rate	Change	New Rate	Change
Employment Simulations				
No Jobless Households	13.94%	0.00%	17.20%	3.26%
Increase hours & participation in households with someone with disabilities	13.94%	0.00%	14.16%	0.22%
Increased Female Hours & Participation	13.62%	-0.32%	29.14%	15.20%
Living Wage	13.96%	0.02%	14.25%	0.31%
Lone Parents	13.94%	0.00%	16.67%	2.73%
Tax-Benefit Simulations (€100m)				
Child Benefit	13.94%	0.00%	13.97%	0.03%
Qualified Child Increase	13.94%	0.00%	13.95%	0.01%
Living Alone	11.70%	-2.24%	11.72%	-2.22%
Core Benefits	13.83%	-0.11%	13.86%	-0.08%
Qualified Adult Increase	13.17%	-0.77%	13.18%	-0.76%
Fuel Allowance	11.60%	-2.34%	11.61%	-2.33%
Working Family Payment	13.94%	0.00%	13.94%	0.00%

Child Population	**Baseline Poverty Rate: 17.51%**			
	Fixed		*Floating*	
	New Rate	Change	New Rate	Change
Employment Simulations				
No Jobless Households	14.52%	-2.99%	15.29%	-2.22%
Increase hours & participation in households with someone with disabilities	17.22%	-0.29%	17.25%	-0.26%
Increased Female Hours & Participation	12.30%	-5.21%	17.89%	0.38%
Living Wage	16.89%	-0.62%	17.03%	-0.48%
Lone Parents	17.62%	0.11%	18.14%	0.63%

Tax-Benefit Simulations (€100m)				
Child Benefit	17.25%	-0.26%	17.27%	-0.24%
Qualified Child Increase	16.76%	-0.75%	16.76%	-0.75%
Living Alone	17.51%	0.00%	17.51%	0.00%
Core Benefits	17.05%	-0.46%	17.05%	-0.46%
Qualified Adult Increase	17.19%	-0.32%	17.19%	-0.32%
Fuel Allowance	17.51%	0.00%	17.51%	0.00%
Working Family Payment	16.52%	-0.99%	16.52%	-0.99%
Tax-Benefit Simulations (€1bn)				
Child Benefit	14.19%	-3.32%	14.95%	-2.56%
Children Reforms	12.76%	-4.75%	13.47%	-4.04%
Elderly Reforms	16.11%	-1.40%	16.15%	-1.36%
Core Benefits	15.59%	-1.92%	15.79%	-1.72%

TABLE A4: NUMBER OF INDIVIDUALS IN POVERTY

	Whole	*Adult*	*Elderly*	*Children*	*Renters*
Baseline	670,946	368,361	90,383	212,202	325,132
Reforms - €100m					
Fixed					
Child Benefit	665,613	366,238	90,383	208,992	322,284
QCI	655,460	361,997	90,383	203,080	318,074
Living Alone	656,411	368,361	75,848	212,202	324,122
Core Benefits	657,936	361,673	89,666	206,597	318,628
QAI	657,109	363,378	85,418	208,313	321,445

Fuel Allowance	655,289	367,852	75,235	212,202	321,450
WFP	647,352	356,771	90,383	200,198	309,255
Floating					
Child Benefit	666,789	366,931	90,584	209,274	322,848
QCI	655,918	362,408	90,430	203,080	318,074
Living Alone	656,976	368,772	76,002	212,202	324,122
Core Benefits	658,548	362,084	89,867	206,597	318,628
QAI	657,567	363,789	85,465	208,313	321,445
Fuel Allowance	655,747	368,263	75,282	212,202	321,450
WFP	647,352	356,771	90,383	200,198	309,255

Reforms - €1bn

Fixed					
Child Benefit	598,179	336,151	90,113	171,915	285,268
Children	556,230	311,289	90,383	154,558	258,737
Core	565,844	289,466	87,481	188,897	257,616
Elderly	576,665	327,947	53,463	195,255	286,425
Floating					
Child Benefit	638695	354345	103162	181188	303067
Children	556230	311289	90383	154558	274878
Core	584640	297487	95762	191391	260530
Elderly	583346	333698	53989	195659	287326

Glossary

At risk of income poverty thresholds: income thresholds derived as proportions of median income. These are based on the household income adjusted for household size and composition (referred to as equivalised income). A household at risk of income poverty has an adjusted (or equivalised) income below 60 per cent of the median adjusted household income. The at risk of income poverty rate takes account of household income from all sources, number of adults and number of children in the household. There are some minor differences in the income concept and the equivalence scale between the Irish and EU measures of at risk of income poverty.

At risk of income poverty: a term used at EU level to denote whether a household's income falls below the 60 per cent of median income threshold. It is also known as *income poverty*.

At risk of income poverty or exclusion: this EU measure combines the number of people who experience at risk of income poverty or severe material deprivation or low work intensity. This measure is the basis for the Europe 2020 income poverty target. In cases where people experience more than one of these indicators, they are counted only once. The Irish version of this measure is the combination of at risk of income poverty and basic deprivation.

Basic deprivation: people who are denied – through lack of income – at least ***two items or activities on this index/list of 11*** are regarded as experiencing relative deprivation. This is enforced deprivation as distinct from the personal choice not to have the items. Eleven basic items are used to construct the deprivation index:

- unable to afford two pairs of strong shoes
- unable to afford a warm waterproof overcoat
- unable to afford new (not second-hand) clothes
- Unable to afford a meal with meat, chicken or fish (vegetarian equivalent) every second day
- unable to afford a roast joint or its equivalent once a week
- without heating at some stage in the last year through lack of money
- unable to afford to keep the home adequately warm
- unable to afford to buy presents for family or friends at least once a year
- unable to afford to replace any worn out furniture
- unable to afford to have family or friends for a drink or meal once a month
- unable to afford a morning, afternoon or evening out in the last fortnight for entertainment.

The indicator **of basic deprivation** was developed by the Economic and Social Research Institute using data from the *Survey on Income and Living Conditions*. (See Maître B., Nolan B. and Whelan C. (2006) Reconfiguring the Measurement of Deprivation and Consistent Income Poverty in Ireland, Dublin: ESRI, for further information on the indicator.)

Consistent income poverty: this is a measure of income poverty used in the *National Action Plan for Social Inclusion 2007-2016* (*NAP-inclusion*) that takes account of the household's living standards as well as the household size, composition and total income. A household is consistently poor if the household income is below the at risk of income poverty threshold (see above) and the household members are deprived of **at least 2 out of the 11 items** on the basic deprivation list.

Deprivation: see definition for basic deprivation above for measure of deprivation used in the *NAP-inclusion*.

Disposable income: Market income plus benefits/social transfers minus taxes and social security contributions.

Equivalence scales: a set of relativities between the needs of households of differing size and composition, used to adjust household income to take into account the greater needs of larger households. In Ireland, the national scale attributes a weight of one to the first adult (aged 14+) and 0.66 to each subsequent adult and a weight of 0.33 to each child. International comparisons such as the one done by Eurostat uses the modified OECD scale which attributes a weight of one to the first adult (aged 14+) and 0.5 to each subsequent adult and a weight of 0.3 to each child.

Equivalised Income: This refers to household income from all sources adjusted for differences in household size and composition (number of adults and children). It is calculated by dividing total disposable (i.e., after tax) household income by the equivalence scale value. It can be interpreted as income per adult equivalent.

EU-SILC: *European Union Statistics on Income and Living Conditions* is a voluntary household survey carried out annually in a number of EU Member States allowing comparable statistics on income and living conditions to be compiled. In Ireland, the Central Statistics Office (CSO) have been conducting the survey since 2003. The results are reported in the Survey on Income and Living Conditions (SILC). Any data as compiled by Eurostat and any reference to the questions or questionnaire in the household survey is here referred to as 'EU-SILC'.

Gross income: Market income plus benefits/social transfers.

Financial strain: is a composite indicator based on five items: difficulty making ends meet, housing costs burdensome, going into debt to meet ordinary living expenses, arrears on mortgage/rent or utility bills, and inability to save.

Household: a household is usually defined for statistical purposes as either a person living alone or a group of people (not necessarily related) living at the same address with common housekeeping arrangements – that is, sharing at least one meal a day or sharing a living room or sitting room.

Household equivalent (or equivalised) income: household income adjusted to take account of differences in household size and composition by means of equivalence scales.

Income poverty and Social Exclusion: these terms are defined broadly in the *National Action Plan for Social Inclusion 2007-2016 (NAPinclusion)* as follows:

> 'People are living in income poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources people may be excluded and marginalised from participating in activities which are considered the norm for other people in society.'

The two concepts are very similar when used in Irish policymaking but income poverty is sometimes used in the narrower context to refer to low income (or wealth). On the other hand, social exclusion is almost always used in the broader sense, to refer to the inability to participate in society because of a lack of resources that are normally available to the general population.

Lone parent: a parent who has primary custody of a dependent child and is not living with the other parent.

Market income: income such as salaries or wages that is earned through employment/self-employment.

Material deprivation (EU): this indicator is one of the European Commission's common indicators on social protection and social inclusion. It measures the proportion of the population lacking at least three out of the following nine items:

- arrears on mortgage or rent payments, utility bills, hire purchase instalments or other loan payments
- capacity to afford paying for one week's annual holiday away from home
- capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day
- capacity to face unexpected financial expenses (set amount corresponding to the monthly national at risk of income poverty threshold of the previous year)
- household cannot afford a telephone (including mobile phone)
- household cannot afford a colour TV
- household cannot afford a washing machine
- household cannot afford a car
- ability of the household to pay for keeping its home adequately warm.

Mean: the average value (for example, the average income in a sample obtained via household survey).

Median: the value that divides a sample in half (e.g., the income level above and below which half the people in a sample fall).

Micro-simulation model: a computer program that mimics the operation of government programs, tax liabilities, social security and other benefits for households and individuals.

Negative binomial regression: a generalisation of a Poisson regression which loosens the assumption that the variance is equal to the mean.

Net income: market income minus taxes and social security contributions.

Odds ratio: quantifies the strength of association between two events, A and B. The odds ratio is the ratio of the odds of A in the presence of B and the odds of A in the absence of B. An odds ratio of 1 indicates independence.

Ordered logistic regression: a subtype of logistic regression where the dependent variable is ordered (i.e., categorised).

Ordinary least squares regression: estimates the coefficients of linear regression equations by minimising the sum of squares of the differences between the observed dependent variable and those predicted by the linear function of the independent variable.

Poisson regression: assumes that the dependent variable has a Poisson distribution and assumes the logarithm of its expected value can be modelled by a linear combination of unknown parameters.

Severe material deprivation: this EU indicator measures the proportion of the population lacking at least four of the nine items listed in the EU index of material deprivation (see definition above).

SILC: in Ireland, the Central Statistics Office (CSO) is responsible for carrying out the SILC survey. They produce analysis in accordance with Irish national income poverty targets, indicators and related issues. These results are reported in the Survey on Income and Living Conditions (SILC). Any data on Ireland that is sourced specifically from the CSO is here referred to as 'SILC'.

Social welfare transfers: cash receipts paid from various social welfare schemes received by the individual or household.

SWITCH: the ESRI's tax-benefit micro-simulation model (simulating welfare, income tax, childcare and health policies).

Uprating: the process of increasing the value of incomes and other monetary variables such that they are consistent with the distribution observed in a given year.

Well-being: is "a positive physical, social and mental state. It requires that basic needs are met, that individuals have a sense of purpose, that they feel able to achieve important goals, to participate in society and to live lives they value and have reason to value. Well-being is enhanced by conditions that include financial and personal security, meaningful and rewarding work, supportive personal relationships, strong and inclusive communities, good health, a healthy and attractive environment, and values of democracy and social justice." (NESC, 2009, p. 3).

Zero-inflated regression: a regression used to model count data that has an excess of zero counts.