

## ESRI SPECIAL ARTICLE

*Distributional impact of tax and welfare policies:  
COVID-related policies and Budget 2021*

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# DISTRIBUTIONAL IMPACT OF TAX AND WELFARE POLICIES: COVID-RELATED POLICIES BUDGET 2021

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## ABSTRACT

In this article, we assess the impact of the COVID-19 pandemic on unemployment in Ireland and estimate how family incomes have changed as a result of increased unemployment, calibrated to administrative sources for end-August. We then show how the direct and indirect tax and welfare measures enacted prior to Budget 2021 have helped to cushion pandemic-related income losses. Lastly, we assess the impact of Budget 2021 measures.

We find that pandemic-related unemployment could have decreased household income by an average of 7 per cent across the population, with significantly larger losses for those who lost their jobs. Thanks to the initial policy response in the form of the PUP, wage subsidy and standard rate VAT cut, household income fell instead by 3 per cent on average. These losses are sharpest at the upper end of the income distribution, for the young, and for those in certain hard-hit sectors such as hospitality. The impact of Budget 2021, while less costly than the pre-budget measures, is similar in pattern, with above average gains for the bottom two-fifths of the income distribution and lower than average gains for those at the upper end.

Without these interventions, income inequality would have increased substantially. Instead, our simulations suggest that the COVID-related interventions stabilised disposable income inequality, a significant feat given the job losses experienced. At risk of poverty rates were also stabilised by COVID-related policies but there is a risk that these indices may increase significantly once these supports are withdrawn. We conclude with some brief reflections on some of the challenges facing the government in the coming years.

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## 1. INTRODUCTION

In the Budget delivered to the Dáil on 13 October, the Minister for Finance and the Minister for Public Expenditure and Reform announced plans for General Government expenditure in 2021 of €109.2 billion, a €21.9 billion (25 per cent) increase from its pre-pandemic 2019 level. This is to be financed by €88.7 billion of General Government revenue and borrowing, with a General Government deficit of €20.5 billion planned for 2021.<sup>2</sup>

The majority of additional Departmental expenditure has been allocated to the Department of Health – reflecting increased healthcare costs and additional demands arising from the ongoing COVID-19 pandemic – and the Department of Social Protection. While most of the latter reflects increased claims for welfare payments rather than an increase in the generosity of these payments, the Budget announced changes that will leave welfare spending €510 million higher and taxes €265 million lower than they otherwise would have been.<sup>3</sup>

These measures come in addition to the substantial changes made earlier in 2020 to the direct tax and benefit system and indirect taxes. The COVID-19 pandemic has resulted in huge employment losses in 2020, with the Government responding by introducing two new financial supports: the Pandemic Unemployment Payment and the Employment Wage Subsidy Scheme. A cut to the standard rate of VAT was also enacted in advance of the Budget package.

Using representative survey data linked to SWITCH, the ESRI's tax and benefit microsimulation model and ITSim, the ESRI and Department of Finance indirect tax tool, this article assesses these reforms. We first look at the cost and distributional effect of pandemic-related unemployment, where this is calibrated to the latest available figures at end-August 2020. We then assess how pre-budget COVID income supports and Budget 2021 affect these.<sup>4</sup>

We find that pandemic-related unemployment could have decreased household income by an average of 7 per cent across the population, with significantly larger losses for those who lost their jobs. Thanks to the initial policy response in the form of the PUP, wage subsidy and standard rate VAT cut, household income fell instead

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<sup>2</sup> See Table 11 of the Budget 2021 Economic and Fiscal Outlook, available at <http://budget.gov.ie>.

<sup>3</sup> See Chapter 10 of Budget 2021 Expenditure Report, available at <http://budget.gov.ie>.

<sup>4</sup> This analysis focuses on pre-budget direct and indirect tax and welfare measures and Budget 2021. It excludes measures announced at the end of October 2020 which increased the level of PUP and EWSS in response to the introduction of Level 5 restrictions.

by 3 per cent on average. These losses are sharpest at the upper end of the income distribution, for the young, and for those in certain hard-hit sectors such as hospitality. The impact of Budget 2021, while less costly than the pre-budget measures, is similar in pattern, with above average gains for the bottom two-fifths of the income distribution and lower than average gains for those at the upper end.

Without these interventions, income inequality would have increased substantially. Instead, our simulations suggest that the COVID-related interventions stabilised disposable income inequality, a significant feat given the job losses experienced. At risk of poverty rates were also stabilised by COVID-related policies but there is a risk that these indices may increase significantly once these supports are withdrawn. We conclude with some brief reflections on some of the challenges facing the government in the coming years.

## **2. SCENARIOS**

This analysis uses SWITCH, the ESRI's tax benefit model and ITSim, the indirect tax microsimulation tool jointly developed by researchers at the ESRI and the Department of Finance. SWITCH is run on data from the 2017 Survey of Income and Living Conditions (SILC), the primary source of information on household incomes collected annually by the Central Statistics Office (CSO). The scale, depth and diversity of this survey allows it to provide an overall picture of the impact of the policy changes on Irish households, which cannot be gained from selected example cases. ITSim estimates the indirect taxes (VAT and excise duties, including carbon taxes) paid by Irish households on the basis of their reported expenditure, collected by the CSO's nationally representative Household Budget Survey (HBS) in 2015-2016.<sup>5</sup> There are three stages to our analysis which rely on four scenarios. These are summarised in Table 1.

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<sup>5</sup> Incomes are uprated to 2020 levels using earnings growth, and expenditures are uprated to 2021 levels using forecasts for HICP from the Central Bank of Ireland (Central Bank of Ireland, 2020). No income growth is assumed between 2020 and 2021.

**TABLE 1 SCENARIOS**

Scenario	Data	Tax-benefit policy system
<b>Pre-COVID</b>	2017 SILC with incomes uprated to 2020 levels	February 2020 direct and indirect tax and welfare policies, indexed by forecast price growth between 2020 and 2021
<b>COVID - no policy response</b>	2017 SILC with incomes uprated to 2020 levels and COVID-related job loss calibrated to end-August 2020	February 2020 direct and indirect tax and welfare policies, indexed by forecast price growth between 2020 and 2021
<b>COVID - September policy response</b>	2017 SILC with incomes uprated to 2020 levels and COVID-related job loss calibrated to end-August 2020	September 2020 direct and indirect tax and welfare policies, indexed by forecast price growth between 2020 and 2021
<b>COVID - Budget 2021</b>	2017 SILC with incomes uprated to 2020 levels and COVID-related job loss calibrated to end-August 2020	2021 direct and indirect tax and welfare policies

Given the substantial impact of the COVID-19 pandemic on employment, we first adjust the 2017 data in order to be representative of the 2020 population in terms of unemployment rates. A proportion of workers in each industry are assumed to have either lost their job or to have been put on the Employment Wage Subsidy Scheme (EWSS). The number of individuals to either lose their job or receive the EWSS is calibrated from publicly available data from the CSO on the number of people in receipt of the Pandemic Unemployment Payment (PUP) and the Temporary Wage Subsidy Scheme (TWSS, the predecessor to EWSS). Both calibrations are done using end-August figures, the latest available at the time of writing, and account for the industry and age breakdown of recipients of either scheme.<sup>6</sup> The data are also adjusted to take account of income growth between 2017 and 2020.<sup>7</sup>

We then use SWITCH to calculate households' social welfare entitlements, tax liabilities and net incomes under our baseline policy. This indexes the policy rules in place in February 2020 by forecast inflation of 0.2 per cent<sup>8</sup> between 2020 and 2021 to provide a benchmark that holds welfare payments, tax credits and thresholds constant in real terms.<sup>9</sup> Comparing this scenario (*COVID – no policy response*) to one in which there is no unemployment shock (*Pre-COVID*) shows in net-terms the effect of pandemic-related unemployment on incomes, accounting

<sup>6</sup> COVID-19 Adjusted Monthly Unemployment Estimates by Age Group, Lower and Upper Bound, Month, Statistic and Sex. <https://statbank.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=MUM02&PLanguage=0>.

<sup>7</sup> For example employment income is uprated by 1.12 using data from the CSO and the ESRI *Quarterly Economic Commentary*, and self-employment income is uprated by 1.04 using both data from the CSO and national income forecasts in the ESRI *Quarterly Economic Commentary*.

<sup>8</sup> As per the Central Bank's Quarterly Bulletin, Q3.

<sup>9</sup> While these rules could alternatively be indexed by forecast wage growth to provide a more distributionally neutral benchmark, no such forecast was available given the uncertainty associated with the ongoing pandemic. See Callan et al. (2019) for a discussion of indexation options and the associated issues they raise.

for the offsetting effect of lower tax payments and higher social welfare entitlements (so called ‘automatic stabilisers’).

In the second stage, we incorporate three major policy changes made between March and September 2020 in response to the pandemic.

1. The **Pandemic Unemployment Payment (PUP)** was announced on 15 March at a rate of €203 per week, increased to €350 per week following an announcement on 24 March. The generosity of the PUP was gradually decreased so that, by September 2020, recipients received either €203, €250 or €300 per week, depending on their pre-pandemic earnings. It is this version of the PUP that we model in SWITCH. Although reduced from its initial flat rate of €350, the PUP is still more generous than the standard personal rate for Jobseekers’ supports. The PUP is closed to new applicants from January 2021 while the payment itself will be discontinued in Spring 2021.
2. On 19 March, the Minister for Social Protection introduced the Employer Refund scheme by which employees could remain on company payrolls while receiving the amount of the COVID-19 Support Payment, the cost of which would be reimbursed to relevant businesses. This scheme was superseded by the Temporary Wage Subsidy Scheme (TWSS) from 26 March, allowing employers to claim subsidies of up to €410 per week for eligible employees they retain on payroll. The TWSS was replaced on 1 September by the **Employment Wage Subsidy Scheme (EWSS)** which provides a two-tier subsidy of €151.50 or €203 per employee to employers who have suffered a loss in turnover of at least 30 per cent. This scheme will remain in operation until Spring 2021. As our focus in the *COVID – September policy response* scenario is on the tax-benefit scheme in place just preceding the budget, it is the EWSS that is examined in the analysis that follows.
3. As part of the July Stimulus, the **standard rate of VAT** was cut from 23 per cent to 21 per cent from September 2020 until February 2021 to aid a wide range of economic activities.

This scenario, *COVID – September policy response*, is compared to the *COVID – no policy response* scenario in order to show the cost and distributional effect of these supports.<sup>10</sup> A key assumption in this stage of the analysis is the number of jobs supported by the EWSS that would have been lost in the absence of this policy measure. Our central assumption is that 50 per cent of jobs supported by the EWSS

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<sup>10</sup> In each case, policy rules are indexed in line with forecast CPI growth between 2020 and 2021 (Central Bank of Ireland, 2020).

would have been lost in the absence of this policy measure<sup>11</sup> but, in the next section, we show how sensitive our estimation of the cost of the pandemic income supports is to this assumption.

In the third stage of the analysis, we incorporate changes announced in Budget 2021. The elements of Budget 2021 that we model consist of changes to direct taxes, indirect taxes and social welfare payments which we list in Appendix A and briefly detail here.

Although most tax credits and bands were frozen in cash terms – amounting to a small effective tax increase given forecast inflation of 0.2 per cent – some cuts to direct taxes on personal income were announced. The point that the main rates of Universal Social Charge (USC) and class A employer pay related social insurance (PRSI) begin to apply were increased slightly while a reduced rate of USC for Medical Card holders was extended by a year. The earned income tax credit (EITC) available to self-employed workers was also increased (by €150 to €1,650 per year) meaning that most self-employed will now pay the same income tax as employees with the same level of earnings.<sup>12</sup>

There were more substantial reductions in indirect taxes, with a temporary 14-month cut in the rate of VAT charged on hospitality and hairdressing (from 13.5 per cent to 9 per cent) and cash freezes (small effective cuts) in alcohol duties. However, there were also increases in tobacco products tax (equivalent to an extra 50 cents per pack of 20 cigarettes) as well as a well-flagged rise in the carbon tax (from €26 to €33.50 per tonne).<sup>13</sup>

While the main rates of most social welfare benefits were frozen in cash terms, there were some substantial targeted increases to payments, in part informed by ESRI research on how lower income households could be best compensated for a rise in the carbon tax (O'Malley et al., 2020). Low income retirees and single adults living alone gained from increases to the Living Alone Increase and Fuel Allowance: 36 per cent and 14 per cent respectively. Low income families with children gained from a rise in weekly payments per child, whether in receipt of Jobseekers'

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<sup>11</sup> We have arbitrarily chosen the halfway point, 50 per cent, as it is not possible to know what the true figure is.

<sup>12</sup> The incomes of self-employed workers will continue to be subject to higher rates of USC above €100,000 per year but benefit from more favourable PRSI treatment than the earnings of employees (Roantree et al., 2018). The Budget also announced the extension of various direct tax reliefs for companies and first-time buyers of newly built homes, none of which are incorporated in our analysis given the focus is on household incomes.

<sup>13</sup> There were also changes to the way that cars registered from January 2021 will be taxed, both on registration in the form of Vehicle Registration Tax (VRT) and recurrently (motor tax). However, we do not model either of these changes as our SILC data do not contain sufficiently detailed information on car ownership.



payments, One-Parent Family Payment or Working Families Payment. In addition, there were increases to the amount that recipients of One-Parent Family Payment and Disability Allowance could earn before seeing their payment means-tested, and to the Carer's Support Grant paid annually to those in receipt of the Carer's Allowance, Carer's Benefit and Domiciliary Care Allowance.<sup>14</sup>

Comparing outcomes in the *COVID – September policy response* and *COVID – Budget 2021* scenarios gives the additional cost and distributional effect of the direct and indirect tax and welfare measures announced in Budget 2021, compared to a price-indexed version of the September 2020 tax-benefit system.

### 3. COST

Table 2 displays the monthly cost of pandemic-related unemployment, of the accompanying supports in operation as of September 2020 and of Budget 2021.

Columns 1 and 2 of Table 2 show the cost of pandemic-related unemployment, calibrated to match August 2020 levels, under two assumptions: (1) no jobs supported by the EWSS would have been lost in the absence of this policy and (2) 50 per cent of jobs supported by the EWSS would have been lost in the absence of this policy. The net Exchequer impact of the pandemic unemployment shock ranges between -€341 million and -€745 million depending on how EWSS is treated. In our central scenario (in column 2), where 50 per cent of jobs supported by EWSS would be lost without this policy intervention, the loss in Exchequer revenues of €745 million per month is almost equally driven by a reduction in tax/SIC revenue (-€365 million per month) and an increase in welfare expenditure (+€380 million per month).

Comparing this scenario to one in which the PUP and EWSS are introduced in column 3 shows a larger loss in Exchequer revenue of €831 million per month. It is notable however, that much of this Exchequer loss would have been experienced in the absence of these policies, assuming that the EWSS is saving 50 per cent of the jobs it supports. Even if we assume that the EWSS is saving no jobs, close to half of this Exchequer loss would have been experienced (see net Exchequer impact of -€341 million per month in column 1). This is because, in the absence of the PUP and EWSS, the existing tax-benefit system would have helped stabilise incomes, for example through increased Jobseeker's Benefit or Assistance payments. These estimates suggest that, at most, the PUP and EWSS are doubling

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<sup>14</sup> There was also a postponement of the planned rise in the qualifying age for the State pension, which we do not model.

the Exchequer cost of COVID-related unemployment, although it is likely that their marginal cost is significantly less than this, depending on how crucial the EWSS is to job retention.

The effect of Budget 2021, in column 4, is to slightly increase the monthly Exchequer cost, primarily through an increase in welfare expenditure.

**TABLE 1 THE COST OF COVID-19 RELATED EMPLOYMENT IN TERMS OF DIRECT TAX AND WELFARE**

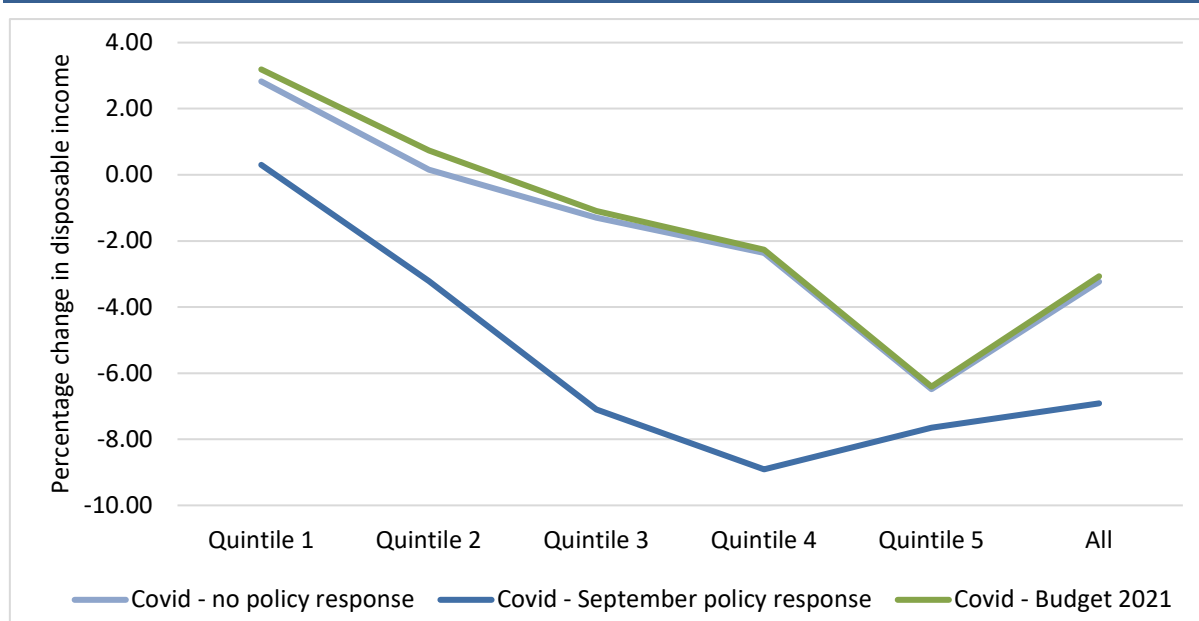
	Cost (€million per month)			
	COVID – no policy response (1)	COVID – no policy response, baseline (2)	COVID – September policy response (3)	COVID – budget 2021 (4)
<b>Change in earnings</b>	-503	-1,080	-778	-778
<b>(a) Change in tax/SIC revenue</b>	-173	-365	-277	-276
<b>(b) Change in welfare expenditure</b>	168	380	335	345
<b><i>Pandemic Unemployment Payment</i></b>	0	0	272	270
<b>(c) Employment Wage subsidy scheme</b>	0	0	219	219
<b>Net Exchequer impact (a-b-c)</b>	<b>-341</b>	<b>-745</b>	<b>-831</b>	<b>-839</b>

*Source:* Authors' calculations using SWITCH run on 2017 Survey of Income and Living Conditions data, uprated to 2020 income levels.  
*Notes:* (1) no direct/indirect tax or welfare policies implemented. Assumes no jobs supported by the EWSS would have been lost in the absence of this policy.  
(2) no direct/indirect tax or welfare policies implemented. Assumes 50 per cent of jobs supported by the EWSS would have been lost in the absence of this policy.  
(3) direct and indirect tax and welfare policies implemented up to September 2020.  
(4) direct and indirect tax and welfare policies announced in Budget 2021.

#### 4. DISTRIBUTIONAL IMPACT

Figure 1 shows the distributional effect of pandemic-related unemployment with and without accompanying supports and Budget 2021 measures. We first examine the impact of pandemic job losses without targeted supports on income distribution (*COVID – no policy response*). We then turn to the effect of the PUP, EWSS and cut to the standard rate of VAT on household income (*COVID – policy response*) before showing the cumulative effect of these supports and Budget 2021 measures (*COVID – Budget 2021*).

**FIGURE 1 DISTRIBUTIONAL EFFECT OF EMPLOYMENT LOSSES WITH AND WITHOUT SEPTEMBER COVID POLICIES AND BUDGET 2021**



*Source:* Authors' calculations using ITSim linked to the 2015-2016 Household Budget Survey updated to 2021 prices, and SWITCH run on 2017 Survey of Income and Living Conditions data, updated to 2020 income levels.

*Notes:* Quintiles are based on equivalised household income, using CSO national equivalence scales.

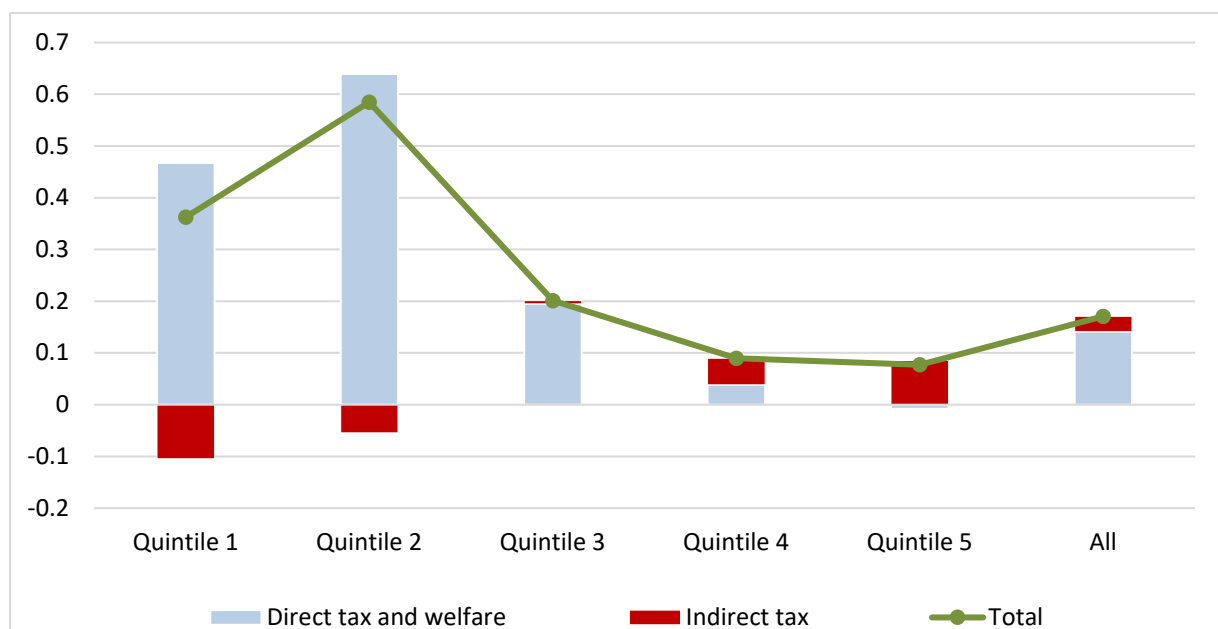
Figure 1 illustrates the impact of each scenario across the distribution of household income, adjusted for family size, with the population divided into five equally sized groups (quintiles) ordered from lowest- to highest income, left-to-right. We estimate that pandemic-related unemployment has decreased household income by 7 per cent. However, this loss is not equally distributed. Households in the lowest quintile group saw little change to their income as (1) they are less likely to contain a worker and to be exposed to the unemployment shock and (2) the existing tax-benefit system (e.g. Jobseeker's Benefit, Jobseeker's Assistance etc.) does a good job of sheltering the incomes of those in this income quintile from job losses. Losses increase further up the income distribution with those in the upper half of the income distribution experiencing the largest income loss of between 7 per cent and 9 per cent.

The initial policy response to the pandemic (PUP, EWSS and cut to the standard rate of VAT) decreases the average household income loss from 7 per cent to 3 per cent. Households in the lowest two income quintiles experienced small income gains compared to a *Pre-COVID* scenario as a result of the generous rate of PUP and the cut to the standard rate of VAT. This phenomenon is also highlighted in Beirne et al. (2020), which examines the distributional effect of the more generous flat-rate PUP of €350 per week. Losses are small in quintiles three and four.

Only quintile five still experiences large average income losses of 6.5 per cent compared to a *Pre-COVID* scenario.

Figure 1 also shows the additional effect of Budget 2021 on income distribution. Budget 2021 reinforces the trend of the pre-Budget income support policies but the magnitude of the effect of Budget 2021 is small compared to the impact of employment losses or policies enacted earlier in the year. Figure 2 shows the effect of Budget 2021 policy changes alone, distinguishing between direct tax and welfare and indirect tax measures. Direct tax and welfare measures result in an average increase in disposable income of 0.2 per cent compared to the price indexed benchmark. Gains are higher in the lower half of the distribution and are close to zero in quintiles four and five, reflecting low rates of social welfare receipt in these quintiles. Indirect tax measures result in a negligible increase in disposable income, on average, compared to price-indexed policies with the reduction in VAT more than offsetting the rise in carbon tax and tobacco duty for most households. However, the effect is not uniform and there are small losses at the bottom of the income distribution in addition to the small gains at the top of the distribution. Taking direct and indirect measures together results in an overall picture of a progressive budget, largely driven by the substantial increases to certain welfare payments for low income retirees, families with children and adults living alone.

**FIGURE 2 BUDGET 2021 COMPARED TO INDEXED SEPTEMBER 2020 POLICY PARAMETERS**



*Source:* Authors' calculations using ITSim linked to the 2015-2016 Household Budget Survey updated to 2021 prices, and SWITCH run on 2017 Survey of Income and Living Conditions data, updated to 2020 income levels.

*Notes:* Quintiles are based on equivalised household income, using CSO national equivalence scales.

## 5. INEQUALITY

The impact of the pandemic has not been uniform across different groups of the population. Inequalities have been observed by income group, age, gender and industry (Adams-Prassl, et al., 2020; Alon et al., 2020; McQuinn, et al., 2020). There are also suggestions that the pandemic will result in longer-run effects on inequality in income, health, human capital, etc. (Blundell et al., 2020). In this section, we show estimates for income inequality and at risk of poverty rates in the four scenarios presented above. We also add to the international evidence on the unequal effect of the pandemic and show how short-run pandemic-related income losses vary by age cohort, gender and industry in Ireland. To do this, we examine income at the individual level rather than the family level (discussed in Section 4). This necessitates some assumption about how income is split between members of a couple.

### 5.1 Income inequality and at-risk of poverty rates

Table 3 shows our estimates of income inequality and at risk of poverty rates in the four scenarios described above. Income inequality is measured using the widely used Gini Index. An increase in this index indicates that income is distributed more unequally. At risk of poverty rates are measured with respect to a poverty line equal to 60 per cent of median equivalised household income.<sup>15</sup>

Inequality in market – or pre-tax and transfer – income is 0.51 in the *Pre-COVID* scenario, rising to 0.56 when we account for COVID-related job loss without any policy response. The initial policy response reduces this to 0.53 and inequality remains at this level in the *COVID – Budget 2021* scenario. The Gini of disposable – or post-tax and transfer – income is 0.28 in the *Pre-COVID* scenario. This rises to 0.29 (+4 per cent) when COVID-related job losses are introduced. The initial policy response to COVID and tax-benefit changes in Budget 2021 stabilise the Gini of disposable income at 0.28 and 0.27 respectively. This pattern of a predicted rise in inequality in the absence of policy intervention and a stabilisation once policy changes are taken into account is not unusual compared to our European neighbours. Almeida et al., 2020 estimate that in the absence of policy responses, the COVID pandemic would have resulted in an average rise in the Gini of 3.6 per cent across the European Union but a small fall is estimated (-0.7 per cent) once policy measures are taken into account.

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<sup>15</sup> The CSO's equivalence scale is used.

**TABLE 3 INCOME INEQUALITY AND AT RISK OF POVERTY RATES**

	Pre-COVID	COVID – no policy response	COVID – September policy response	COVID – Budget 2021
<b>Income inequality</b>				
Gini Market Income	0.51	0.56	0.53	0.53
Gini Disposable Income	0.28	0.29	0.28	0.27
<b>At Risk of Poverty rate</b>				
Anchored Poverty rate	0.14	0.18	0.16	0.15
Anchored Poverty rate - working age	0.15	0.20	0.17	0.16
Anchored Poverty rate - child	0.18	0.23	0.20	0.19

*Source:* Authors' calculations using SWITCH run on 2017 Survey of Income and Living Conditions data, updated to 2020 income levels. The at risk of poverty rate is calculated based on a poverty line equal to 60 per cent of median equivalised disposable income. The CSO equivalence scale is used. Working age defined as aged 18-65 and children those under age 18.

The at risk of poverty rate rises from 0.14 in the *Pre-COVID* scenario to 0.18 in the *COVID – no policy response* scenario. There are rises of similar magnitudes for working age and child subgroups. The direct and indirect tax and benefit reforms introduced as part of the COVID policy response cushion most of this increase and Budget 2021 continues in the same direction, so that at risk of poverty rates in the *COVID – Budget 2021* scenario are little higher than those in the *Pre-COVID* scenario.

While the COVID policies in particular have done much to stabilise inequality and the at risk of poverty rate, these scenarios indicate how inequality and poverty may rise in the future if these supports are withdrawn before there are ample job opportunities.

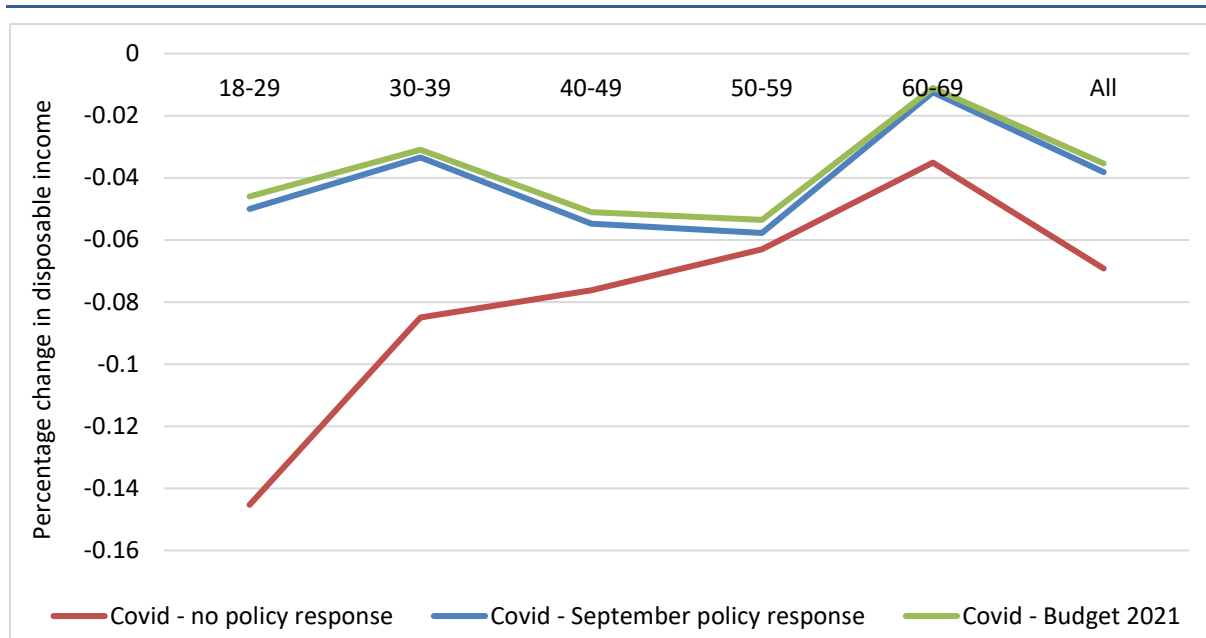
## 5.2 Age

Figure 3 shows the change in disposable income by age cohort compared to the *Pre-COVID* scenario.<sup>16</sup> Clearly the youngest age cohort is most affected by income losses due to COVID-related unemployment. We estimate that the 18-29 cohort would have lost 15 per cent of disposable income in the absence of targeted supports. This is twice the average loss of 7 per cent observed across all age cohorts. However, the policy response to COVID-related job losses has been such that losses have averaged 3.5 per cent with little difference across age cohorts.

<sup>16</sup> Income is at the individual level rather than the tax-unit level which necessitates some assumption about how income is split between members of a couple. We consider each member of a couple as an individual in terms of their market income, tax liability and benefit entitlement. One exception is family benefits, such as child benefit, and household level benefits, such as housing benefits, which we assume to be shared equally among members of a couple.

This implies that the COVID policies are doing most to support the incomes of young adults.

**FIGURE 3 IMPACT OF EMPLOYMENT LOSSES, DIRECT TAX AND WELFARE POLICIES AND BUDGET 2021 BY AGE**



Source: Authors' calculations using SWITCH run on 2017 Survey of Income and Living Conditions data, updated to 2020 income levels. To individualise income, household level benefits are split equally between members of a couple.

### 5.3 Gender

Figure 4 shows how income losses are distributed by gender, comparing the scenario *COVID – Budget 2021* to the scenario *Pre-COVID*. Men are more likely to be in employment, pre-COVID, than women and, when they are in employment, they tend to have higher average earnings. In line with this, we estimate that men lose, on average, more disposable income than women as a result of the pandemic. This should be interpreted as a short-term effect as there is evidence in the international literature that, in order to cope with increased caring responsibilities, women have been more likely than men to switch from employment to inactivity or to decrease their hours of work during the pandemic (Adams-Prassl, et al., 2020; Alon et al., 2020; Andrew et al., 2020). Neither of these effects are captured by our method and they are likely to have knock-on effects on the gender wage gap and the gender work gap in the future.

**FIGURE 4 THE IMPACT OF EMPLOYMENT LOSSES, DIRECT TAX AND WELFARE POLICIES AND BUDGET 2021 BY GENDER**



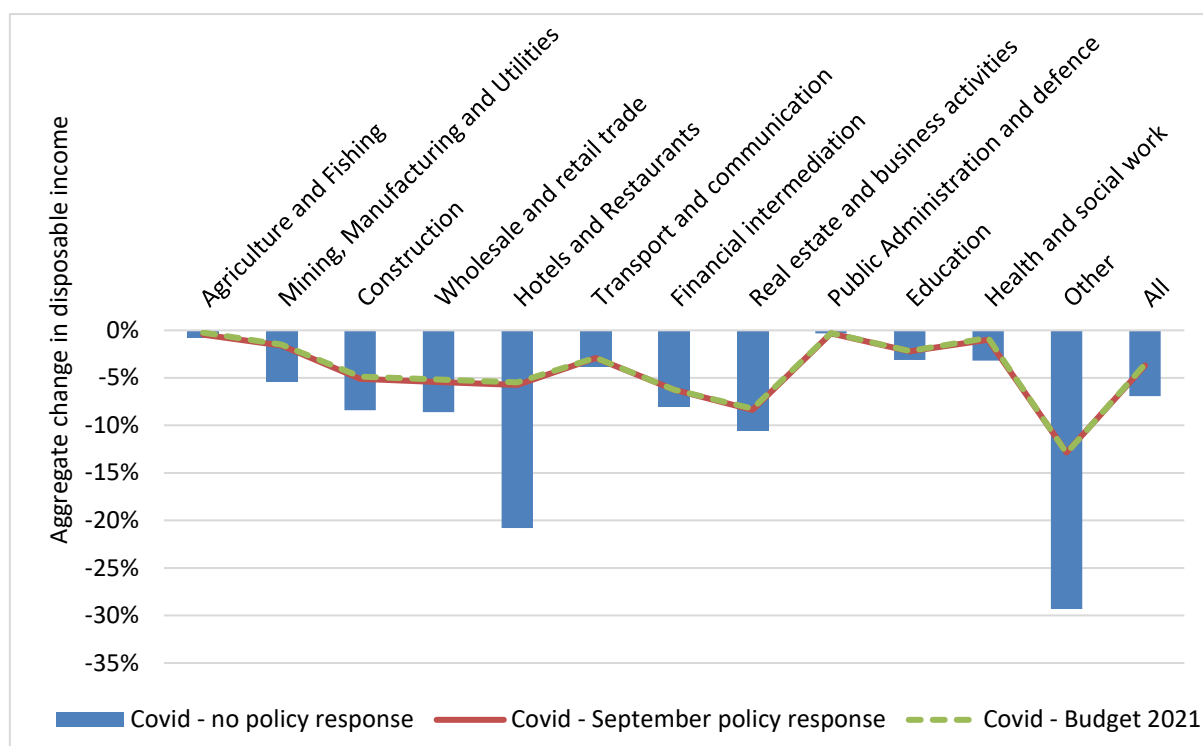
Source: Authors' calculations using SWITCH run on 2017 Survey of Income and Living Conditions data, uprated to 2020 income levels. To individualise income, household level benefits are split equally between members of a couple.

#### 5.4 Industry

Figure 5 shows the aggregate change in disposable income of workers by industry. Before accounting for the PUP and EWSS, those most affected by income losses are those working in *Hotels and Restaurants* and *Other*, which includes the Arts. The policy response to unemployment losses has greatly sheltered the income losses for those working in these industries in particular. In the absence of economic recovery in these industries, the withdrawal of these policies, scheduled for Spring 2021, will result in large income losses.



**FIGURE 5 THE IMPACT OF EMPLOYMENT LOSSES, DIRECT TAX AND WELFARE POLICIES AND BUDGET 2021 BY INDUSTRY**



Source: Authors' calculations using SWITCH run on 2017 Survey of Income and Living Conditions data, updated to 2020 income levels. To individualise income, household level benefits are split equally between members of a couple.

## 6. CONCLUSIONS

2020 has been a challenging year for employment and incomes in Ireland and has proved a severe test of the social welfare system. Significant interventions have been made by the Government to support the incomes of those affected financially by COVID-19 in the form of the Pandemic Unemployment Payment and wage subsidies. In addition the standard rate of VAT was reduced over the summer from 23 per cent to 21 per cent to help bolster economic activity.

If these initial interventions had not happened, we estimate that pandemic-related unemployment would have decreased household income by an average of 7 per cent across the population, with significantly larger losses for those who lost their jobs. The initial policy response in the form of the PUP, wage subsidy and standard rate VAT cut helped protect family incomes and reduce the cost of living so that household income fell instead by 3 per cent on average. These losses are sharpest at the upper end of the income distribution. At 6 per cent, those in the highest income quintile experience a loss more than twice the average. Those in the lowest income quintile actually experienced a gain of close to 3 per cent because of the

cut to VAT and the relative generosity of the PUP compared to prior earnings of this group.

We estimate that, in the absence of targeted policies, young adults in the 18-29 age category would have experienced a particularly large loss in income of over 14 per cent due to COVID-related job losses. The initial interventions acted to reduce this to around 5 per cent, similar to that experienced by older age groups. Those working in certain hard-hit sectors – hospitality, for example – would also have faced significantly above average falls in income. Again, the initial COVID-related policies ensured these losses were greatly reduced.

Without these interventions, inequality in market (pre-tax and transfer) income, as measured by the Gini coefficient, would have risen by close to 10 per cent. Instead, our simulations suggest it rose by less than half of that, just under 4 per cent. Once taxes and transfers are taken into account the COVID-related interventions actually completely stabilised disposable income inequality, a significant feat given the job losses experienced. At risk of poverty rates were also stabilised by COVID-related policies but there is a risk that they may increase significantly once these supports are withdrawn.

While much less costly than the pre-Budget COVID policies, Budget 2021 was also progressive in its impact, with above average gains for the bottom two-fifths of the income distribution and lower than average gains for those at the upper end. We estimate that Budget 2021 will result in small reductions in income inequality and the at risk of poverty rate.

There is much debate over how long to continue COVID-related policies such as the PUP and EWSS. While pandemic-related unemployment is costly to the Exchequer in terms of tax foregone and welfare expenditure, this research has shown that at least half (and probably more) of this cost would have been incurred in the absence of the COVID policies.

The PUP is due to be continued until April 2021 but closed to new applicants at end-2020. Should sufficient employment prospects exist at that time, withdrawing the PUP would improve financial incentives for those seeking work to take up employment. So too would allowing existing recipients to maintain their payment while taking up paid employment for a period of time, as is the case with the self-employed. This could encourage those in non-viable industries to seek employment in other sectors, for which they may need additional training.

However, if the labour market has not largely recovered by Spring of 2021, then the withdrawal of the PUP would be likely to disproportionately affect low-income, young, single workers. This group is particularly at risk of a large income shock for two reasons. Firstly, those aged 18-25 living with parents receive a rate of Jobseeker's Assistance that is 45 per cent lower than the rate for those aged 25 and above.<sup>17</sup> Secondly, many young people receiving the PUP are students so may not be eligible for Jobseeker's Assistance in the first place.<sup>18</sup> One option available to policymakers is a more gradual tapering of the PUP which could help the groups most at risk of long-term unemployment after the pandemic to maintain a certain standard of living while searching for work. Much will depend on the post-COVID recovery and the availability of employment for different age cohorts and in different sectors.

Similarly, determining the optimal time to close or withdraw the EWSS – currently end-March 2021 – will be challenging. In the long-run, continuing the subsidy would mean supporting both employment which would exist even if the subsidy was no longer in place (a deadweight cost) and employment which is no longer viable in the long term (where employees should be given the opportunity to re-train in other roles). Yet withdrawing it too early would lead some firms to fail that would otherwise be viable. While close monitoring of the speed and scale of the recovery by sector may help inform this difficult decision, there is also a case for examining the design of the subsidy for any it does continue for. At present, the sharp cut-off in eligibility imposed by the requirement to be experiencing a 30 per cent reduction in turnover means some firms may face an incentive to suppress output, therefore inhibiting their recovery.

Finally, men appear to have been hardest hit by employment losses in the short term, driven by the fact that they are more likely than women to be in employment in the first place and tend to have higher earnings. However, in line with the international evidence, female participation rates and hours of work in Ireland may have changed over the course of 2020 due to child and elderly care pressures. Such pandemic-related career interruption may have a knock-on effect on gender gaps in earnings and work patterns in the future, which policymakers may wish to address.

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<sup>17</sup> The personal rate of Jobseeker's Assistance for those aged 18-25 not living independently and with no dependent children is €112.70 per week compared to €203 a week for those aged over 25.

<sup>18</sup> It is estimated that in October 2020 at least 25 per cent of PUP recipients aged under 25 were registered as a full-time student (CSO, 2020) and therefore ineligible for Jobseeker's Assistance or Benefit.

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## APPENDIX A

The SWITCH model provides a detailed and accurate representation of almost all aspects of the Irish personal tax and benefit system. It does not include taxes on businesses (like corporation tax), which are difficult to assign to individual households, or expenditure on public services which, unlike cash transfers provided through the benefit system, are conceptually difficult to assign a value to (O’Dea and Preston, 2014).

The ITSim model estimates the indirect taxes (VAT and excise duties, including carbon taxes) paid by Irish households on the basis of their reported expenditure, collected by the CSO’s nationally representative HBS in 2015-2016.

The main measures we include in our analysis of Budget 2021 using SWITCH are given in Table A1.

**TABLE A1 MAIN MEASURES IN BUDGET 2021 USING SWITCH**

<b>Income Taxes</b>	EITC increase
	USC second rate increase
	Carer’s support grant increase
<b>Social Welfare</b>	Living Alone Allowance increase
	Fuel Allowance increase
	QCI changes
	OPFP earnings cap removal
	Working Family Payment increases
<b>Indirect Taxes</b>	Disability Allowance disregard increased
	Carbon tax increase
	VAT reduction for hospitality/tourism
	Tobacco tax increases