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DISTRIBUTIONAL IMPACT OF TAX AND WELFARE POLICIES: BUDGET 2018

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ABSTRACT

This article examines the impact of the tax and welfare changes introduced in Budget 2018 on the distribution of income across households. The analysis uses SWITCH, the ESRI tax-benefit model, which is based on data gathered by the CSO for almost 8,000 households in its nationally representative Survey of Income and Living Conditions for 2013 and 2014, calibrated to represent the 2018 population. The impact of policy is measured against a distributionally neutral benchmark – a budget which would index the money value of tax credits and welfare payment rates in line with expected growth in wages of about 3.1 per cent.

Key findings include the fact that the overall impact of policy was to reduce incomes somewhat below the levels which would have obtained if tax and welfare parameters were simply indexed in line with wage growth. The average loss across all households is close to 0.4 per cent. At low income levels, these reductions, relative to a wage-indexed policy, were in the region of 0.6 per cent; at high income levels, the reductions were in the region of 0.2 per cent.

Analysis at family unit level reveals losses of close to 0.4 per cent, compared to a neutral benchmark, for most family types. Losses are slightly lower (less than 0.2 per cent) for single employees without children, and for double earner couples without children. Somewhat greater losses (0.6 per cent) are identified for retired couples, and a family type category which includes those who are outside the labour force – mainly in education, ill or disabled.

[1] We thank Gerry Reilly and the SILC team at the CSO for access to SILC data on which the SWITCH tax-benefit model is based. We thank anonymous referees for comments; any remaining errors or obscurities are the responsibility of the authors.

1. INTRODUCTION

In this article we examine the distributional impact of the main tax and welfare measures in Budget 2018. Our analysis is based on SWITCH, the ESRI tax-benefit model,[2] to ensure that we obtain a nationally representative picture. SWITCH is based on SILC (Survey of Income and Living Conditions), the CSO's main survey of household income. The scale, depth and diversity of this survey allows it to provide an overall picture of the impact of the budget on Irish households, which cannot be gained from selected example cases. Data from 2013 and 2014 SILC are pooled, in order to increase the effective sample size to almost 8,000 households including 20,000 individuals.[3] To ensure that these pooled data are nationally representative, weights are calibrated using information from demographic projections, the Revenue Commissioner's Income Distribution Statistics, Department of Social Protection estimates of the number of recipients of a range of social welfare schemes, and a number of other sources to represent the 2018 situation.[4]

The areas covered by SWITCH, including income tax, PRSI, USC, property tax, welfare benefits and public service remuneration, account for the bulk of the impact of budgetary policy changes on households' cash incomes in recent years. There are, however, some taxes (e.g. indirect taxes, which affect the purchasing power of cash incomes) which cannot at present be integrated fully within the modelling framework. Work on the inclusion of these taxes in the SWITCH model is now underway, based on the methods developed by Savage (2017), as part of a collaborative project with the Department of Finance. Like almost all tax-benefit models, the focus is on cash taxes and benefits; there is no standard methodology for the attribution of benefits from public spending to households.

The results we obtain relate to the 'cash' or 'first round' effects of Budget 2018 policy changes, before any adjustments in individual behaviour such as changes in employment status or hours of work. This is by far the most common approach internationally. A new strand in the SWITCH research programme has just begun,

2 See Callan et al. (2011) for a full description of the model.

3 Due to the longitudinal component of SILC, some households are in both waves of the survey. Where a household is present in more than one of these waves, we use the most recent observation. For close to 70 per cent of households it is the 2014 data which are used; 2013 data are used only where a household is not re-interviewed. By design, SILC does not re-interview 25 per cent of households, and a further significant proportion cannot be contacted or refuse to respond. This structure means that the households in the pooled sample are not automatically representative of the 2014 population, but this issue is dealt with by the reweighting procedure described in the text, which ensures the SWITCH database is representative of the 2018 situation.

4 A technical adjustment for sample size differences between years of SILC also applies.

and will seek to identify the size and nature of labour supply responses to tax and welfare changes.[5]

2. MEASURING THE DISTRIBUTIONAL IMPACT OF POLICY

Analysis based on a large-scale nationally representative sample of households is essential in order to assess the overall impact of budgetary policy. Calculations for selected example households cannot give a representative picture of the impact of the budget for the population as a whole. The ESRI tax-benefit model (SWITCH) allows us to do this: it estimates the impact of direct tax and welfare changes using anonymised data from the CSO's nationally representative Survey on Income and Living Conditions.

The impact of policy change must be measured against an alternative specifying what would happen if the policy change did not take place (a 'counterfactual' policy). In the construction of budgets, the practice in Ireland has been to construct an 'opening budget' against which changes are measured. For tax and welfare, Ireland's conventional opening budget simply freezes tax rates, credits and welfare payments at their existing levels, whereas the UK and the US have adopted differing forms of indexation with respect to prices and/or wages (see Callan et al., 2015, for more details). While the frozen benchmark is useful in accounting terms, it would be highly misleading in an analysis of distributional impact.[6] With nominal wages, prices and real wages all showing positive growth, implementing the conventional opening budget would lead to real income *losses* for those dependent on welfare, while further up the income distribution incomes would *rise* (Callan et al., 2001; Bargain and Callan, 2010).[7] Furthermore, using the opening budget as a basis to measure policy impact would mean that measured policy impact would depend on government's definition of this default policy – something which varies across countries, and can change over time.

The alternative used here is a policy which indexes both tax and welfare parameters with respect to the expected growth or decline in wages. This ensures that average tax rates are held constant (i.e. no fiscal drag), and leads to approximately equal growth (or decline) in income across different income groups (Callan et al., 2001). It should be clear that this is designed to provide a 'distributionally neutral' benchmark, and is not intended as a policy

5 See Callan et al. (2009) for an implementation of this approach in the context of the reform of the tax treatment of couples.

6 For a more detailed exposition, see Callan et al. (2001).

7 When wages are falling, the conventional benchmark would give rise to income gains for welfare recipients and income losses for those in employment.

recommendation. There are many reasons why it may be desirable to depart from this benchmark; but having a distributionally neutral benchmark, independent of the default position chosen by government, is essential in examining the distributional impact of policy changes. The wage-indexed benchmark is an established part of the standard toolkit for distributional analysis.

We use forecasts of wage growth to implement this approach. Results examining the impact of Budget 2018 are based on forecast wage growth of 3.1 per cent – an average of the forecast wage growth from the current *Quarterly Economic Commentary* (McQuinn et al., 2017, 3.0 per cent) and the Central Bank's *Quarterly Bulletin* (Central Bank of Ireland, 2017, 3.2 per cent).

Results shown are at the household level unless otherwise specified and are based on household disposable income (after taxes and benefits), adjusted for household size and composition, i.e. income per adult equivalent or 'equivalised income'.[8]

3. BUDGET 2018

A wide range of taxation and welfare measures are directly included in our model-based analysis, including:

- a €5 increase in the weekly rates of payment for pensioners aged 66 and over, with proportional increases for qualified adults and those on reduced rates;
- a €5 increase in the weekly rates of payment for working age (under 66 years of age), with proportional increases for qualified adults, Jobseekers Allowance (JA) recipients who are under 26 years of age and other recipients on reduced rates;
- a €2 increase in the weekly rates of payment for a qualified child;
- a one-week increase in the duration of fuel allowance payments;
- a €20 per week increase in the income disregard for the One Parent Family payment and the Jobseeker's Transition payment;
- a €100 increase in the Home Carer's tax credit;
- an increase of €750 in the standard rate income tax band for all earners;

[8] This adjusts income to take account of household size. The scale used is the scale used in official monitoring of poverty in Ireland, i.e. 1 for the first adult, 0.66 for subsequent adults and 0.33 for children aged 14 or under.

- a €200 increase in the earned income tax credit for the self-employed;
- a €10 increase in the Working Family Payment thresholds (formerly Family Income Supplement) for those with up to three children;
- a €2.50 increase in the Living Alone Allowance;
- reductions in USC;
- a reduction in the value of mortgage interest relief to no more than 75 per cent of its 2017 levels;
- the new phone allowance.

Views may differ as to whether the 30-cent-per-hour increase in the National Minimum Wage (NMW) should be included in the analysis.[9] As this is paid for by employers, it can be argued that it should not be included on a par with tax and welfare adjustments. On the other hand, the minimum wage is a policy instrument with a distinct distributional profile, and its impact on the household income distribution may be of interest. We have undertaken the analysis both with and without the increase in the minimum wage. As differences between the 'with' and 'without' results are barely perceptible we present simply the results with the minimum wage impact included.

Overall, the SWITCH model provides good coverage of the main policy changes in Budget 2018. The SWITCH estimates of the full year cost of USC and income tax changes are some 10 per cent higher than the official estimates. As for welfare cash payments, the SWITCH estimates are close to 10 per cent lower than the expenditure estimates in the Budget – largely because some welfare payments go to persons outside the scope of household surveys, such as pensions going to those abroad or in nursing homes.

We note two aspects of policy which are not included in the current analysis: the Housing Assistance Payment and the Affordable Childcare Subsidy scheme. Separate reports on both of these topics are in train.

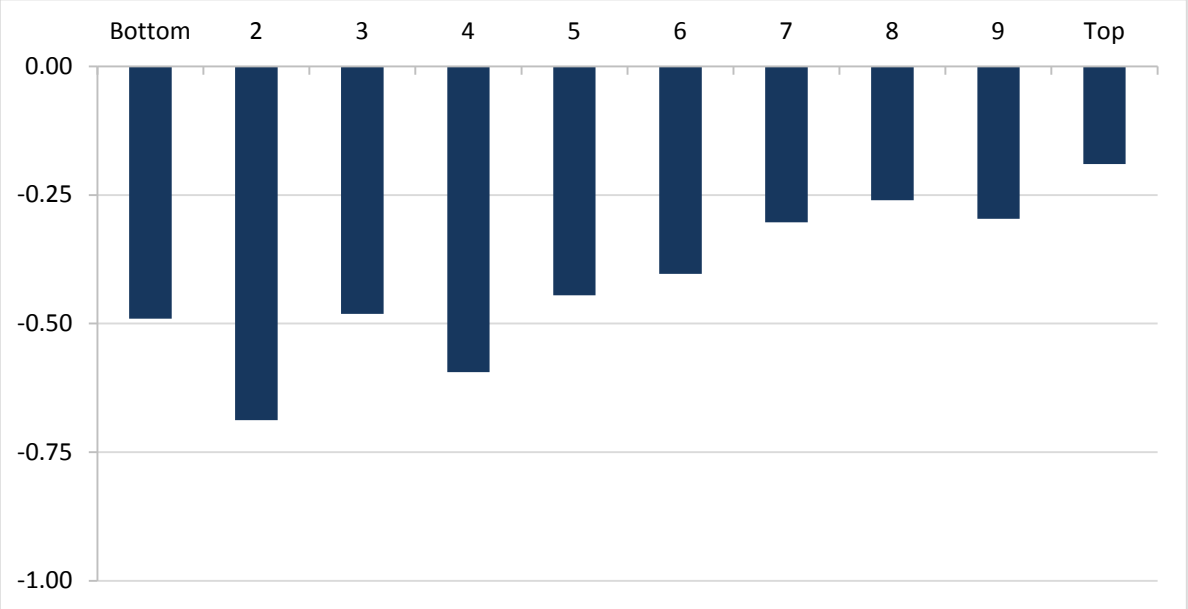
Figure 1 shows the impact of Budget 2018, relative to a neutral, wage-indexed budget, across ten equally sized income groups (deciles) ranked from the lowest to the highest incomes, after adjustment for household size.

[9] Some individuals in the sample have wages below the minimum wage. In our simulations, these cases are treated as if they had the minimum wage, and benefited from an increase. Alternative approaches to modelling the 10 cent per hour rise in the NMW also have very little overall impact on the outcomes measured here.

The first point to note is that there are losses across all income groups, averaging 0.4 per cent overall, relative to a neutral, wage indexed budget. These losses arise because the adjustments to tax and welfare parameters were less than what full indexation (of 3.1 per cent) would imply. For example, the standard rate band was widened by €750, but indexation would have required an increase of €1,050. Similarly, the Budget raised welfare payments by €5 per week, while indexation would have required an increase of €6, or for pensioners, €7. It is these gaps between the changes required by indexation and the actual Budget changes which generate the losses observed in the chart. From a macroeconomic perspective, our estimates suggest that indexation of tax bands, credits and welfare payments would have cost in the region of €1,100 million. The resources used in Budget 2018 for personal taxes and welfare payments were some €400 million lower than that figure, reflecting the particular squeeze on resources during this budgetary year.

The pattern of losses across the income distribution is also illustrated in Figure 1. Somewhat greater losses were experienced in the bottom 40 per cent of the income distribution (losses of between 0.5 and 0.7 per cent). Losses for the top 40 per cent of the income distribution were closer to 0.25 per cent. These changes are small compared to the losses imposed by austerity budgets and the gains from budgets during the boom years. For example, Budget 2006 involved gains of 1.8 per cent, averaged across households at all income levels, while Budgets 2009-2010 combined saw losses of over 5 per cent for the highest income quintile.

FIGURE 1 IMPACT OF BUDGET 2018 – PERCENTAGE CHANGE IN HOUSEHOLD DISPOSABLE INCOME BY INCOME DECILE RELATIVE TO WAGE-INDEXED BUDGET



Source: Authors' analysis using SWITCH, the ESRI tax-benefit model, at December 2017 incorporating for 2018 the main changes in direct tax, welfare, and the National Minimum Wage. Each income group contains one-tenth of all households, ranked from lowest to highest incomes, adjusted ('equivalised') to take account of the numbers of adults and children in each household. Budgetary impacts are assessed relative to a neutral budget with tax bands, tax credits and welfare payments increased in line with expected wage growth of 3.1 per cent.

4. IMPACT BY FAMILY TYPE

The preceding analyses have examined the impact of Budget 2018 across the income distribution. Here we examine how different family types have been affected by budgetary policy changes. The analysis is conducted at the level of what is termed a 'tax unit', i.e. an individual or couple, together with dependent children, if any. Young adults including third-level students are treated as independent tax units.

Table 1 shows losses for all family types (ranked from the smallest to the largest percentage loss). For most types, the loss is between 0.3 and 0.5 per cent. Losses are slightly lower (less than 0.2 per cent) for single employees without children, which accounts for more than one in three of all families, and for double earner couples without children. Somewhat greater losses (0.6 to 0.7 per cent) are identified for single earner couples with children, retired couples, and a family type category which includes those who are outside the labour force – mainly in education, ill or disabled. Taken together, these groups account for just over one in four of all families.

TABLE 1 IMPACT OF BUDGET 2018 – PERCENTAGE CHANGE IN DISPOSABLE INCOME BY FAMILY TYPE

	Budget 2018 % Change	Proportion Of Families %
Single Employed without Children	-0.1	36.5
Dual Earner Couple without Children	-0.2	4.3
Single Earner Couple without Children	-0.3	5.8
Non-Earning Lone Parent	-0.3	1.3
Single Retired Tax Unit	-0.4	10.2
Single Unemployed without Children	-0.4	2.1
Employed Lone Parent	-0.5	5.3
Dual Earner Couple with Children	-0.5	7.4
Unemployed Couple	-0.5	0.5
Retired Couple	-0.6	9.1
All Other Tax Units	-0.6	9.3
Single Earner Couple with Children	-0.7	8.0

Source: Authors' analysis using SWITCH, the ESRI tax-benefit model, at December 2017 incorporating for 2018 the main Budget 2018 changes in direct tax, welfare, and the January 2018 increase in the National Minimum Wage.

5. CONCLUSION

Our analysis provides a nationally representative picture of the impact of the main tax and welfare changes in Budget 2018, taking into account the increase in the National Minimum Wage. The analysis is undertaken relative to a distributionally neutral budget, implemented via indexation of tax and welfare parameters in line with expected wage growth.

Key findings include the fact that the overall impact of policy was to reduce incomes somewhat *below* the levels which would have obtained if tax and welfare parameters were simply indexed in line with wage growth. The average loss across all households is close to 0.4 per cent. At low income levels, these reductions, relative to a wage-indexed policy, were in the region of 0.6 per cent; at high income levels, the reductions, were in the region of 0.2 per cent.

Analysis at family unit level shows that small losses are found for all family types. About one-third of families have losses close to the average loss of 0.4 per cent. Some four out of ten families – mainly single persons in employment – have losses of 0.1 to 0.2 per cent. Somewhat greater losses, of 0.6 to 0.7 per cent, are experienced by single earner couples with children, retired couples and a group including those who are not in the labour force (mainly students and those with a disability).

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