BUDGET 2004: IMPACT ON INCOME DISTRIBUTION AND RELATIVE INCOME POVERTY

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1. Measuring Distributional Impacts

What is the likely impact of the income tax and welfare changes introduced in Budget 2004 on families at different levels of income? Much comment on this issue is based on analyses which measure the impact of changes against the "opening budget", which would leave welfare rates and tax bands frozen in nominal terms. But if such an "opening budget" were actually implemented, it would typically involve losses in real income for those receiving welfare benefits as the purchasing power of fixed nominal incomes was eroded by inflation. Those in employment, on the other hand, would typically experience gains in income arising from growth in pay. The average tax rate would rise as wage growth brought more income into the higher tax bracket. Thus, as argued in a series of papers,[1] the "opening budget" is far from neutral in its impact across the income distribution and is therefore unsuitable as a yardstick for measuring distributional impacts.

A "distributionally neutral" budget, giving rise to equal growth in income across all income groups, provides a more appropriate reference point for analysis of the distributive impact of budgetary policy. Under such a budget, major population groups would share equally in the benefits of economic growth. Growth in disposable income would be the same for all major population groups, and shares of income for different groups in the population would remain the same after the budget as in the year before. While some would argue that the government should undertake more redistribution, and others that it should do less, the "distributionally neutral" budget provides a yardstick against which the impact of actual budgets can reasonably be measured.

[1] Callan *et al.* (1999, 2001a, 2001b, 2002a, 2002b, 2003) and Callan and Nolan (1999).

A number of choices arise in implementing such a yardstick. The approach taken here involves increasing tax credits, tax bands and social welfare payment rates in line with expected growth in wage income, the predominant element in national income.[2] This "wage-indexed" budget would give rise to similar percentage income growth for low, middle and high income households. For wage earners, increasing tax credits and tax bands in line with wage growth ensures that the share of income taken in tax is constant, so their net incomes grow at the same rate as gross wages. For those depending on social welfare payments for their income, an increase in welfare rates equal to the rate of increase in pre-tax wages is the key element which ensures that they share equally in the growth in income.

In this article we examine the impact or first-round of the income tax and social welfare policy changes announced in Budget 2004, measured against the neutral yardstick provided by a budget indexed in line with likely wage growth of about 3½ per cent as forecast in this *Commentary*. Results from Callan *et al.* (2002a) on the extent of behavioural response to standard tax and welfare changes suggest that these first-round impacts are likely to be a good guide to the overall impact of Budget 2004's tax and welfare measures on the distribution of income and relative income poverty.

2. *SWITCH*, The ESRI Tax-Benefit Model

What will be the impact of Budget 2004's tax and welfare measures on the distribution of income? Most commentary on this topic focuses on calculations of cash gain or loss for a small selection of families, whether real or imaginary. But such analysis can, on occasion, be quite misleading. A small number of hypothetical households cannot adequately represent the diversity of the population. Families differ widely in terms of a range of characteristics relevant to their tax liabilities and welfare entitlements (demographic composition, employment/ unemployment, incomes, housing tenure, etc.). The only systematic way of taking account of this diversity is to use a tax-benefit model, which simulates the tax liabilities and welfare entitlements for a large-scale nationally representative sample of households. This is precisely what is done by *SWITCH*, the ESRI tax-benefit model (see box for a brief description).

SWITCH: the ESRI tax-benefit model

Tax-benefit models are needed for a comprehensive assessment of the effects of tax and welfare policy changes, taking into account the wide variation in individual and family circumstances relevant to welfare entitlements and tax liabilities. *SWITCH*, the ESRI tax-benefit model, is a well-established tool for analysing the "first-round" effects of tax and welfare policy changes. The version of *SWITCH* used in the present analysis is based on the 2000 *Living in*

[2] Incomes from self-employment are more variable from year to year than wages, so indexing taxes and social welfare to wage growth provides a more stable benchmark.

Ireland Survey, a large-scale nationally representative survey of households undertaken by the ESRI. The model database has been adjusted to ensure that it reflects recent changes in incomes, employment, unemployment and population – and draws on projections of such changes for the year 2004 to provide a suitable framework for the analysis of Budget 2004.

The model uses detailed information on individual and family circumstances (including information on wages and hours of work for those in paid employment, and on labour force status and receipt of social welfare benefits for those not in paid employment) to assess the social welfare entitlements and tax liabilities of each family in the database. The model can therefore simulate for each family the disposable income they would receive under actual policy, or under alternative policies of interest.

Using these detailed calculations it is possible to summarise the impact of policy changes in many different ways. Here we focus in particular on how the average gain or loss varies depending on the income of the family. Family units are ranked by income, adjusting for differences in family size and composition using a simple equivalence scale: 1 for the first adult in the family, 0.66 for a second adult and 0.33 for children. Thus, a married couple with a disposable income of €200 per week would have an "equivalised" income of just over €120 (i.e., €200 divided by 1.66). A married couple with one child would have an equivalised income of just over €100 (i.e., €200 divided by 1.99 (=1+0.66+0.33)). Families can then be divided into equal sized groups (5 "quintiles" or 10 "deciles), from poorest to richest.

One underlying technical assumption is that labour market behaviour and wage rates are the same under each policy; but the model can shed light on how such behaviour may change by identifying the impact of policy changes on financial incentives to work. For a study of behavioural labour market responses to tax and welfare changes see Callan *et al.* (2003a).

3. Budget 2004: Distributive Impact

Simply indexing income tax parameters in line with expected wage growth would have cost about €335m; indexing welfare payments would have involved a similar cost. Budget 2004 allocated over €600 million to increased welfare payments, well above the €335 million or so required for indexation. But the main income tax changes[3] had a full year cost of something less than €300 million per year, somewhat below the cost of indexation.

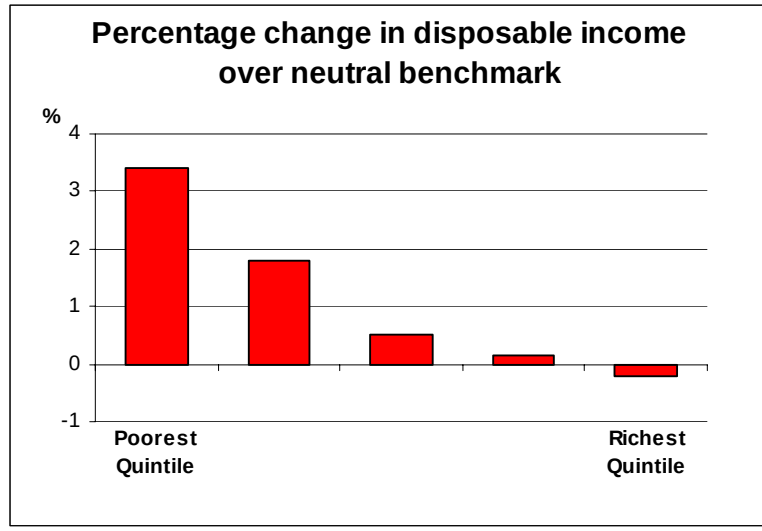
In what follows we use *SWITCH* to analyse the impact of Budget 2004 relative to the distributionally neutral yardstick provided by a budget indexed in line with the *Commentary*'s forecast wage growth of 3½ per cent. (This differs from the analysis included in the Budget documentation,[4] in which *SWITCH* is used

[3] Our analysis does not include special reliefs such as the BES scheme, Film Relief, Urban Renewal etc. which are used by rather small numbers of high income taxpayers.

[4] Annex B to the Summary of Budget Measures.

to analyse the impact relative to a conventional opening budget, tax and welfare parameters are frozen in nominal terms). Figure 1 shows the percentage gain in income for five equal sized income groups ("quintiles"), ranked from poorest to richest.[5] This shows gains, over and above indexation, averaging about 3½ per cent for the bottom quintile and close to 2 per cent for the next quintile. By contrast, the top 40 per cent of families see little change in their incomes as compared with a wage-indexed budget.[6]

Figure 1: Distributive Impact of Budget 2004 Measured Against Wage-indexed Budget



This pattern of impact contrasts with that of most budgets over the past decade. During this period, most resources available to the tax/transfer system over and above indexation have been devoted to income tax cuts (Callan *et al.*, 2001a). This has led to gains, over and above indexation, in the middle and upper reaches of the income distribution, with much smaller gains for those dependent on welfare. In Budget 2004, however, the total tax-welfare package was tilted in the opposite direction, with the total value of tax concessions no more than the cost of indexation, while welfare rates were increased by significantly more than required by indexation. While the rise in child benefit is sometimes criticised for giving the same absolute amount to those on high and low incomes, this does mean that it gives a greater proportionate increase in income at the

[5] The ranking criterion is income per adult equivalent, in order to take account of differences in family size and composition. The equivalence scale counts 1 for the first adult, 0.66 for a second adult if present, and 0.33 for each dependant child in the family. Adult children are counted as separate units.

[6] The extension of Film Relief and the Business Expansion Scheme are not included in this analysis, but the benefits of these tax reliefs are likely to be concentrated towards the top of the distribution and could cancel out the small loss shown for the top quintile.

lower levels and contributes to the progressive pattern shown in Figure 1.

4. Budget 2004: Impact on Relative Income Poverty

A similar analysis was undertaken to assess the likely impact of the budget on relative income poverty, e.g., the proportion of persons living below half average income. While this is not an explicit target under the National Anti-Poverty Strategy, it is clearly germane to the long-term evolution of poverty (see Whelan *et al.*, 2003) and is widely used internationally as an indicator of the extent of poverty.

Table 1: First-round Impact of Budget 2004 on Relative Income Poverty

% of Mean Income	Wage-Indexed Baseline	Post-Budget Estimate	Budget Impact	% of Median Income	Wage-Indexed Baseline	Post-Budget Estimate	Budget Impact
	%	%	% point change		%	%	% point change
40%	5.5	5.5	-0.1	50%	10.8	9.3	-1.5
50%	16.3	15.3	-1.0	60%	19.3	18.8	-0.6
60%	24.6	24.4	-0.2	70%	27.8	27.5	-0.3

Note: Mean income is the arithmetic average income, estimated at about €385 per week in 2004 under both indexed and actual Budget 2004 policies. Median income is the income which provides the dividing line between the poorer and richer halves of the population. This comes to about €341 per week under the indexed policy for 2004, and is estimated as being marginally higher (by about €1.80 per week) under the policies announced in Budget 2004.

We look first at the central poverty lines (half of mean income or 60 per cent of median income), below which are found between 15 per cent and 20 per cent of individuals. Table 1 shows that relative poverty, as defined by these cut offs, would be between half and one percentage point lower arising from the direct impact of Budget 2004, compared with a neutral, wage-indexed policy. At higher cut-offs, Budget 2004 leads to a smaller reduction in the proportion of persons falling below the income poverty line. Only 5 per cent of people fall below the lowest cut off, and this category includes self-employed persons and farmers with low or negative incomes: tax and welfare measures tend to have little impact on this group. More sophisticated measures which take account of the depth of poverty (how far incomes fall below the poverty line) also show a small fall in the extent of poverty arising from Budget 2004.

Given that all of the resources, over and above those needed for indexation, were allocated to welfare payments readers may wonder why the impact on relative income poverty is not greater. The answer lies in the size of the package. In Budget 2004, the net cost of the tax and welfare measures, over and above indexation, is of the order of €250 million per annum. By contrast, Budget 2001 had a net cost (over and above indexation) of more than €1,000 million per annum, with close to 80 per cent of that amount allocated to income tax cuts.

5. Conclusions

Budgetary policy changes are most often analysed against a background of an "opening budget" in which tax credits, tax bands and social welfare payment rates are frozen in nominal terms. We have argued that an alternative approach is needed in order to provide a reliable picture of the distributive impact of budgetary policy. The distributive impact of the opening budget would itself be highly skewed, making it unsuitable for the analysis of distributive impacts. A wage-indexed budget, treated as the benchmark here, would ensure that: the proportion of income taken in direct tax would remain the same over time; and disposable income growth would be similar for bottom, middle and top income groups. Whether or not this neutral option is the best policy to pursue in any given year is open to argument, but it clearly provides a useful benchmark against which the distributional impact of actual policy changes can be measured.

Measured against a wage-indexed budget, we find that Budget 2004 favoured low income groups, particularly those in the bottom half of the income distribution. These saw gains of between 2 and 3½ per cent, over and above a wage-indexed budget. By contrast the net impact of the budget on the incomes of the top 40 per cent was close to zero, compared with a wage-indexed budget. Overall the tax and welfare measures contained in Budget 2004 could be expected to lead to a small reduction in the level of relative income poverty.

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