

BUDGET 2005: IMPACT ON INCOME DISTRIBUTION AND RELATIVE INCOME POVERTY

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1.
**Measuring
Distributional
Impacts**

Much of the comment on Budget 2005 has focused on whether it lived up to its advance billing as a “socially inclusive budget” and on supposed contrasts between the distributive impact of Budget 2005 and earlier budgets. Typically these comments are based on small numbers of examples,¹ and on a framework which measures the impact of changes against the benchmark of an “opening budget” which would leave welfare rates, tax credits and tax bands frozen in nominal terms. Each of these features can give rise to quite misleading results.

Examples of budgetary impact based on only a few examples cannot adequately represent the diversity of real world households or capture the overall pattern of gains and losses. A tax-benefit model, based on a large scale nationally representative survey, is needed for these purposes. *SWITCH*, the ESRI tax-benefit model, simulates the social welfare entitlements and direct tax liabilities of a large-scale, nationally representative sample of households (see Appendix). This allows a more comprehensive analysis of the distributive impact budgetary changes in tax and welfare policy, which takes account of the wide variation across families in circumstances relevant to their tax and welfare situation.

In a series of papers in the post-Budget *Commentary* and elsewhere we have argued that the distributional impact of the budget is best measured relative to a “distributionally neutral” benchmark. In this article we examine the impact or first-round of the income tax and social welfare policy changes announced in

¹ The Department of Finance analysis in Annex B (assessment using NAPS guidelines or “poverty proofing”) is a notable exception. It will be argued, however, that the fact that this analysis was based on a “conventional opening budget” rather than a “distributionally neutral budget” detracts from its value.

Budget 2005. The impact is measured against the neutral yardstick provided by a budget indexed in line with likely wage growth of about 4½ per cent as forecast in this *Commentary*. Our results differ from those of the Department of Finance (published on Budget day as Annex B to the Minister's speech, dealing with "poverty proofing"), because that analysis was undertaken using the general convention governing the "opening budget".

We have become accustomed to the conventions governing the "opening budget". On the tax side, these involve freezing key parameters such as tax rates, bands and credits in nominal terms. Similarly, welfare payment rates are frozen in nominal terms under the conventional opening budget. But if such an "opening budget" were actually implemented, the real income of those dependent on welfare benefits would be eroded by inflation. Those in employment, on the other hand, would typically experience gains in real income because pay growth is usually above price inflation. 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,² 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.

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.³ 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.

² Callan *et al.* (1999, 2001a, 2001b, 2002a, 2002b, 2003).

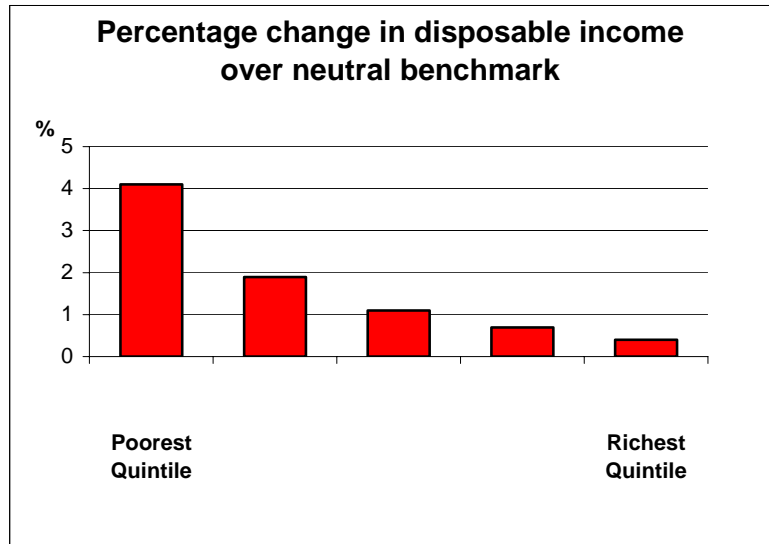
³ Incomes from self-employment are more variable from year to year than wages, so indexing taxes and social welfare to wage growth provides a more stable benchmark.

2. Budget 2005: Distributive Impact

Simply indexing income tax parameters in line with expected wage growth would have cost about €450 million; indexing welfare payments would have involved a similar cost. Budget 2005 allocated over €800 million to increased welfare payments, and about €700 million to income tax reductions, well above the resources required for indexation. The total size of the budgetary package, over and above the costs of indexation, was of the order of €600 million on a full year basis.

In what follows we use *SWITCH* to analyse the impact of Budget 2005 relative to the distributionally neutral yardstick provided by a budget indexed in line with the *Commentary's* forecast wage growth of 4½ per cent. Figure 1 shows the percentage gain in income for five equal sized income groups (“quintiles”), ranked from poorest to richest. This shows gains, over and above indexation, averaging just over 4 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 their incomes boosted by no more than half of one per cent, as compared with a wage-indexed budget.

Figure 1: Distributive Impact of Budget 2005 Measured Against Wage-indexed Budget



Thus, our analysis, based on a nationally representative sample, indicates that Budget 2005 did favour low-income groups, with smaller gains for those on higher incomes.

Table 1: Distributive Impact of Budget 2005 and Recent Budgets

Quintile of income per adult equivalent	Budget 2000	Budget 2001	Budget 2002	Budget 2003	Budget 2004	Budget 2005
	<i>% change in income, actual policy over neutral benchmark</i>					
Bottom	0.8	3.4	4.0	0.0	3.4	4.1
2 nd	2.4	3.3	2.9	0.4	2.0	1.9
3 rd	2.8	3.5	1.4	-0.4	0.5	1.1
4 th	3.3	3.9	0.7	-0.5	0.2	0.7
Top	4.0	4.4	0.6	-0.7	-0.2	0.4

How does this compare with the distributional impacts seen in recent budgets? Table 1 addresses this question, bringing together similar analyses of distributional impacts of the past six budgets. Our overall conclusion is that Budget 2005 is similar in its impact to those of recent years, but contrasts strongly with those of the 1990s.

Callan *et al.* (2002, 2003a) found that over the 1990s gains from budgetary policy changes were greatest towards the top of the income distribution. In more recent years, only Budget 2000 continued this pattern – it was the last budget for which gains were strongly tilted towards the top of the distribution. Budget 2001 involved a much more even pattern of gains across the distribution. Budgets 2002 and 2004 involved substantial gains for those in the bottom half of the income distribution, with the greatest gains for the 20 per cent of the population with the lowest incomes (the bottom quintile). Budget 2003 was roughly neutral for the bottom half of the income distribution, with small losses (as against a wage-indexed benchmark) for the upper half of the distribution.

Against this background, Budget 2005 can be seen as similar to those in 2002 and 2004. The major contrast is not between Budget 2005 and recent budgets, but between the Budgets of 2001 to 2005 and those of the 1990s.

3. Budget 2005: 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. Although it is not a target under the National Anti-Poverty Strategy, it is clearly germane to the long-term evolution of poverty (see Whelan *et al.*, 2003). It is also one of the key indicators of progress in terms of social inclusion agreed by the EU Council at Laeken.

The central indicator agreed at Laeken was the proportion of the population falling below 60 per cent of median income. Our calculations suggest that the immediate impact of Budget 2005 will be to reduce this figure by about half a percentage point. For lines at 50 per cent of median income we find a similar effect, but at 70 per cent of median income the impact is smaller, at about 0.2 percentage points. 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 2005.

4. Conclusions

A systematic analysis, using *SWITCH*, the ESRI tax-benefit model, reveals that the direct tax and welfare provisions⁴ in Budget 2005 were indeed quite progressively structured with the greatest gains for those with least income. Gains for the bottom quintile (the poorest 20 per cent of the population) were of the order of 4 per cent as against gains of less than 1 per cent for the top half of the income distribution). The shape of the budgetary impact is similar to that of Budget 2004, and that of Budget 2002. The major contrast is between Budgets of the past 5 years and those of the 1990s and the year 2000, in which typically the greatest gains went to those at the top of the income distribution. These estimates are, of course, calculated on the technical assumption that there is no change in labour market behaviour in response to the tax and welfare policy changes. While identifying likely effects is an ongoing area of research, best evidence to date (Callan, van Soest and Walsh, 2003) suggests that the impact of Budget 2005 changes will be quite limited.

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⁴ Indirect taxes are outside the scope of the *SWITCH* model, but the fact that excise taxes, which are heavily incident on low income groups, fell in real terms means that the progressive pattern may have been reinforced.

Appendix: *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 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 2005 to provide a suitable framework for the analysis of Budget 2005.

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).