BUDGET 2003: ANALYSIS OF THE DISTRIBUTIONAL IMPACT

TIM CALLAN, MARY KEENEY AND JOHN WALSH

1. Introduction

The overall size of the income tax/welfare package contained in Budget 2003 is very limited compared with corresponding packages in recent years. The background to this, in terms of developments in the domestic and world economies, is well known. In this article, we examine the first round distributional impact of the income tax and social welfare policy changes announced in Budget 2003.

2. Assessing Distributional Impact

What will be the impact of Budget 2003's tax and welfare measures on the distribution of income? Most commentary on this topic focuses on calculations of cash gain or loss for selected illustrative households. But a small number of hypothetical households cannot adequately represent the diversity of the population. Families differ widely in terms of their demographic composition, incomes, housing situations, the labour market position of their members and other characteristics relevant to their income tax liabilities and welfare entitlements. 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).

Most readers will be familiar with the broad outlines of the framework used in constructing the opening budget: expenditures are set, for the most part, at levels corresponding to a "constant level of service", and tax rates and other parameters, along with welfare rates, are typically frozen in nominal terms. On Budget day, the Minister for Finance announces changes relative to this opening budget.

Budget day documentation and most subsequent analysis assumes, in line with this conventional opening budget, that tax and welfare rates would remain fixed in nominal terms in the absence of any budget. While this is a useful benchmark for some purposes it is of limited value in analysing distributional effects, as the opening budget would have non-neutral effects on income distribution and poverty. This can readily be seen by considering what would happen if the conventional opening budget were actually implemented. Welfare recipients would see their real incomes fall, as the purchasing power of fixed nominal incomes was

eroded by inflation. Wage earners would see real incomes rise, but by less than wage growth, because average tax rates would rise.

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. It is based on the 1994 *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 as far ahead as 2004 to provide a framework for medium-term analysis of budgetary issues.

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 are then divided into 10 equal sized groups or "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. It is expected that related work on the estimation and simulation of labour supply responses to tax/transfer policy changes will be published in the new year.

The experience of high inflation during the 1970s and early 1980s led some countries to introduce provisions to guard against increases in average tax rates due to inflation ("fiscal drag" or "bracket creep" as more taxpayers were drawn into the tax net or saw a greater share of their income exposed to higher tax rates). In the UK, for example, the effect of the Rooker-Wise amendment is that the "opening budget" before any discretionary changes includes indexation of income tax allowances in line with the consumer price index. These automatic increases can be overriden by decision of parliament, but an explicit decision to do so is required. Even price indexation, however, is not enough to ensure that full neutrality is achieved. Average tax rates would still rise if there was real income growth. Furthermore, while the incomes of welfare recipients would be

protected in real terms, they would lag behind growth in employment incomes.

Some readers may also remember that it was possible for governments to announce during periods of high inflation that a certain number of taxpayers were being "taken out of the tax net" by increased allowances, even though the underindexation of allowances drew greater numbers of taxpayers into the tax net. Such results are artefacts arising from the conventional opening budget framework. In the context of poverty proofing, adherence to the conventional opening budget as a framework could allow for similar statements about "households being taken out of relative income poverty" by budgetary measures, although the year-on-year impact of policy was to increase the number of households in relative income poverty.[1]

A "distributionally neutral" benchmark[2], with equal growth in income across all income groups, provides a more appropriate guide to the distributive impact of budgetary policy. Under such a benchmark, 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.

A number of choices arise in implementing such a benchmark. The approach implemented here involves indexing tax and social welfare to the growth in gross wage income, the predominant element in national income.[3] In effect, then, the benchmark represents a budget which is neutral in terms of the share of wages taken in tax, and in terms of the relationship between wages and the incomes of social welfare recipients. For wage earners, this is achieved by increasing tax-free allowances and tax bands in line with the growth in 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 would, in general, ensure that they shared equally in the growth in income.[4]

It should be noted that the use of a wage indexed or distributionally neutral benchmark is appropriate even when circumstances dictate that fiscal policy must be contractionary. In these circumstances, the neutral benchmark still serves as a reference point where incomes at all levels rise equally, against which the distribution of pain, rather than gain, can be measured.

3. Budget 2003: Distributive Impact

The cost of income tax reliefs actually given in Budget 2003 is well below the cost of indexation in line with expected earnings growth. The precise extent of this difference depends, of course, on expectations regarding earnings growth. Here, we simply assume that earnings growth

[1] See T. Callan, M. Keeney and J. Walsh (2001) "Income Tax and Welfare Policies: Selected Issues", in T. Callan and D. McCoy (eds.) *Budget Perspectives: Proceedings of a Conference Held on 9 October 2001*, Dublin: The Economic and Social Research Institute.

[2] We use benchmark here in the sense of "yardstick" or aid to measurement; in the PPF, the term benchmarking has also come to be used to mean adjustment with respect to a target.

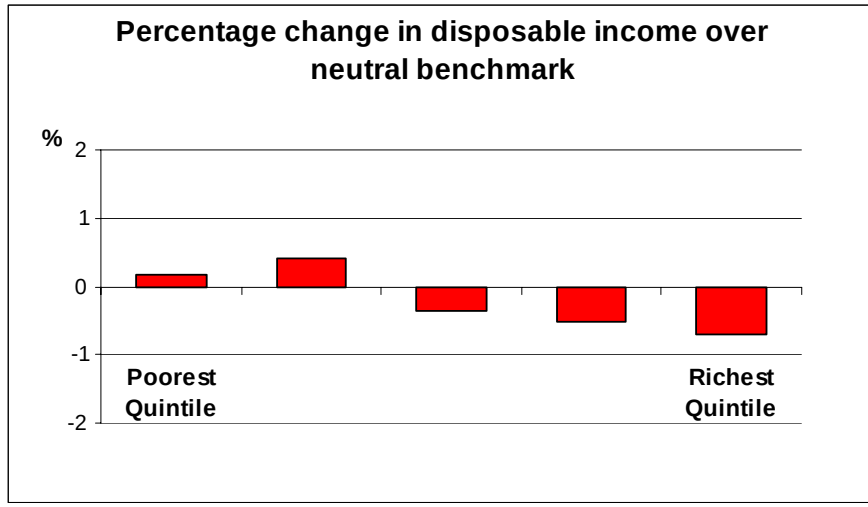
[3] Incomes from self-employment are more variable from year to year than wages, so indexing taxes and social welfare to wage growth provides a more stable benchmark.

[4] If tax cuts over and above indexation were implemented, then welfare payments would have to rise faster to keep pace with growth in net wage incomes.

for 2003 over 2002 averages 5.5 per cent, as forecast elsewhere in this *Commentary*. On this assumption, we estimate that income tax and employee PRSI receipts will exceed a neutral benchmark – under which direct taxes would remain a constant share of income – by more than €300m. Welfare expenditure, on the other hand, is slightly more than would be required to index all welfare payments to earnings growth. However, the concentration of extra welfare resources on special increases for pensions and for child benefit means that many other payment rates fall slightly short of the indexed levels.

In what follows we use *SWITCH* to analyse the impact of Budget 2003 relative to a distributionally neutral wage-indexed yardstick, using the *Commentary's* forecast of 5.5 per cent growth in hourly wages for 2003.. Figure 1 shows the percentage gain in income for five equal sized income groups, ranked from poorest to richest. (The ranking criterion is income per adult equivalent, in order to take account of differences in family size and composition.)

Figure 1: Distributive Impact of Budget 2003 Measured Against Wage-indexed Budget



This shows small gains for the bottom two quintiles, and small losses for the top three-fifths of families. The spread between the maximum percentage gain (the second decile, 0.4 per cent) and the maximum percentage loss (the top decile, a loss of 0.7 per cent) is just over one percentage point.

Compared to many earlier years, the proportionate changes in income are small – less than 1 per cent in all cases, and often close to 0.5 per cent. The pattern could be characterised as mildly redistributive. The results reflect the fact that welfare payments have, in aggregate, been given slightly more resources than those required for indexation, while the tax package is more than €300m short of the amount required for indexation. While the rise in child benefit was much smaller than in recent years, it still has some redistributive impact. This arises from a feature of child benefit that is often criticised: the fact that an increase is of the same absolute amount for low income and high income families. But this means a higher proportionate increase for the low income family. However, there was a contrast with recent years, in which higher child benefit rates delivered

significant increases in the total child income support package (child benefit plus child dependant addition) to welfare recipients. This year, the increase in the combined payment was no more than 5 per cent, marginally less than would have been required for indexation in line with earnings growth.

Personal rates of payment increased by about 7 per cent for the elderly, and just over 5 per cent for the non-elderly – the latter figure being marginally below the expected rate of wage growth. Only the retired (single or couple) and single unemployed without children were found to gain relative to an indexed policy (by between 0.7 and 1.2 per cent). All other family types, whether with children (lone parents, single and dual-earner couples with children) or without children (single employed, single or dual earner couple with children) were found to be negatively affected (typically by between 0.5 and 1 per cent).

4. Conclusions

We find that Budget 2003 had a much more limited impact on disposable incomes than many previous budgets. The income tax and welfare measures in Budget 2003 are redistributive in direction, but small in magnitude, when measured against the distributionally neutral benchmark provided by a wage-indexed policy. Given the small size of the redistributive effect of direct tax and transfer measures, it is possible that the redistributive effect may be offset by the impact of indirect tax measures.