The Macro-economic Impact of Changing the Rate of Corporation Tax

[*]Thomas Conefrey and [**]John FitzGerald

The size and importance of the market services sector within the Irish economy has increased dramatically since the mid 1990s and the sector now accounts for a significant share of overall exports. The rise in output and employment in market services coincided with the reduction in the corporation tax rate applicable to the sector from 40 per cent in 1994 to 12½ per cent in 2003. This low corporation tax regime was introduced for the manufacturing sector in the late 1950s. However, the exceptional growth in that sector peaked in the 1990s and thus the precise impact of the low tax rate for the manufacturing sector is not obvious. The extension of this low tax regime to the business and financial services sector after 1994 constitutes a natural experiment which allows us to consider the before and after periods and to derive an estimate of the macroeconomic impact of this tax change.

The analysis in our recent paper[†] indicates that the reduction in the rate of corporation tax in the 1990s stimulated exports of services and, even allowing for profit repatriations by foreign firms and replacement of lost tax revenue, it resulted in an increase in domestic output. The increase in the profit rate in the business and financial services sector suggests that some of the increased output involved relocation of profits to Ireland by multinational firms.

From 1989, the low manufacturing rate of corporation tax was extended to companies engaged in internationally traded financial services activities in the Irish Financial Services Sector (IFSC). In 1996, to comply with EU rules, the Irish government decided to move to apply a rate of 12½ per cent on corporate profits across all activities from 2003. This meant that the rate of corporation tax applicable to activity in the bulk of the business and financial services sector fell gradually from 40 per cent in 1994 to 32 per cent in 1998 and finally to 12½ per

[*]thomas.conefrey@centralbank.ie; [**]john.fitzgerald@esri.ie

cent by 2003. This extended the attraction of Ireland for mobile firms in the business and financial services sector.

We developed a model of the business and financial services sector to derive an estimate of the final impact on output and tax revenue in Ireland of changes in the rate of corporation tax. In our new model of the business and financial services sector the output of the sector depends on overall world demand and on Ireland's competitiveness, broadly defined.

We analyse the impact of the tax change on the economy in a two-stage process. In the first stage, we consider the direct impact on the business and financial services sector. Our simulation results indicate that the reduction in the corporation tax rate from 40 per cent in 1993 to 12.5 per cent in 2003 had a significant long-run impact on the business and financial services sector. By 2005, exports, output, employment and tax revenue from the sector were significantly higher than they would have been without the tax change.

This simulation does not allow for government action to offset any net change in corporate tax revenue and it takes no account of the knock-on effects of changes in this sector on the wider economy, such as its effect on wage inflation. In order to capture the wider macro-economic effects, and to test the robustness of the results from the small business and financial services sector model, this model is embedded in the *HERMES* macroeconomic model of the Irish economy in the second stage.

The results from the modified *HERMES* model of the whole economy indicate that the substantial loss of tax revenue, consequent on the reduction in the corporation tax rate, required significantly higher taxes. In the paper it is assumed that any loss of revenue from a reduction in corporation tax rates is made good through higher taxes on labour, leaving government borrowing unchanged. This rise in labour taxes caused wage rates to increase, which in turn offset some of the positive effects of the reduction in corporation tax on Ireland's external competitiveness. Nonetheless the change in the corporate tax regime is estimated to have had a positive effect on overall output and employment in the economy. Our results also suggest that the reduction in the corporation tax rate gave rise to the relocation to Ireland of a substantial amount of profits through transfer pricing.

[†] Conefrey, T., FitzGerald, J. 2011. The Macro-economic Impact of Changing the Rate of Corporation Tax. *Economic Modelling,* Vol. 28, No. 3, pp. 991-999.