

## ANNEX F

### Income Tax and Progressivity Issues

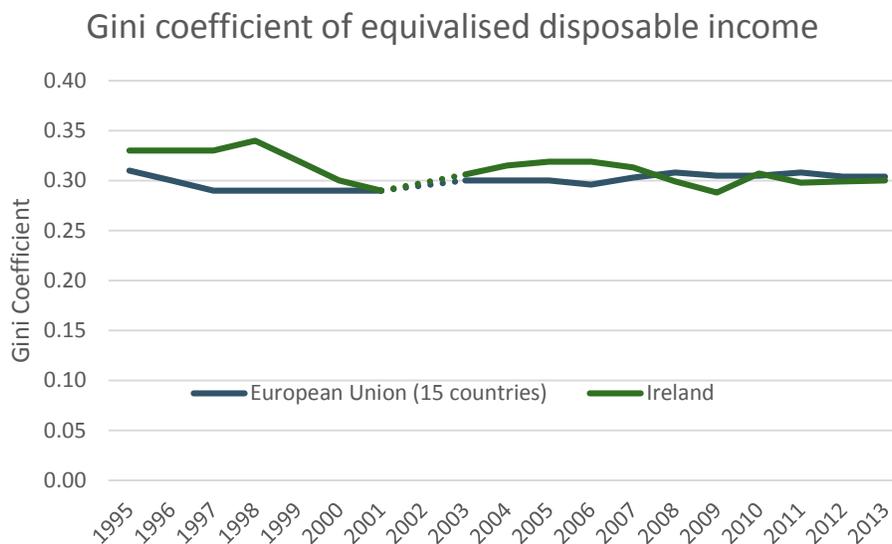
#### Introduction

A progressive income tax system means that those on higher incomes pay proportionately higher rates of tax on their income than those on lower incomes. This annex considers the role the Irish tax system plays in redistributing income.

#### Context – Income Distribution in Ireland

The Gini coefficient is a measure of the distribution of income where 0 represents a situation where all households have an equal income and 1 indicates that one household has all national income. The Gini coefficients presented here are on the basis of equivalised household disposable income.<sup>1</sup>

Using Eurostat data, it is possible to compare Ireland's Gini coefficient since 1995 to that for the then EU 15 member states. As shown below, for both Ireland and the EU 15, the Gini coefficient has been remarkably stable, with inequality measured on this basis in Ireland close to that of the EU 15 over the entire period. For the second half of the 1990s, income inequality in Ireland was slightly above the EU-15 figure with the gap narrowing after 2000. For more recent years up until 2013, the Gini coefficient in Ireland has been more or less the same as for the EU-15.



Source: Eurostat [ilc\_di12]

<sup>1</sup> Equivalisation involves adjusting household income on the basis of household size and composition. Eurostat uses a scale of 1 for the first adult, 0.5 for subsequent adults and 0.3 for children (aged under 14). This means that the income of all households is expressed in terms of a single adult household. For instance, a single adult household with an actual income of 100 ( $100 \div 1 = 100$ ) is considered to have the same equivalised income as a two adult household with an income of 150 ( $150 \div \{1+0.5\} = 100$ ). Disposable income refers to household income after taxes and transfers.

It should be noted that the Gini coefficient for market income – household income before taxes and transfers are accounted for – is considerably higher than for disposable income both for the EU-15 and particularly for Ireland. In Ireland, this difference grew substantially when the economy contracted post 2007. The difference between the market and disposable income measure indicates the strong redistributive character of the Irish tax and welfare system.

### Redistribution of Income through the Tax and Welfare System

Redistribution of income takes place through the taxation and social welfare systems. Using OECD data, the extent to which each element contributes to the redistribution of income, measured by the reduction in the initial market Gini coefficient, can be examined.<sup>2</sup>

The graph below shows that from 2004 to 2007, the Gini for market income in Ireland was stable. Following a step increase in 2009, the market Gini held steady at a higher level. In a similar pattern, the redistributive impact of tax and welfare system also experienced a step change which counteracted the increase in the market Gini. Reflecting these developments, the Gini for disposable income (after taxes and transfers) held at a slightly lower level more recently. As is evident from the graph the welfare system makes a greater contribution than the tax system in reducing market income inequality. This is also the case across the OECD.

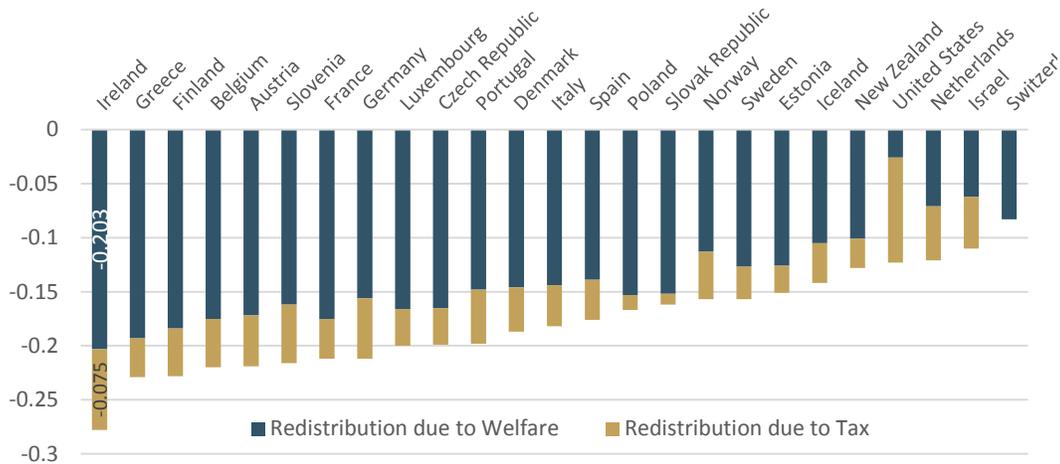


Source: OECD, Income Distribution and Poverty Dataset

The latest data from the OECD (for 2012), shows that Ireland had the largest reduction in the Gini coefficient between market and disposable income for the OECD countries for which data are available. The Irish tax and welfare system reduced the initial market Gini coefficient from 0.58 to a disposable income Gini of 0.30. Over one quarter of the reduction in Ireland in 2012 was attributable to the tax system. This proportion was only larger for Australia (not shown) and the United States.

<sup>2</sup> The equivalence scale used by the OECD differs slightly from the one used by Eurostat and the Central Statistics Office.

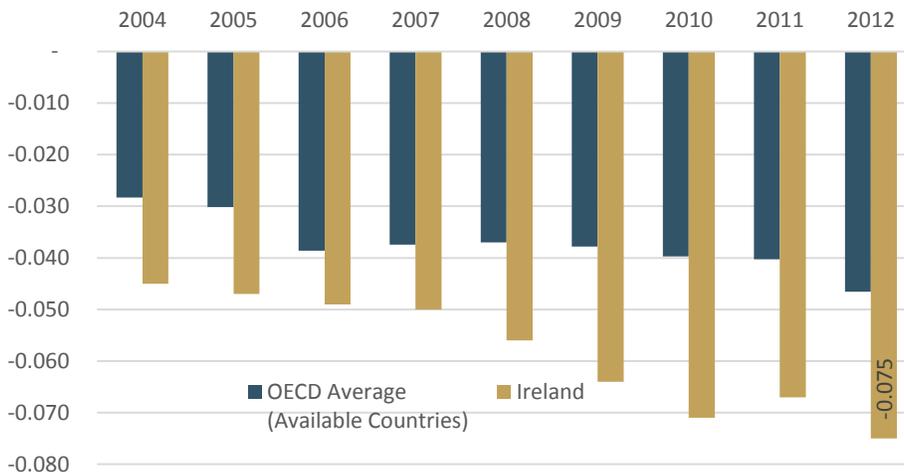
## Reduction in Gini Coefficient due to Tax & Welfare 2012



Source: OECD, Income Distribution and Poverty Dataset

When looked at over a slightly longer time period and taking a more limited sample of countries for which data are available, it is evident that Ireland's tax system has consistently reduced the Gini coefficient to greater extent than is the case with tax systems in other OECD countries (see below). Of interest is the finding that – both for Ireland and the OECD as a whole - the contribution of the tax system to reducing market income inequality has been increasing since 2004.

## Reduction in the Gini Coefficient due to Taxation



Source: Department of Finance Analysis of OECD Income Distribution and Poverty Dataset

Factors which determine the reduction in the Gini coefficient include the initial distribution of income and the overall rate and progressivity of taxation.

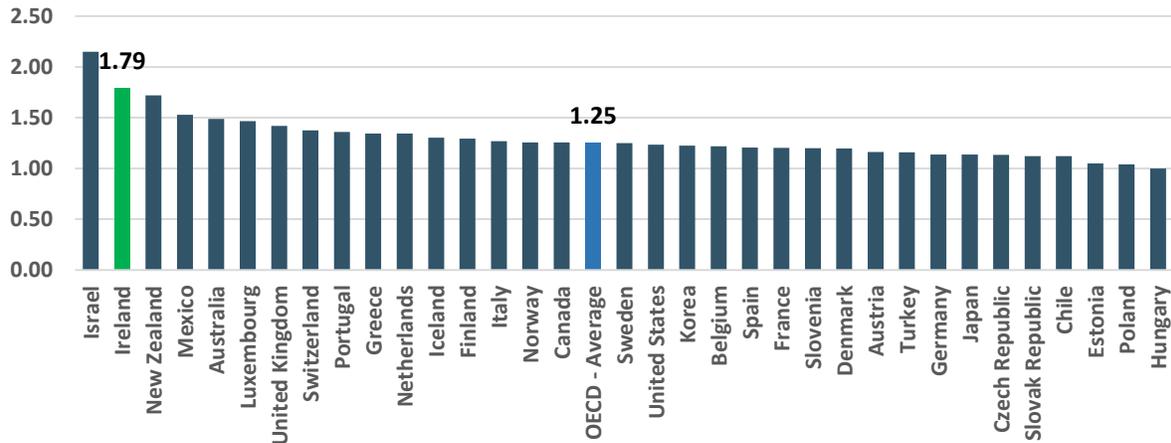
### Progressivity of the Income Tax System

The OECD measures the progressivity of income tax systems by comparing the tax wedge at different levels of earnings.<sup>3</sup> One measure commonly used by the OECD is the ratio of the tax

<sup>3</sup> The tax wedge is defined by the OECD as the sum of personal income tax, employee and employer social security contributions plus any payroll tax less cash transfers, expressed as a percentage of labour costs.

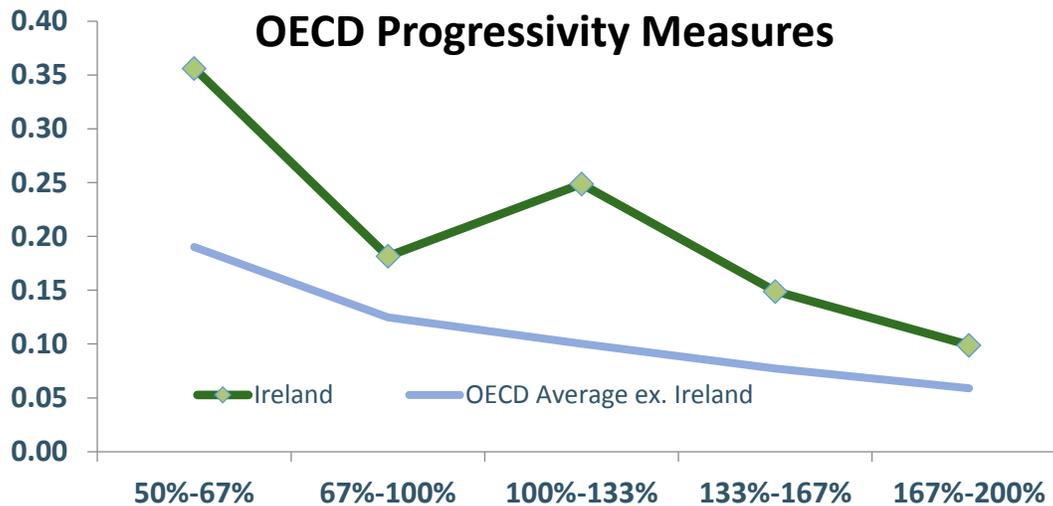
wedge of individuals on 167% of the average wage and on 67% of the average wage. <sup>4</sup> On this basis and as shown below, OECD estimates show that with a score of 1.79 Ireland had the second highest progressivity outcome of OECD member countries in 2014 and the highest among EU members.

**OECD Progressivity Measure - Ratio of tax wedges at 167% and 67% of Average Wage, 2014**



Source: Department of Finance Analysis of OECD Taxing Wages - Comparative tables

In 2013 the OECD completed a more detailed analysis comparing progressivity at a wider range of earnings levels. The results of that analysis (see below) were that the average tax wedge progression in the Irish system was consistently highly ranked (1<sup>st</sup> or 2<sup>nd</sup> in most instances) across each of the earnings ranges considered compared to the 34 OECD countries examined.

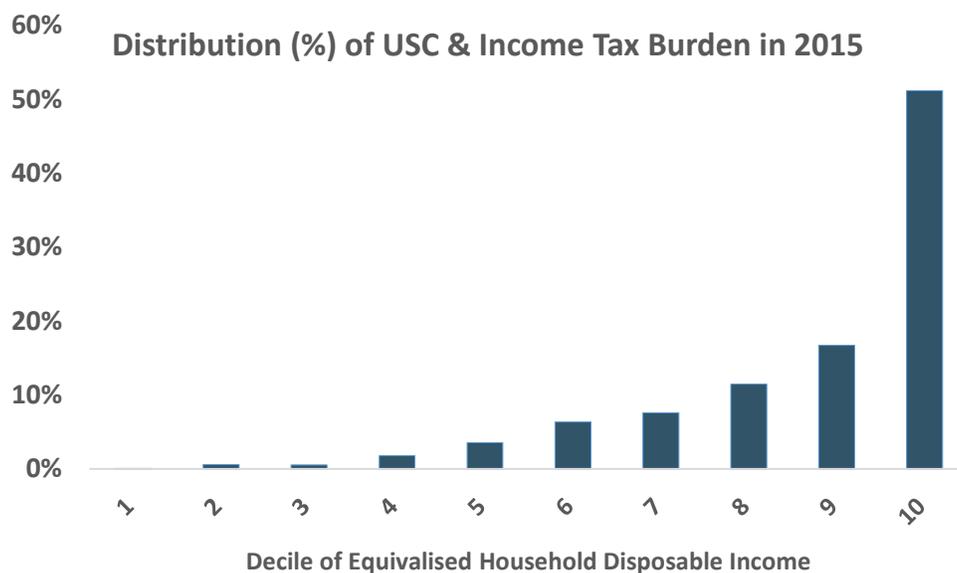


Source: OECD Taxing Wages 2013 Special Feature

<sup>4</sup> Based on an average wage in Ireland of €34,500 the OECD measure compares the ratio of the tax wedges of individuals earning approximately €57,600 to €23,100.

### Progressivity of the Income Tax and USC Burden

The progressivity of the tax system can also be seen in the results of simulations using the Economic and Social Research Institute's (ESRI) SWITCH (Simulating Welfare and Income Tax CHanges) micro-simulation tax-benefit model. When considered at a household level, estimates from SWITCH indicate that, the top decile – the top 10% of households by equivalised disposable income – paid 51% of all income tax and universal social charge (USC) in 2015.<sup>5</sup>



Source: Results based on analysis by the Department of Finance using SWITCH, the ESRI tax-benefit model ([www.esri.ie/switch](http://www.esri.ie/switch))

### Summary

While acknowledging the necessarily static nature of the results shown here and the fact that the analyses do not, for example, take into account redistribution and progressivity on a lifetime basis, it is evident that, compared to other countries, the Irish tax and welfare system contributes substantially to the redistribution of income and a reduction in market income inequality. The income tax system is more progressive relative to comparator countries with the tax burden from income tax and USC falling in large part on households with the highest incomes.

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<sup>5</sup> Deciles are formed by ranking households based on their disposable income and then dividing them into ten equally sized groups. The equivalence scale used in this analysis is the one used by the Central Statistics Office in their Survey of Income and Living Conditions publication.