

# NERI Research inBrief

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## How Much Tax do People Really Pay?

### Total Direct and Indirect Tax Estimates for Ireland

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#### SUMMARY

Too often considerations of the taxation system are focused on income taxes, or income related taxes like social insurance; a narrow perspective given the composition of taxation revenue received by the exchequer. Indeed, the oft-cited phrase 'taxpayers' is generally taken to mean income taxpayers rather than its more appropriate meaning of all those paying taxes – whether from income, expenditure or other contributions.

This paper examines how much tax people 'really' pay. It uses data from the most recent Household Budget Survey to bring together information on the total amount of direct (income tax and social insurance payments) and indirect (VAT, excise and levies) tax paid by people in the Republic of Ireland.

#### KEY POINTS

- On average Irish households pay 13.60% of their gross income in direct taxes (income and social insurance) and 10.36% in indirect taxes (VAT, excise and levies).
- The direct income taxation system is progressive – as income increases more tax is paid as a % of gross income.
- The indirect taxation system is regressive – as income increases less tax is paid as a % of gross income.
- Overall, three deciles contribute taxation to the exchequer at above the average level – the top two deciles and the bottom decile.
- This gives a U-shape to the overall household tax contribution curve – households at the bottom and top of the income distribution contribute the most, with contributions as a percentage of gross income declining to their lowest points in the third, fourth and fifth deciles and then increasing after that towards the top decile.

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**Table 1: Indirect Taxation sources by decile as a % of Gross Income**

Decile	VAT	Excise	Levies	Other Indirect	Total Indirect
<b>Bottom</b>	17.63%	8.82%	0.44%	3.01%	29.93%
<b>2</b>	10.05%	5.66%	0.21%	1.90%	17.85%
<b>3</b>	8.99%	4.84%	0.23%	1.58%	15.66%
<b>4</b>	8.23%	4.20%	0.23%	1.53%	14.20%
<b>5</b>	7.48%	3.85%	0.23%	1.47%	13.05%
<b>6</b>	7.44%	3.52%	0.23%	1.36%	12.57%
<b>7</b>	6.23%	2.85%	0.21%	1.24%	10.53%
<b>8</b>	5.97%	2.39%	0.21%	1.04%	9.62%
<b>9</b>	5.31%	2.07%	0.18%	0.94%	8.50%
<b>Top</b>	3.80%	1.16%	0.12%	0.61%	5.70%
<b>State</b>	<b>6.27%</b>	<b>2.76%</b>	<b>0.19%</b>	<b>1.12%</b>	<b>10.36%</b>

**Notes:** This table is a reproduction of table 7 in the accompanying NERI working paper.  
Data is equalised using the national scale.  
Deciles are equalised gross income deciles.

**Table 2: Direct, Indirect and Total Household Taxation by decile as a % of Gross Income**

Decile	Direct	Indirect	Total
<b>Bottom</b>	0.72%	29.93%	30.64%
<b>2</b>	0.49%	17.85%	18.34%
<b>3</b>	1.00%	15.66%	16.66%
<b>4</b>	2.62%	14.20%	16.82%
<b>5</b>	3.97%	13.05%	17.03%
<b>6</b>	7.38%	12.57%	19.95%
<b>7</b>	10.67%	10.53%	21.20%
<b>8</b>	14.12%	9.62%	23.74%
<b>9</b>	17.27%	8.50%	25.77%
<b>Top</b>	23.99%	5.70%	29.69%
<b>State</b>	<b>13.60%</b>	<b>10.36%</b>	<b>23.95%</b>

**Notes:** This table is a reproduction of table 8 in the accompanying NERI working paper.  
Data is equalised using the national scale.  
Deciles are equalised gross income deciles.

### Introduction and Context

Too often considerations of the taxation system are focused on income taxes, or income related taxes like social insurance; a narrow perspective given the composition of taxation revenue received by the exchequer. Indeed, the oft-cited phrase 'taxpayers' is generally taken to mean income taxpayers rather than its more appropriate meaning of all those paying taxes – whether from income, expenditure or other contributions.

Projections for the Republic of Ireland's taxation revenue suggest that just over €50 billion will be collected across all taxation categories during 2014. While corporations and other businesses contribute a sizeable proportion of this sum (principally through profit taxes, local authority charges and employer PRSI) the largest proportion flows from households.

Households contribute to financing the exchequer in a number of ways. Household's direct tax contributions from earnings, through income taxes (including the Universal Social Charge (USC)) and social insurance, are apparent; albeit that we tend to have greater knowledge of benchmark taxation rates (both effective and marginal) than the actual rates households pay taking account of entitlements to tax expenditures. Household indirect taxation contributions, through VAT, excise duties, levies, local taxes and charges, are less apparent.

Using data from the most recent Household Budget Survey (HBS), this paper examines how much tax people 'really' pay. In doing so it estimates both the direct (income tax and social insurance) and indirect taxation contributions of households across the income distribution.

In establishing these estimates, this research aims to provide a more comprehensive understanding of the distribution and composition of people's tax contributions. Understanding the overall shape of these contributions offers a firmer basis for considerations of policy options, or critiques of previous policy changes.

### Data and Calculations

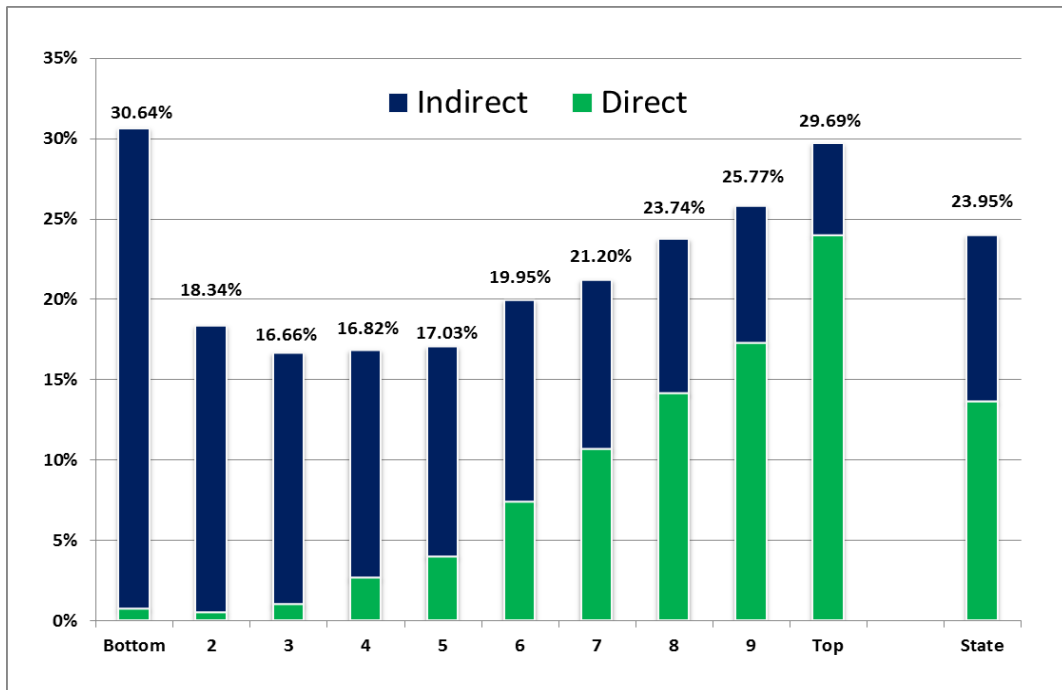
This paper uses data from the CSO's 2009-2010 Household Budget Survey (HBS). The survey occurred over the period from August 2009 to September 2010 collecting data from a representative sample of 5,891 households throughout the state. Expenditure across a total of 538 items or good/service-groups is recorded for all households.

The methods and calculation assumptions for the analysis in this paper are outlined in detail in the accompanying *NERI Working Paper* (Collins, 2014: 7-11). In summary, they involve the establishment of a base price for each produce/service and the identification, where relevant, of any VAT, excise and levies charged on these products/services. The calculations also capture 'other' indirect taxation from vehicle taxes (running cost taxes not registration taxes) and the television licence.

As a means of assessing the robustness of the modelled indirect taxation the research has compared the calculated total VAT tax take with the exchequer revenue from VAT (details in table A13 of the appendix of the accompanying *NERI Working Paper*). Overall the modelled VAT collected from households represents between 54.5% and 56% of the exchequer VAT collected in 2009 and 2010. Estimates from the European Commission for the period 2000-2011 suggest Irish households contributed on average 49% of the total VAT tax take. The EC household VAT estimates for 2009 and 2010 were 51% and 53% respectively suggesting the modelled indirect taxation outlined above offers a good representation of the indirect taxation experience of households.

Alongside expenditure data, the paper also uses HBS income and direct taxation data. Total taxation patterns are examined using deciles of gross equivalised household income. The bottom decile represents the 10% of households with the lowest equivalised gross income and the top decile the 10% with the highest equivalised income. Gross income measures income

Chart 1: Total Household Tax Contributions, % Gross Income



after direct income (various earnings) plus transfers and the equivalisation process adjusts this data to reflect differences in household size and composition.

### Results

Table 1 outlines the structure of indirect taxation across the income distribution covering VAT, Excise, Levies and other indirect measures.

On average 10.36% of gross income is allocated to indirect taxation, although this number varies considerably across the income distribution. Overall, indirect taxes are regressive, consuming a higher proportion of resources the further down the income distribution you go. As the table shows, the bottom seven deciles contribute more in indirect taxation than the average.

The regressive nature of indirect taxes stands in contrast to the progressive nature of the direct taxation (income taxes and social insurance) system. As the HBS provides data on these tax payments, it is possible to combine them with the data in table 1 to establish a picture of the overall taxation contribution of households. Table 2 presents these results which are summarised diagrammatically in chart 1.

Across the income distribution, three deciles contribute taxation to the exchequer at above the average level – the top 2 deciles and the bottom decile. This gives a U-shape to the overall household tax contribution curve – households at the bottom and top of the income distribution contribute the most, with contributions as a percentage of gross income declining to their lowest points in the third, fourth and fifth deciles and then increasing after that towards the top decile.

### References

This NERI *Research inBrief* summarises an accompanying *NERI Working Paper* which provides further details on the data, methods and calculations presented here. The paper is available on the institute's website and its reference is:

Collins, M.L. (2014), 'Total Direct and Indirect Tax Contributions of Households in Ireland: Estimates and Policy Simulations' *NERI Working Paper*, 2014/18. Dublin, NERI.

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