
Analysis of the Distribution of Incomes and Taxes for Tax Cases and Earners

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In the context of discussions about the 2010 Budget, this research project analyses the distribution of incomes and taxes for tax cases and individual earners. It was based on the following:

1. Detailed income and tax data for 2005 taken from Revenue's Statistical Report for 2007¹.
2. Reply in November 2008 by the Minister for Finance to a Parliamentary Question (PQ) from the Labour Party's Joan Burton about the distribution of income earners for Income Tax Year 2008 (see Appendix 2)

The results are presented below under the following headings

1. Key findings and conclusions
2. Basic statistics for dual-income married couples
3. Results of income splitting
4. Impact on income and tax distributions
5. Review of income and tax distributions
6. Distribution of incomes, tax and average incomes
7. Impact of higher taxes
8. Notes on methodology.

Appendix 1.

Estimated Distributions of Income and Taxes for Tax Cases & Earners across Gross Income Ranges for 2008.

Appendix 2.

Provisional Distribution of Income Earners for Income Tax Year 2008.

¹ Data for 2006 has become available but it would not materially alter the analysis or findings.

1. Key Findings and Conclusions

The key finding is that income and tax distributions are much more skewed towards low earners than indicated by official Revenue statistics which are based on tax cases and treat dual-earning married couples as single cases rather than as individual earners. Treating these couples as separate earners in 2008 added 400,000 earners to the tax system and reduced the earnings of a further 400,000.

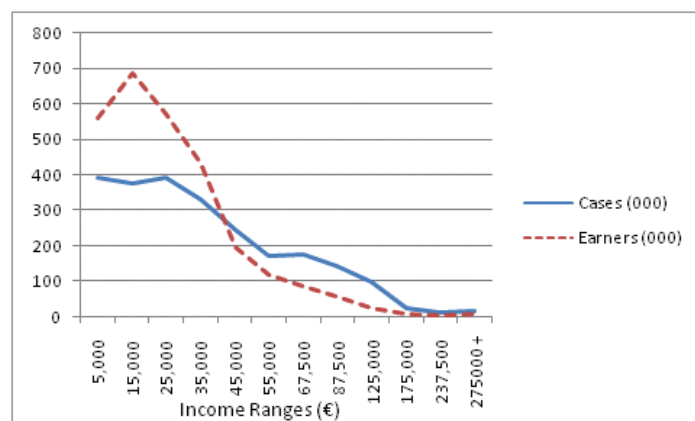
Assuming an income split of 65/35² for dual-earning married couples, the key estimates for 2008 are as follows:

- The 2.4 million tax cases jumped to 2.8 million earners.
- The number with gross incomes under €40,000 increased from 1.48 million tax cases to 2.25 million earners, a jump of 52%.
- To offset this increase, the number with gross incomes over €40,000 declined from 888,000 tax cases to 520,000 earners.

This modified distribution of incomes has implications for any proposals to bring more low paid into the tax net on the grounds that they are earning substantially less than indicated by official figures, or for increasing the tax take from high earners who are less numerous than suggested by official figures.

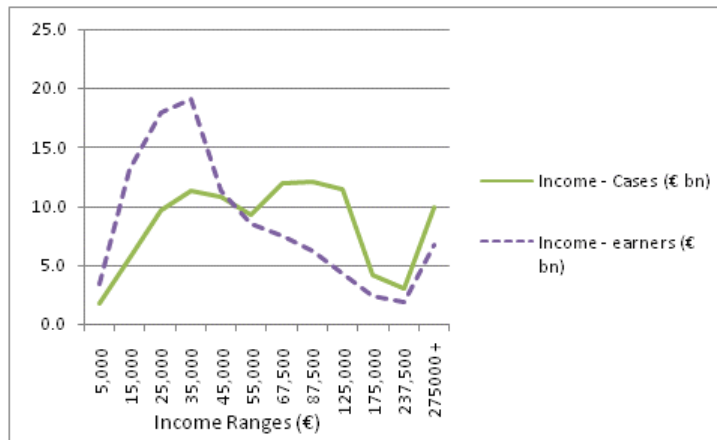
Other key findings relating to 2008 include:

- The number of earners was much more concentrated around lower income levels than for tax cases. This is a direct consequence of adding 400,000 additional earners and reducing incomes of prime earners for dual-income married couples to 65% of their tax case levels. The following chart shows the distribution of numbers of cases and earners across income ranges:



² As used in the Revenue's Statistical Report 2007.

- Average incomes for earners were concentrated around the €35,000 level whereas average incomes of tax cases were evenly spread across income ranges up to €125,000. The chart below shows the distribution of gross incomes for cases and earners across Income Ranges.



- Average incomes of low earners were about 27% higher than for tax cases in the same income range while average incomes of high earners was about 32% higher than for tax cases within the same range. These increases reflect the fact that many secondary earners in dual-income married dropped into the low income range. This increased the average income for the range and boosted the average income of those remaining in the upper income range.

The impact of an across-the-board 10% tax on tax cases and earners was considered. This indicated that, for tax cases, the total tax raised from cases with gross incomes under €30,000 would be similar to that raised from cases with gross incomes over €150,000. However, when viewed from the perspective of earners, the total tax raised from earners with gross incomes under €30,000 would be 3.2 times greater than that raised from earners with gross incomes over €150,000. This arises because there would be 57% more earners than tax cases in the lower income range and 52% fewer earners than tax cases in the higher income range.

As a consequence of individualisation and application of PRSI and health/income levies to individual earners, the income tax system has become much more centred on individual earners than on tax cases. Basing key tax distribution statistics on tax cases disguises significant patterns which can only be identified by focusing on earners. Accordingly, we urge that future income tax changes take account of their impact on earners as well as on tax cases and that Revenue extends its range of income tax statistics to embrace earners as well as tax cases. Pending their availability, extreme care should be taken when quoting statistics about the fairness of the income tax system or adjusting rates and credits.

2. Basic Statistics for Dual-Income Married Couples

Revenue data about income distribution is based on tax cases and treats dual-income married couples as single tax cases rather than as separate earners. The distinction between tax cases and earners is important as dual-income married couples covered about 400,000 tax cases and 800,000 earners in 2008.

Dual-income couples are extremely significant. Based on detailed Revenue data for 2005:

- The average income of dual-income married couples was €70,000 as compared with €27,000 for all other tax cases (single, widowed and single-income married couples).
- Dual-income married couples accounted for about 36% of all income and 41% of all income tax notwithstanding that they represented only 17% of tax cases.

3. Results of Income Splitting

After splitting the incomes of dual-earning married couples (in the ratio 65/35) and moving all adjusted incomes into lower income bands, the following picture emerges for 2008:

- The number of people increased from 2.36 million tax cases to 2.77 million earners.
- The average gross annual income was €36,700 as compared with €42,900 per tax case.
- While the total amount of tax paid was unchanged at €15.6 billion, the average income tax paid was only €5,700 per earner in contrast with €6,600 per tax case.

4. Impact on Income and Tax Distributions

The foregoing global statistics disguise significant changes to the distributions of numbers, incomes and taxes for 2008 given in the reply to the PQ (see Appendix 2).

In summary, the 151,000 tax cases with gross incomes over €100,000 declined to 53,000 earners and the 732,000 cases with incomes between €40,000 and €100,000 fell to 466,000 earners. To offset these declines at upper income levels, the 717,000 cases with incomes in the range €20,000 to €40,000 increased to 1.0 million and the 764,000 cases with incomes below €20,000 surged to 1.2 million.

This assessment is explained in greater detail below:

- In the PQ reply, the 151,000 tax cases with incomes above €100,000 had average annual incomes of €190,000. They accounted for 28% of all incomes and for 50% all taxes with an effective tax rate of 27%.

Once the incomes of dual income couples are split (65/35), there were only 53,000 earners with gross incomes in excess of €100,000 and they had average annual incomes of more than €250,000. They accounted for 15% of all incomes and for 31% all taxes with an effective

tax rate of 33%.

This shows that the effect of dividing up the incomes of dual-income married couples was to move many high earning couples out of the top income band. However, the remaining smaller number of very high earners had higher incomes and a higher effective tax rate than that indicated in the PQ reply.

- The 466,000 earners with incomes in the range €40,000 to €100,000 had average annual incomes of about €71,000. They accounted for 33% of all incomes and for 43% all taxes. Their effective tax rate was 20%. In the PQ reply, the 732,000 tax cases within this income band had average annual incomes of about €60,000. They accounted for 44% of all incomes and for 43% all taxes. Their effective tax rate was 15%.

Again, the effect of dividing up the incomes of dual-income married couples was to move many married earners into lower income bands. At the same time, the average income of earners was increased by the number being downgraded from the top income band. The net effect was a reduction in the number of earners in the band but an increase in average earnings, effective tax rate and tax paid per earner.

- The 1.0 million earners with incomes in the range €20,000 to €40,000 had average annual incomes of about €36,000. They accounted for 36% of all incomes and for 24% all taxes. Their effective tax rate was 10%. In the PQ reply, The 717,000 tax cases within this income band had average annual incomes of about €29,000. They accounted for 21% of all incomes and for 7% all taxes. Their effective tax rate was 5%.

The average income of earners in the band was increased by the number downgraded from the next higher income band. This more than offset the effect of dividing up the incomes of dual-income married tax cases. The net effect was an overall increase in the number of earners in the band along with increases in average earnings, effective tax rate and tax paid per earner.

- The 1.24 million earners with incomes below €20,000 had average annual incomes of about €13,000. They accounted for 16% of all incomes and for 2% all taxes and their effective tax rate was 2%. In the PQ reply, the 764,000 tax cases within this income range had average annual incomes of about €10,000. They accounted for 7% of all incomes and for negligible taxes.

5. Review the Income and Tax Distributions

Appendix 1 tabulates the main results of the analysis. Data in the columns related to tax cases was based on data supplied by Revenue in the PQ. The data on earners assumed the incomes of dual-income married couples were split 65/35 based on the methodology explained in Section 8 below.

It can be seen from this table that the number of earners is greater than tax cases and that the percentage distributions of incomes and taxes are quite different. These patterns are much clearer in the following charts.

Chart 1 - Distribution of Numbers of Cases and Earners across Income Ranges

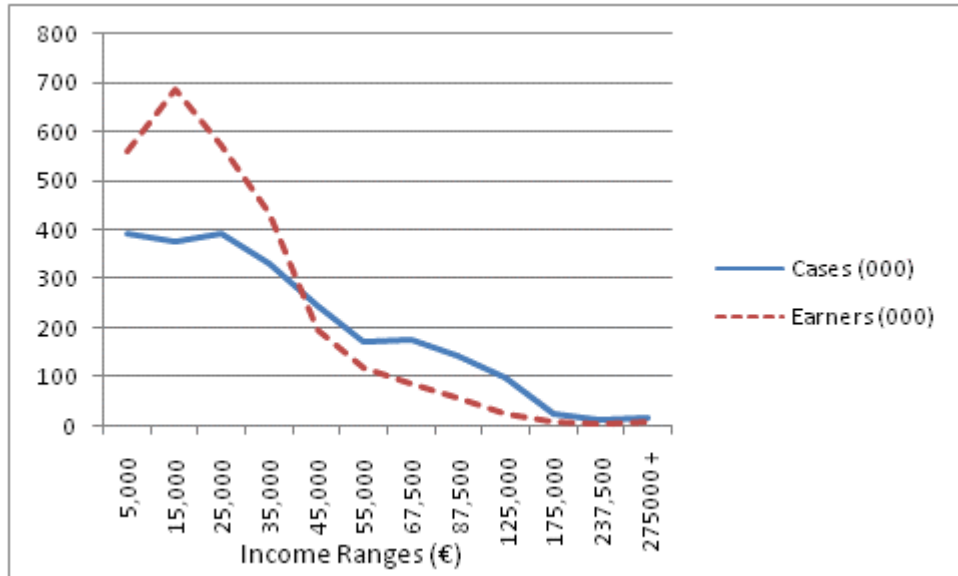


Chart 1 shows that the number of earners are much more concentrated towards lower incomes than for tax cases. This is a direct consequence of adding 400,000 additional earners and then reducing incomes of prime earners for dual-income married couples to 65% of their tax case levels.

Chart 2 - Distribution of Gross Incomes for Cases and Earners across Income Ranges

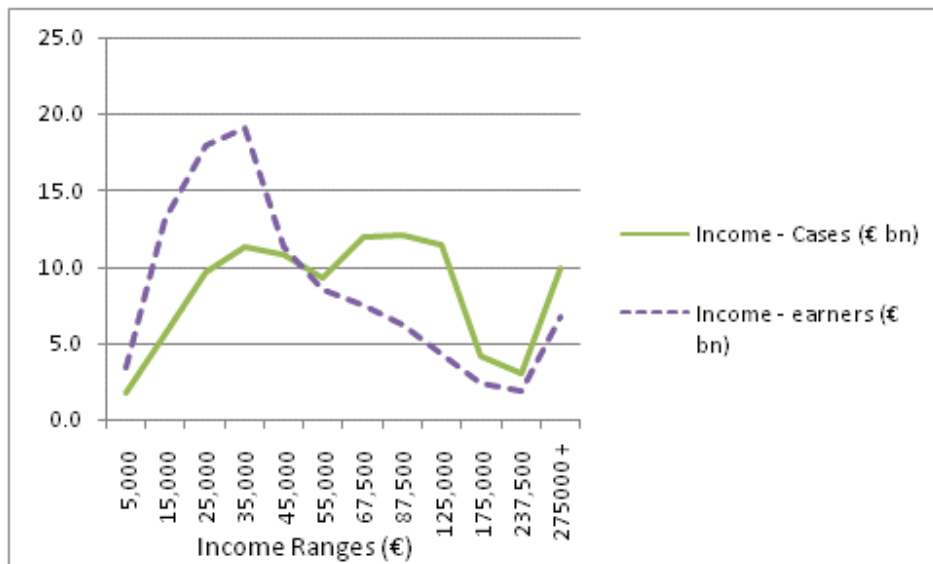


Chart 2 indicates that average incomes for earners are concentrated around the €35,000 level whereas average incomes of tax cases are fairly evenly spread across income bands.

Chart 3 - Distribution of Income Tax for Cases and Earners across Income Ranges

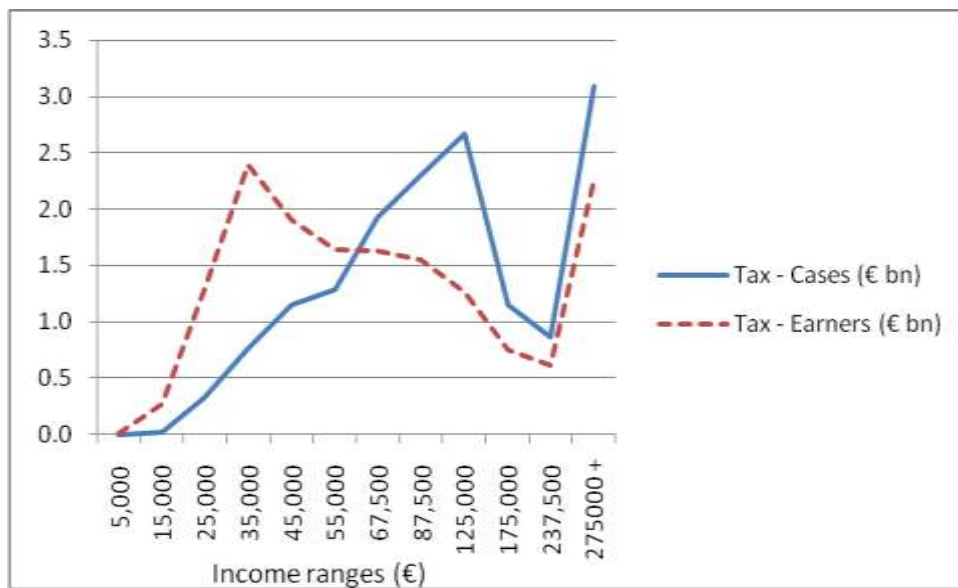


Chart 3 shows that lower- and middle-income earners bear a greater share of the tax burden than middle-income tax cases. This reflects the distribution of earners and their incomes shown in Charts 1 and 2.

6. Distribution of Incomes, Tax and Average Incomes

Based on the data in Appendix 1, the top 1.9% of earners (incomes over €100,000) accounted in 2008 for 14.8% of all income and 31.4% of all income taxes paid. The same percentage of tax cases (with the income limit increased to €175,000+) accounted for 15.4% of all income and 30.1% of all taxes paid.

At the other end of the spectrum, the bottom 44.9% of earners (incomes under €20,000) accounted for 16.1% of all income and 1.8% of taxes paid. The same percentage of tax cases (with the income limit increased to a maximum of €27,000) accounted for 14.5% of all income and 1.7% of all taxes paid.

A consequence of distinguishing between earners and tax cases is that a much greater number of earners were on low incomes .i.e. 1.81 million earners had gross incomes under €30,000 as compared with 1.15 million tax cases. As a result, the numbers on middle/upper incomes fell from 1.21 tax cases to 0.95 million earners.

The following table shows how average gross incomes varied for tax cases and earners in 2008:

Gross income ranges (€)	Tax Cases			Earners		
	Number of cases (000)	Gross incomes (€000)	Gross income per case (€000)	Number of earners (000)	Gross incomes (€000)	Gross income per earner (€000)
Up to €30,000	1,155	17,202	15	1,814	34,261	19
€30,000 to €150,000	1,156	67,163	58	928	56,562	61
Over €150,000	54	17,273	317	26	10,815	418
Total	2,365	101,638	43	2,768	101,638	37

It indicates that the average income of low earners (i.e. under €30,000) were about 27% higher than that for tax cases in the same income range and that average income of high earners (over €150,000) was about 32% higher than that for tax payers in the same range. These increases reflect the fact that some secondary earners in dual-income married moved into lower income ranges. This increased the average income in the lowest income range while boosting the average income of those remaining in the upper income range.

7. Impact of Higher Taxes

The table below assesses the impact of an across-the-board 10% tax on tax cases and earners.

Gross income ranges (€)	Tax Cases			Earners		
	Number of cases (000)	Gross incomes (€000)	10% Tax on gross incomes (€000)	Number of earners (000)	Gross incomes (€000)	10% tax on gross incomes (€000)
Up to €30,000	1,155	17,202	1,720 (1,490/case)	1,814	34,261	3,426 (1,890/earner)
€30,000 to €150,000	1,156	67,163	6,716 (5,810/case)	928	56,562	5,656 (6,090/earner)
Over €150,000	54	17,273	1,727 (31,980/case)	26	10,815	1,082 (41,620/earner)

Totals	2,365	101,638	10,163	2,768	101,638	10,164
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Based on this table:

- The tax take from those with gross incomes of less than €30,000 rises from €1,490 per case to €1,890 per earner, an increase of 27%.
- The tax take from those with gross incomes between €30,000 and €150,000 increases marginally from €5,810 per case to €6,090 per earner.
- The tax take from those with gross incomes above €150,000 rises from €31,980 per case to €41,620 per earner, and increase of 30%.

These divergences arise because average gross incomes are significantly higher for earners than for tax cases within the lower and upper income ranges.

The table also shows that, for tax cases, the total tax raised from cases with gross incomes under €30,000 is almost identical to that raised from cases with gross incomes over €150,000. However, when viewed from the perspective of earners, the total tax raised from earners with gross incomes under €30,000 is 3.2 times greater than that raised from earners with gross incomes over €150,000. This is largely because there are 57% more earners than tax cases in the lower income range and 52% fewer earners than tax cases in the higher income range.

8. Notes on Methodology

A detailed exercise was conducted to restructure Revenue statistics on income and tax distributions for 2005 to use earners rather than tax cases as the basis of analysis. This involved increasing the number of earners by 370,000 to 2.49 million to take account of second earners and splitting the incomes of dual-earning married couples in an assumed rate of 65/35 for the first and second earners respectively. The resultant reduced incomes were then assigned to lower income bands and effective tax rates appropriate to these lower bands were applied. Using this approach, Revenue data for 2005 was rebuilt around earners and key elements were then applied to the Revenue’s 2008 statistics which had been based on tax cases. Over twenty interlocking tables based on distributions of incomes and tax were used to build up the findings.

Appendix 1 - Estimated Distributions of Income and Taxes for Tax Cases & Earners across Gross Income Ranges for 2008

Range of gross incomes	Estimated Totals for 2008 - Based on Cases					Estimated Totals for 2008 - Based on Earners								
	From To €	To €	Number of cases	% of total	Income € m	% of total	Tax € m	% of total	Number of earners*	% of total	Income € m	% of total	Tax € m	% of total
-	10,000	10,000	390,075	16.5	1,821	1.8	0	0.0	557,924	20.2	3,300	3.2	6	0.0
10,000	20,000	20,000	374,540	15.8	5,648	5.6	23	0.1	685,759	24.8	13,084	12.9	269	1.7
20,000	30,000	30,000	390,365	16.5	9,733	9.6	328	2.1	570,657	20.6	17,877	17.6	1,286	8.3
30,000	40,000	40,000	327,559	13.8	11,395	11.2	768	4.9	433,815	15.7	19,086	18.8	2,394	15.4
40,000	50,000	50,000	243,457	10.3	10,880	10.7	1,154	7.4	199,158	7.2	11,235	11.1	1,908	12.3
50,000	60,000	60,000	170,535	7.2	9,331	9.2	1,293	8.3	121,774	4.4	8,450	8.3	1,639	10.5
60,000	75,000	75,000	176,407	7.5	11,948	11.8	1,927	12.4	88,233	3.2	7,474	7.4	1,631	10.5
75,000	100,000	100,000	141,914	6.0	12,114	11.9	2,296	14.7	57,490	2.1	6,117	6.0	1,554	10.0
100,000	150,000	150,000	96,484	4.1	11,495	11.3	2,668	17.1	27,308	1.0	4,201	4.1	1,258	8.1
150,000	200,000	200,000	25,109	1.1	4,286	4.2	1,156	7.4	10,509	0.4	2,290	2.3	754	4.8
200,000	275,000	275,000	13,229	0.6	3,062	3.0	872	5.6	6,230	0.2	1,823	1.8	615	4.0
Over	275,000	275,000	16,126	0.7	9,926	9.8	3,088	19.8	9,129	0.3	6,701	6.6	2,260	14.5
Totals			2,365,800	100.0	101,638	100.0	15,575	100.0	2,767,986	100.0	101,638	100.0	15,575	100.0

Appendix 2 - Provisional Distribution of Income Earners for Income Tax Year 2008

Range of Gross Income €	Gross Income€	Number*	Tax €	% of all Tax
0 - 10,000	1,821,117,560	390,075	95,453	0.0%
10,001 - 20,000	5,647,605,342	374,540	23,180,911	0.1%
20,001 - 30,000	9,732,796,943	390,365	327,938,866	2.1%
30,001 - 40,000	11,394,848,884	327,559	767,960,473	4.9%
40,001 - 50,000	10,879,703,845	243,457	1,154,254,505	7.4%
50,001 - 60,000	9,331,342,849	170,535	1,293,292,911	8.3%
60,001 - 70,000	8,010,727,431	123,694	1,252,167,103	8.0%
70,001 - 80,000	6,562,914,342	87,855	1,124,094,329	7.2%
80,001 - 90,000	5,278,734,950	62,328	995,950,643	6.4%
90,001 - 100,000	4,209,654,353	44,444	850,896,316	5.5%
100,001 - 125,000	7,209,063,374	64,982	1,607,950,484	10.3%
125,001 - 150,000	4,286,008,435	31,502	1,060,379,649	6.8%
150,001 - 200,000	4,286,037,028	25,109	1,156,236,989	7.4%
200,001 - 275,000	3,061,534,079	13,229	871,752,729	5.6%
275,001 - 500,000	3,823,035,259	10,733	1,119,588,869	7.2%
500,001 - 1,000,000	2,643,212,633	3,946	810,486,061	5.2%
Over 1,000,000	3,459,611,575	1,447	1,158,291,133	7.4%
Overall Totals	101,637,948,882	2,365,800	15,574,517,424	100.0%

Source: Reply in November 2008 by the Minister for Finance to a Parliamentary Question (PQ) from the Labour Party's Joan Burton about the distribution of income earners for Income Tax Year 2008.

* A married couple who has elected or has deemed to have elected for joint assessment is counted as one tax unit.