

#### **PF1.4: Neutrality of tax-benefit systems**

##### *Definitions and methodology*

Couple families with children can choose from a range of possible labour supply options to achieve a desired level of disposable family income. Tax-benefit systems are defined here as “neutral” if changes in the distribution of paid work among adults in couple families do not affect the amounts paid to government and net household income, and thus provide equal incentives to work for both partners. Often, men are the main earner in couple families. In practice, therefore, this indicator is associated with gender equity in the distribution of paid work within households.

The nature of the tax unit is an important factor in determining the extent to which tax/benefit systems favour dual-earner couples or single-earner households (OECD, 2003, 2008 and 2010). Under “joint” or “family-based” taxation systems – where the combined income of married couples and in some cases whole families is taxed as one single unit – the marginal tax rate of the second earner – most commonly the female partner – will be the same as the marginal tax rate of the primary earner. If the taxation system is progressive, this will be higher than the marginal rate for a single person at the same level of earnings, with possible adverse incentives for female partners to participate in paid work. By contrast, under an individual taxation system – where the incomes of individuals are taxed separately regardless of marital status or family circumstance – the marginal tax rate for the second earner is independent of the earnings of the primary earner. Thus, under a progressive tax schedule individual taxation means that a second earner will be taxed less heavily than a primary earner up to the point where earnings are equal, implying that couples can achieve higher levels of disposable income by becoming a dual-earner family. As a result, individual tax systems with progressive income tax schedules encourage a more equal sharing of earnings across different household members and the market participation of second earners. In 2014, most OECD countries had separate income taxation of spouses and partners (OECD, 2015). The countries with joint taxation, or with options for joint taxation, were Estonia (for married couples), France (families), Germany (optional, married couples), Ireland (optional, married couples), Luxembourg (spouses and partners), Norway (optional), Poland (optional, married couples), Portugal (families), Spain (optional, families), Switzerland (married couples), and the United States (optional – married couples).

However, “neutrality” of tax-benefit systems is not only determined by the tax unit. Indeed, many “individual” tax systems exhibit some “joint elements” such as tax reliefs and allowances that are transferable between partners, as for example, in Denmark and the Netherlands (OECD, 2015). As a result, when a non-earning partner in a hitherto single-earner household enters work, their earnings first off-set the value of the transferable tax reliefs and credits, reducing the income gain for the household. Similarly, benefits whose receipt is related to household income can also affect decisions to enter work or work more by both partners.

##### *Key findings*

Table PF1.4.A considers how tax/benefit systems may affect the distribution of earnings among spouses in couple families. It looks at how couple families with incomes of 133% and 200% of average earnings may best allocate earnings among themselves. Three alternatives are considered at the two earnings levels:

- i) “Single-earner couples”, with one earner at 133% or 200% of average earnings;
- ii) “Dominant dual-earner couples”, with the main or primary earner at 100% or 150% of average earnings, and the second earner at 33% or 50% of average earnings;

Other relevant indicators: Gender pay gaps (LMF1.5); Gender differences in employment outcomes (LMF1.6); Public spending on family benefits (PF1.2); Typology of family benefits (PF1.3); Key characteristics of parental leave arrangements (PF2.1); and, Childcare support (PF3.4).

iii) “Equal dual-earner couples”, with both partners at either 67% of average earnings or 100% of average earnings.

For each couple Table PF1.4.A shows household net transfers to government as a proportion of household gross earnings, that is, the proportion of gross household earnings that must be transferred to government following direct taxes (income tax plus social security contributions) and the receipt of cash benefits. The degree of ‘neutrality’ in the tax-benefit system is illustrated by how these net transfers vary between couples with identical levels of household earnings but different distributions of earnings within the couple. For example, in Australia in 2014, net transfers to government for a single-earner couple with gross household earnings at 133% of average wages amounted to 20.4% of gross earnings (column 1), while for an equal dual-earner couple with the same gross household earnings net transfer were almost 5 percentage points lower at 15.5% of gross household earnings (column 5). Net transfers to government increase when gross household earnings are equal to 200% of average earnings but, at 23.4% of gross household earnings, net transfers for the equal dual-earner couple (column 6) were still lower than those for the single-earner couple (who pay 30.9% of gross household earnings to government in net transfers (column 2)). In other words, at the given levels of household income, the Australian tax-benefit system favours dual-earner couples over single-earner couples.

The same is true across almost all of the OECD, albeit to varying extents between countries. When comparing household net transfers to government across households with identical gross earnings but differing distributions of earnings (compare columns 1, 3 and 5, or columns 2, 4 and 6), it is apparent that in most OECD countries the proportion of gross earnings transferred to government diminishes with a more equal distribution of earnings between partners. Put differently, most tax/benefit systems in the OECD favour dual-earner couples and particularly equal dual-earner couples over single-earner couples.

This is summarised a little clearer in columns 7 and 8 in Table PF1.4.A, which present the difference in net transfers by single and equal-dual earner couples as a percentage of net transfers to government by single earner couples. The majority of values are negative, indicating that equal dual-earner couples generally pay less to government than single-earner couples with a similar level of household earnings. At the given levels of family income, tax-benefit systems appear to be largely neutral (within a few percentage points either side of zero) between dual and single-earner couples in the Czech Republic, Estonia, Hungary, Poland, the Slovak Republic, Switzerland and the United States. Only in Latvia, France and Germany does the tax-benefit system favour single-earner couples over dual-earner families at both levels of earnings, and particularly at higher earnings in Germany. This is because in Germany social security contributions are capped in such a manner that a couple family with two adults each earning 100% of average earnings pay substantially more than a single earner in a couple family with gross earnings equal to 200% of average earnings. A similar effect exists in France, but at these earnings levels the effect of the cap is comparatively small.

Table PF1.4.A also shows that proportional differences between the net transfers paid by single-earner families and equal dual-earner families are generally smaller at higher income levels, largely because of progressive income taxation and the phasing out of income-tested benefits and tax credits (the value in column 8 is in many countries smaller than in column 7). However, this is not always the case – in Denmark, Iceland, Japan, Sweden, and the United Kingdom, for example, dual earners proportionally gain vis-à-vis single-earner couples when earnings levels increase. This is because over the earnings range there is little further progressivity in income taxation (i.e. top income tax rates are reached at relatively low earnings levels) or, in the case of Japan, because of the manner in which the deductible amounts of taxable income increase with household income.

Table PF1.4.A: **Neutrality of tax-benefit systems for couples at different household earnings levels, 2014**

Net transfers to government as percentage of gross household earnings for single-earner and dual-earner couples, and differences in net household earnings between single-earner and equal dual-earner couples, for couple households with two children (age 4 and 6) and gross household earnings equal to 133% and 200% of average earnings

	Net transfers to government as a proportion (%) of gross household earnings, by different levels of household earnings and different earnings distributions within couples						Difference in net transfers to government for single-earner and equal dual-earner couple households, as a proportion (%) of net transfers to government for single-earner couples		Difference in net household income between single-earner and equal dual-earner couple households, as a proportion (%) of net household income for single-earner couples	
	Single-earner couple	133 - 200 - 0	Dominant dual-earner couple	100 - 33	150 - 50	67 - 67	100 - 100	133	200	133
Gross earnings as a % of average earnings	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
							$\frac{([5] - [1])}{[1]} * 100$	$\frac{([6] - [2])}{[2]} * 100$	$\frac{((Net\ Income[5] - Net\ Income[1]) / Net\ Income[1]) * 100}{100}$	$\frac{((Net\ Income[6] - Net\ Income[2]) / Net\ Income[2]) * 100}{100}$
Australia	20.4	30.9	16.5	24.2	15.5	23.4	-23.6	-24.4	6.8	10.9
Austria	28.5	32.7	21.4	29.9	20.6	29.2	-27.7	-10.8	11.9	5.2
Belgium	31.5	41.0	27.2	37.1	28.4	37.1	-10.1	-9.3	5.4	6.5
Canada	16.6	24.8	14.4	21.6	12.1	21.1	-27.4	-14.9	6.3	4.9
Chile	19.3	20.2	16.6	18.5	18.5	19.0	-4.0	-6.4	1.7	1.6
Czech Republic	12.5	18.7	13.5	18.7	12.6	18.7	1.1	0.0	0.6	0.0
Denmark	29.9	38.7	28.2	34.8	28.0	32.4	-6.3	-16.2	3.5	10.2
Estonia	14.7	17.9	14.7	17.9	14.8	17.9	0.5	0.0	0.7	0.0
Finland	30.5	37.4	21.5	29.2	19.3	27.6	-36.7	-26.0	17.0	15.5
France	19.6	23.9	18.3	24.2	20.0	24.6	2.4	2.7	0.2	-0.8
Germany	25.8	29.4	26.6	32.5	26.8	33.9	3.6	15.3	-0.5	-6.4
Greece	19.0	27.0	9.1	17.3	5.4	14.1	-71.5	-47.6	17.7	17.6
Hungary	20.7	25.3	20.7	25.3	20.8	25.3	0.5	0.0	0.6	0.0
Iceland	24.9	36.9	24.2	33.1	24.1	31.8	-3.2	-13.8	1.8	8.1
Ireland	11.7	25.2	5.9	16.7	6.8	14.8	-41.6	-41.3	6.3	13.9
Israel (a)	23.1	30.1	15.8	21.3	11.8	16.8	-48.8	-44.1	15.5	19.0
Italy	28.9	37.6	20.1	29.5	17.7	28.2	-38.8	-24.9	16.7	15.0
Japan	18.5	23.0	17.2	21.2	16.6	19.4	-10.2	-15.7	3.1	4.7
Korea	9.1	14.0	6.5	10.2	4.8	9.7	-46.9	-30.8	5.5	5.0
Latvia	17.3	22.2	19.3	23.6	19.4	23.6	12.0	5.9	-1.8	-1.7
Luxembourg	12.5	23.9	9.8	21.5	10.0	21.5	-19.8	-10.1	3.6	3.2
Mexico	..	..	..	..	..	..	..	..	..	..
Netherlands	38.3	44.5	25.9	33.5	22.4	30.9	-41.4	-30.4	26.6	24.4
New Zealand	17.4	26.4	12.8	21.6	11.8	18.9	-31.7	-28.2	7.5	10.1
Norway	28.4	34.3	22.3	28.7	22.0	26.5	-22.6	-22.7	9.8	11.8
Poland	24.2	26.3	23.8	26.0	23.9	26.0	-1.5	-1.0	1.2	0.4
Portugal	19.4	28.8	14.4	25.0	14.6	25.0	-25.0	-13.1	6.8	5.3

Slovak Republic	11.6	17.7	11.4	17.7	11.8	17.7	1.2	0.0	0.6	0.0
Slovenia	19.6	29.1	15.4	27.1	15.8	26.7	-19.6	-8.1	5.6	3.3
Spain	20.2	26.2	17.6	21.5	15.8	21.2	-21.6	-19.2	6.3	6.8
Sweden	25.5	35.6	17.3	26.3	17.1	21.3	-33.0	-40.2	12.1	22.3
Switzerland	24.5	25.8	23.4	25.1	23.7	27.0	-3.0	4.6	1.7	-1.6
Turkey	28.1	31.6	24.1	27.7	23.8	26.7	-15.4	-15.5	6.8	7.2
United Kingdom	23.0	31.9	15.6	23.3	15.7	21.1	-31.6	-33.8	10.2	15.8
United States	17.5	21.4	17.5	21.4	17.6	21.4	0.5	0.0	0.6	0.0
<b>OECD average</b>	<b>21.5</b>	<b>28.2</b>	<b>17.9</b>	<b>24.5</b>	<b>17.4</b>	<b>23.6</b>	<b>-18.9</b>	<b>-15.3</b>	<b>6.4</b>	<b>7.0</b>
Bulgaria	13.9	21.6	11.7	21.6	13.9	21.6	0.4	0.0	0.7	0.0
Croatia	23.2	29.6	21.8	26.8	21.7	25.6	-6.7	-13.5	2.8	5.7
Lithuania	22.0	22.7	18.2	21.0	18.0	21.3	-17.9	-6.3	5.8	1.9
Malta	13.0	18.2	11.5	15.8	8.2	15.1	-36.9	-17.1	6.3	3.8
Romania	27.1	28.0	24.3	26.6	24.4	27.2	-9.9	-3.1	4.4	1.2
<b>EU average</b>	<b>21.6</b>	<b>28.2</b>	<b>18.0</b>	<b>24.8</b>	<b>17.6</b>	<b>24.1</b>	<b>-17.6</b>	<b>-12.9</b>	<b>6.3</b>	<b>6.3</b>
<b>Eurozone average</b>	<b>21.3</b>	<b>28.1</b>	<b>17.1</b>	<b>24.5</b>	<b>16.4</b>	<b>23.9</b>	<b>-21.6</b>	<b>-13.3</b>	<b>7.5</b>	<b>6.3</b>

Note: the estimates here relate to the situation for a couple household with two children aged 4 and 6. In those situations where one member of the household is not working, it is assumed that they are not entitled to unemployment benefits (for example, because their entitlements have expired). The household is however assumed entitled to social assistance and other means-tested benefits, subject to the relevant income conditions. Where receipt of social assistance is subject to activity tests (such as a non-working household member engaging in an active job-search or being "available" for work), these requirements are assumed to be met. Cash housing benefits are calculated assuming private market rent, plus other charges, amounting to 20% of the full-time wage for all family types. Neither childcare benefits nor childcare costs are considered.

a) The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.  
 Source: [OECD Tax-Benefit Models](#)

The measures in column 7 and 8 do not take into account the level of gross earnings or disposable income, and similar proportional gains/losses from shifting towards a more equal distribution of earnings may have very different effects on family net income in different countries. For example, couple families on 133% of average earnings in Belgium and Japan see similar proportional gains from shifting towards equal dual-earning (a decrease in net transfers to government of roughly 10%), but the actual effect on net family income is much larger in the former (an increase of 5.4%) than in the latter (an increase of 3.1%). To account for this a further measure – showing the proportional (%) difference in household *net incomes* (as opposed to net transfers) between equal dual-earner and single-earner couple households with identical gross household earnings – is presented in columns 9 and 10 in Table PF1.4.A.

#### *Participation tax rates when entering work*

However, the attractiveness of entering paid work for potential second earners does not merely depend on the incentives within the tax benefit system to share paid work within households, but also on the absolute financial gains second earners can make from being in work. In other words to what extent are in-work earnings effectively taxed away when the second earner moves into paid work?

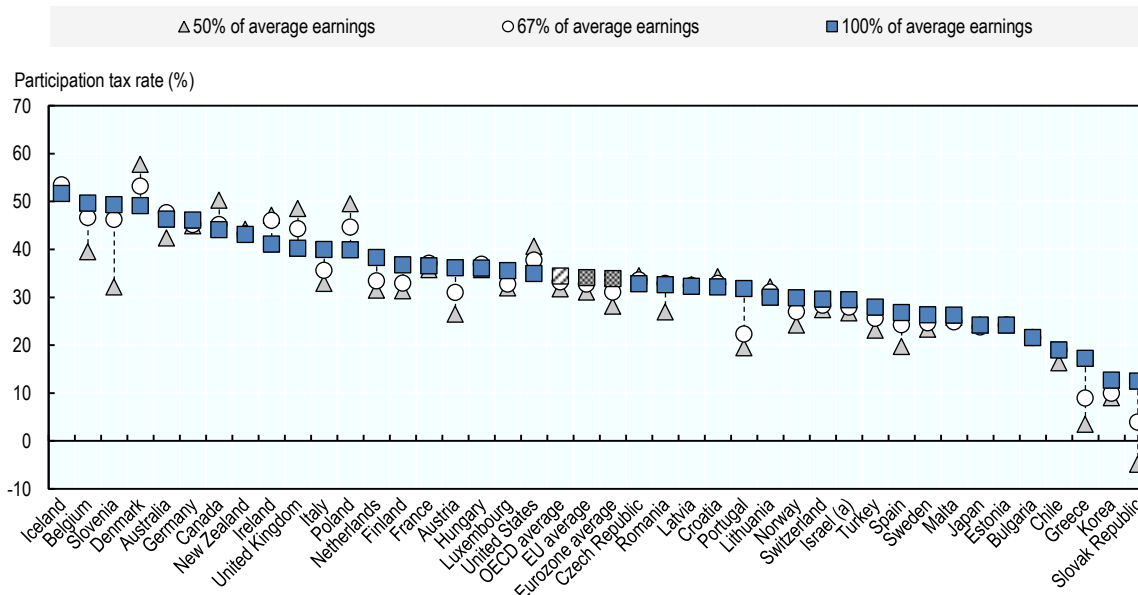
Chart PF1.4.A shows the participation tax rate<sup>1</sup> (PTR) parents face if they are contemplating moving into paid employment when their spouse has earnings equal to 67% of average earnings (these calculations do not account for the cost of childcare and are based on the assumptions inherent to the OECD Tax/Benefit models when calculating the tax-benefit position of individuals (OECD 2007a)). Across almost all OECD countries PTRs are well below 50% at various levels of earnings, implying that work generally pays for potential second-earners in couple families. Financial incentives to enter second-earning

<sup>1</sup> The proportion of prospective gross earnings that would be 'taxed' away in the form of direct taxation (income tax plus social security contributions) and reduced out-of-work and income-tested benefits should the individual enter the labour market.

are strongest in Greece, Korea and particularly the Slovak Republic, where a low-earning second-earner actually faces a negative participation tax rate, partly on account of a short-term 'special assistance' benefit for those entering work. By contrast, financial incentives to second-earning are weakest in Iceland – where the PTR for a second-earner parent on average earnings is about 52% of their prospective gross earnings – and, for low earners especially, in Denmark, where a second-earner parent on 50% of average earnings would take home only about 57% of their prospective gross earnings. In some countries (particularly Denmark, Poland and the United Kingdom) PTRs for second earners decrease as gross earnings increase, producing at least some incentive for second earners to choose higher paying jobs when entering employment. In many others, however, PTRs increase at least marginally with increases in gross earnings. This is particularly the case in Slovenia and the Slovak Republic, where PTRs are around 17 percentage points higher for a second-earner parent entering work at 100% of average wages than for a second-earner parent entering work at 50% of average wages.

**Chart PF1.4.A: Participation tax rates for second earner parents entering employment at varying gross earnings levels, 2014**

Participation tax rates for an individual entering employment with gross earnings equal to 50% of average earnings, 67% of average earnings and 100% of average earnings, where the individual lives in a couple household with two children (age 4 and 6) and a married partner with full-time earnings equal to 67% of average earnings



Countries are ranked in descending order according to the participation tax rate for an individual entering employment with gross earnings equal to 100% of average earnings.

Note: participation tax rates measure the extent to which taxes and benefits reduce the financial gain of moving into work. The estimates here relate to the situation of a person who is not entitled to unemployment benefits (e.g. because their entitlements have expired). Instead, social assistance and other means-tested benefits are assumed to be available subject to relevant income conditions. Where receipt of such assistance is subject to activity tests (such as active job-search or being "available" for work), these requirements are assumed to be met in the out of work situation. Cash housing benefits are calculated assuming private market rent, plus other charges, amounting to 20% of the full-time wage for all family types. The percentage of AW relates to the earnings from full-time employment of the individual moving into work. For married couples the percentage of AW relates to one spouse only; the second spouse is assumed to be inactive with no earnings in a one-earner couple and to have full-time earnings equal to 67% of AW in a two-earner couple. Calculations for families with children assume two children aged 4 and 6. Neither childcare benefits nor childcare costs are considered.

a) The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: [OECD Tax-Benefit Models](#)

### Comparability and data issues

As discussed, income-tested benefits, family based tax credits and transferable tax allowances introduce a bias towards single-earner couples in many tax-benefit systems. Given that many social transfers (including social assistance and housing support) are specifically targeted towards low-income

households, especially when children are present, potential second earners in low-income households are most likely to face weak financial incentives to work (Immervoll *et al.*, 2009, and OECD, 2007a).

The results shown in shown in Table PF1.4.A and Chart PF1.4.A do vary with income level and with the assumed age of children, and results might be very different in some countries if calculations were based on the situation for families with very young children. This is particularly the case in those countries that provide substantial ‘child-raising allowance’ cash transfers to families with children under age 3 that can help support a single breadwinner model (as for example, in Austria, the Czech Republic, Finland, Hungary, Norway or the Slovak Republic, OECD 2007b).

The results do not account for the costs of formal childcare arrangements and implicitly assume that parents have access to free “informal” childcare. Indeed, many parents use informal childcare arrangements (relatives, neighbours), but not all parents have access to such services on a comprehensive basis. The provision of childcare services is heavily subsidised in Nordic countries, so that work pays for parents. In other countries, formal childcare facilities are not always available and they can be expensive. In Ireland, the United Kingdom and the state of Michigan in the United States, the costs of childcare can be so high that in the short-term work does not pay for many second earners in couple families. This also applies to single-parent families in the Canadian province of Ontario, Ireland, the city of Tokyo in Japan, and the city of Zürich in Switzerland (see OECD 2014).

Sources and further reading: Immervoll, H., H.J. Kleven, C.T. Kreiner and N. Verdellin (2008), “An Evaluation of the Tax-Transfer Treatment of Married Couples in European Countries”, *Social, Employment and Migration Working Paper No 76*, OECD, Paris; OECD (2007a), *Benefits and Wages*, OECD, Paris, OECD (2007b), *Babies and Bosses, Reconciling Work and Family Life, A Synthesis of Findings for OECD Countries*, OECD, Paris; OECD (2016), *OECD Benefits and Wages database*, OECD, Paris; OECD (2014), *OECD Tax-Benefit Models 2012: Work incentives after accounting for childcare costs, 2004, 2008, 2012*, OECD, Paris [http://www.oecd.org/els/soc/Childcare\\_2012\\_EN\\_20151202.xlsx](http://www.oecd.org/els/soc/Childcare_2012_EN_20151202.xlsx); OECD (2015), *Taxing Wages 2015*, OECD Publishing, Paris. [http://dx.doi.org/10.1787/tax\\_wages-2015-en](http://dx.doi.org/10.1787/tax_wages-2015-en).