Taxing Wages 2017

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The OECD's publication *Taxing Wages 2017* provides unique information on the income taxes paid by workers, their social security contributions, the family benefits they receive in the form of cash transfers as well as the social security contributions and payroll taxes paid by their employers. This brochure summarises the main results of the report by:

- presenting an analysis of the taxation of labour income in OECD countries in 2016 and the changes from the previous year;
- highlighting the main labour taxation trends between 2000 and 2016 across the OECD.

BOX 1: THE TAX WEDGE

Measuring the effective tax rate on labour costs

Taxing Wages 2017 presents several measures of taxation on labour. Most emphasis is given to the **tax wedge** – a measure of the difference between labour costs to the employer and the corresponding net take-home pay of the employee – which is calculated by expressing the sum of personal income tax, employee and employer social security contributions plus any payroll taxes, minus any benefits received by the employee, as a percentage of labour costs. Employer social security contributions and (in some countries) payroll taxes are added to gross wage earnings of employees in order to determine a measure of total labour costs. However, it should be recognised that this measure may be less than the true labour costs faced by employers because, for example, employers may also have to make *non-tax compulsory payments*[1]. The average tax wedge measures that part of labour costs which is taken in tax and social security contributions net of cash benefits. In contrast, the marginal tax wedge measures that part of an increase of total labour costs that is paid in taxes and social security contributions less cash benefits.

1. Non-tax compulsory payments are requited and unrequited compulsory payments to privately-managed funds, welfare agencies or social insurance schemes outside general governments and to public enterprises (http://www.oecd.org/tax/tax-policy/tax-database.htm#NTCP).

Tax wedge as percentage of labour costs in 2016

Average single workers

The tax wedge – the difference between labour costs to the employer and the corresponding net take-home pay – for single workers on the average wage without children varied widely across OECD countries in 2016 (Figure 1). While in Austria, Belgium, France, Germany, Hungary and Italy, the tax wedge is over 45%, it is 20% or lower in Chile, Mexico and New Zealand. The highest tax wedge is observed in Belgium (54.0%) and the lowest in Chile (7.0%).

The OECD average tax wedge was **36.0%** of labour costs in 2016.

The composition of the tax wedge also differed considerably across countries in 2016:

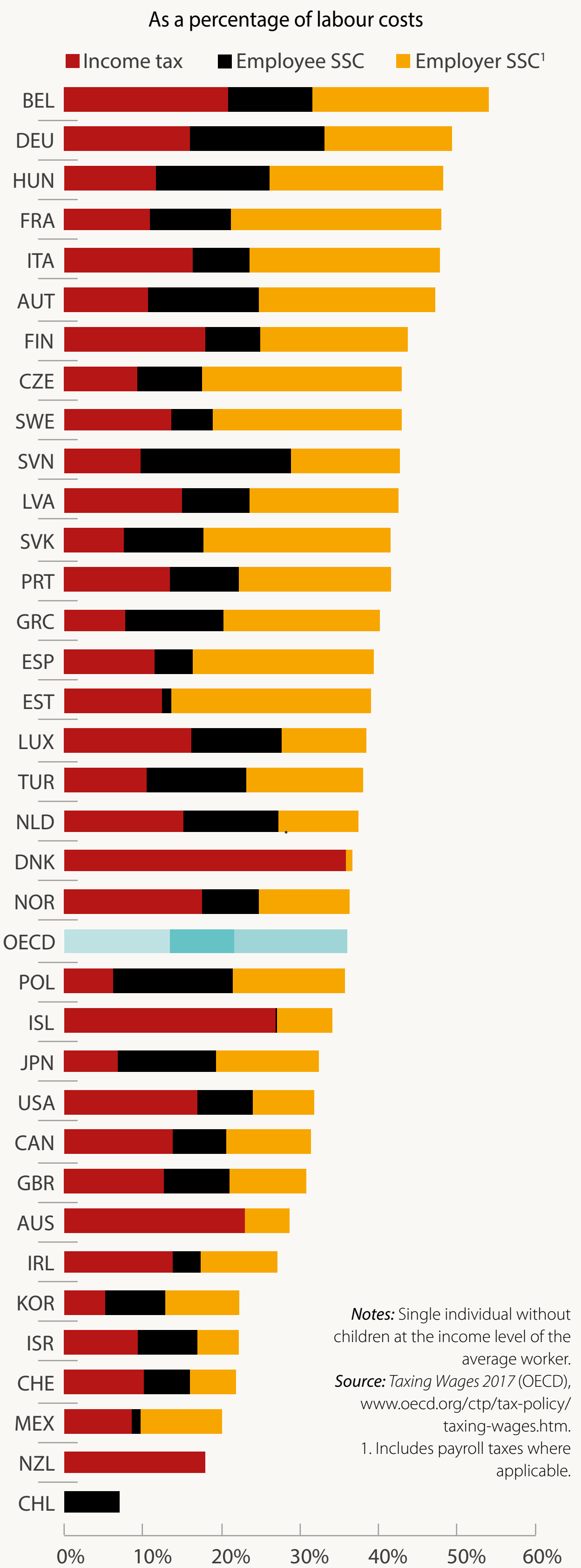
- The percentage of labour costs paid in income tax varies considerably within OECD countries. The lowest figures are in Chile (zero) and Korea (5.2%). The highest percentage is in Denmark (35.9%), with Australia, Belgium and Iceland all over 20%.
- The percentage of labour costs paid in employee social security contributions also varies widely ranging from zero in Australia, Denmark and New Zealand to 17.3% in Germany and 19.0% in Slovenia.
- Employer social security contributions account for 26.8% of labour costs in France, which is the highest among OECD countries. Employer social security contributions account for more than 20% of labour costs in nine other countries - Austria, Belgium, the Czech Republic, Estonia, Hungary, Italy, the Slovak Republic, Spain and Sweden.
- As a percentage of labour costs, employee and employer social security contributions combined exceeds 20% in more than half of the OECD countries. It also represents at least one-third of labour costs in eight countries: Austria, Belgium, the Czech Republic, France, Germany, Hungary, the Slovak Republic and Slovenia.

Changes in the tax wedge between 2015 and 2016

The OECD average tax wedge for the single worker on average earnings decreased by 0.1 percentage point to 36.0% in 2016. The components of the OECD average tax wedge as a percentage of labour costs changed between 2015 and 2016 (Figure 2) in the following ways:

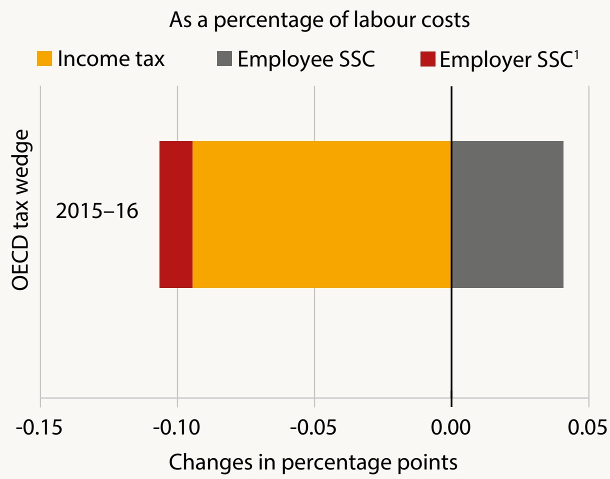
- Personal income tax decreased by 0.09 percentage points.
- Employee social security contributions increased by 0.04 percentage points.
- Employer social security contributions decreased by 0.01 percentage points.

FIGURE 1: **TAX WEDGES (income tax plus employee and employer social security contributions), 2016**



Notes: Single individual without children at the income level of the average worker.
Source: Taxing Wages 2017 (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.
1. Includes payroll taxes where applicable.

FIGURE 2: **CHANGES IN OECD TAX WEDGE COMPONENTS BETWEEN 2015 AND 2016**



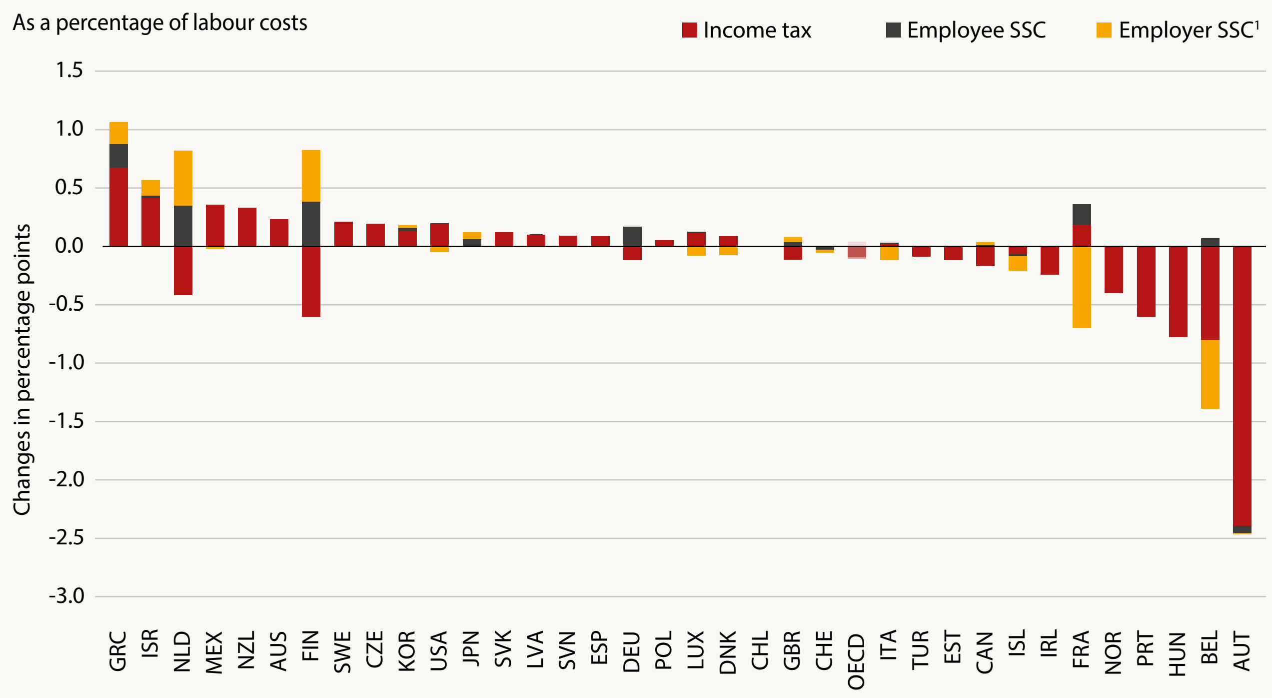
Notes: Single individual without children at the average wage level.
Source: Data from *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.
1. Includes payroll taxes where applicable.

The highest tax wedge is observed in Belgium (54.0%) and the lowest in Chile (7.0%). The OECD average tax wedge was **36.0%** of labour costs in 2016.

The changes in the tax wedge components varied widely across OECD countries (Figure 3):

- Personal income tax, as percentage of labour costs, increased in 19 countries, decreased in 15 countries and remained unchanged in one country (Chile). The largest change was observed in Austria, with a decrease of 2.4 percentage points. There were no increases exceeding 1 percentage point.
- Employee social security contributions, as a percentage of labour costs, increased in 13 countries, decreased in three countries and remained unchanged in the other 19 countries. There were no changes of more than 1 percentage point, with the largest increase in Finland (0.38 percentage points) and the largest decrease in Austria (0.06 percentage points).
- Employer social security contributions, as percentage of labour costs, increased in eight countries, decreased in 10 countries and remained unchanged in the other 17 countries. There were no changes of more than 1 percentage point, with the largest increase in the Netherlands (0.47 percentage points) and the largest decrease in France (0.70 percentage points).

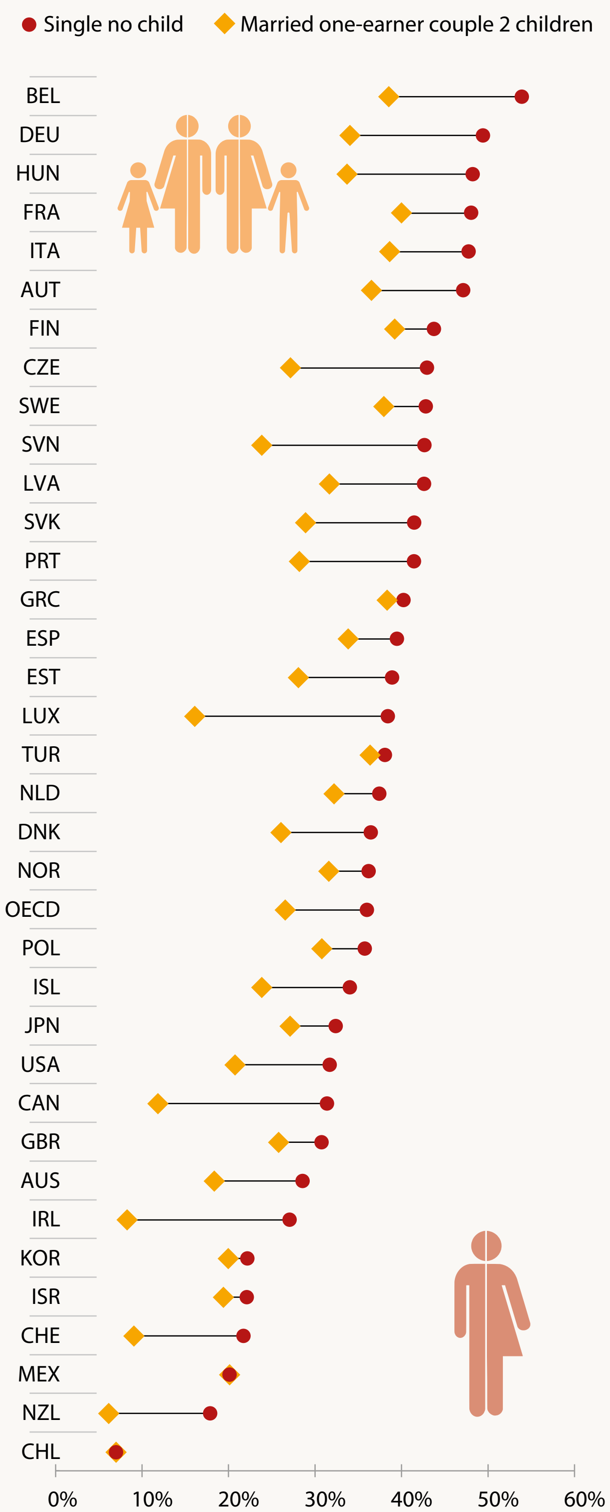
FIGURE 3: **CHANGES IN TAX WEDGE COMPONENTS ACROSS OECD COUNTRIES BETWEEN 2015 AND 2016**



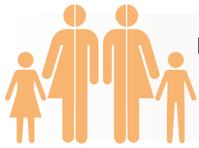
Notes: Single individual without children at the average wage level.
Source: Data from *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.
1. Includes payroll taxes where applicable.

FIGURE 4: **COMPARISON OF TAX WEDGE FOR SINGLE WORKERS AND ONE-EARNER COUPLES IN 2016**

As a percentage of labour costs



Notes: The family type 'single no child' corresponds to a wage level of 100% of average wage. The family type 'married one earner couple 2 children' corresponds to a combined wage level of 100%-0% of average wage.
Source: *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.



In all OECD countries, the tax wedge for families with children was either lower or, in two cases, the same, as single earners without children.

Families with children

In 2016, the OECD average tax wedge for a one earner married couple on average earnings with two children was 26.6% of the labour costs. This figure was 9.4 percentage points lower than the one observed for a single worker without children (Figure 4).

In 2016, the highest tax wedges for one earner couples on average earnings with two children were in France (40.0%) and in Finland (39.2%). The lowest were in New Zealand (6.2%), followed by Chile (7%), Ireland (8.3%) and Switzerland (9.1%).

Most OECD countries provide a financial benefit to families with children through advantageous tax treatment and/or cash transfers. The difference between

the tax wedge of a one earner couple with two children compared to a single worker is greater than 20% of labour costs in Luxembourg, and greater than 15% of labour costs in six other countries – Belgium, Canada, the Czech Republic, Germany, Ireland and Slovenia. On the other hand, the tax wedges were unchanged in Chile and Mexico and differed by less than three percentage points in Greece, Israel, Korea and Turkey.

Between 2015 and 2016, the tax wedge of a one earner couple on average earnings with two children increased in 23 OECD countries, fell in 11 and remained unchanged in one.

- In 28 out of the 35 OECD countries the change did not exceed plus or minus one percentage point.
- There was an increase of greater than one percentage point in New Zealand (1.24) only.
- The tax wedge for families fell by 2.68 percentage points in Austria mainly due to the reforms to the personal income tax schedule. The tax wedge also decreased by more than two percentage points in Portugal (2.50) as a consequence of the increased child tax credit. It decreased by more than one percentage point in Belgium (1.73), in Hungary (1.60) and in Ireland (1.03). It decreased by less than one percentage point in six other countries: Estonia, France, Italy, Norway, Switzerland and Turkey.

When comparing the changes in the tax wedges between 2015 and 2016 for one earner couples with two children compared to single persons without children, at the average wage level, the fiscal preference for families increased in 12 OECD countries: Austria, Belgium, Estonia, France, Greece, Hungary, Ireland, Israel, Italy, Portugal, Switzerland and Turkey. Additionally, the effects of changes in the tax system on the tax wedge were the same for both family types in Mexico. In seven other countries; Australia, Italy, Japan, Korea, Luxembourg, Spain and the United States, the change in the tax wedge for the two family types differed by 0.05 percentage points or less. There were no changes at all in Chile.

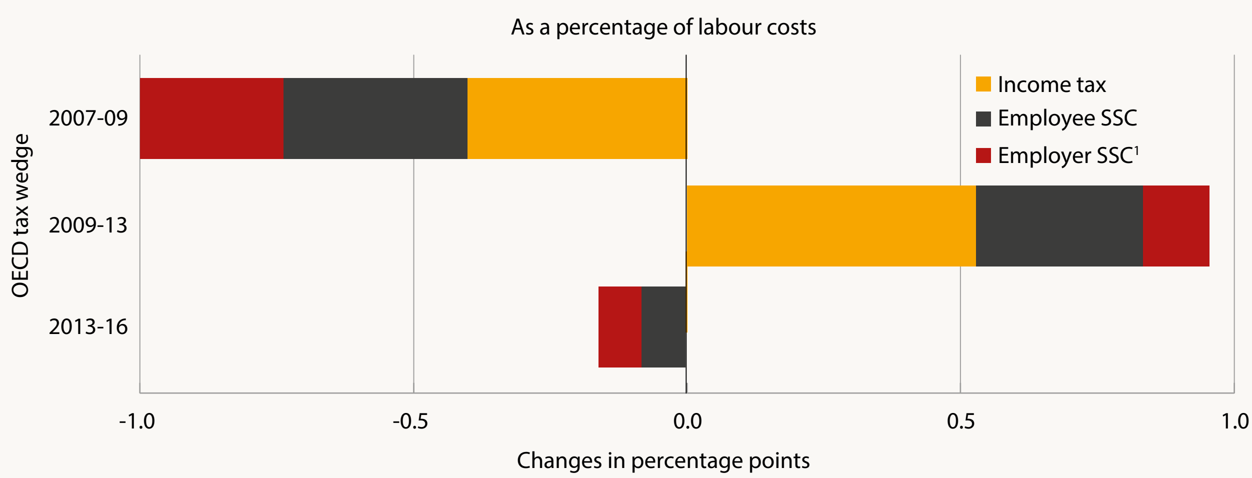
Tax wedge trends for the average single worker since the financial crisis of 2008

The OECD average tax wedge as a percentage of labour costs for the single worker earning the average wage has fluctuated since 2007 (Figure 5). The trend can best be described as follows:

- Between 2007 and 2009, the OECD average tax wedge decreased by 1 percentage point from 36.2% to 35.2%, recording its lowest level since the Taxing Wages series commenced in 2000;
- Between 2009 and 2013, the OECD average tax wedge increased by 1 percentage point from 35.2 to 36.2%;
- Since 2013 the OECD average tax wedge has decreased by 0.2 percentage points to reach 36.0% in 2016.

The decline of the OECD tax wedge between 2007 and 2009 was mainly driven by a reduction in social security contributions (employee and employer), where there was a decrease of 0.60 percentage points. The increase of the OECD tax wedge between 2009 and 2013 was mainly driven by personal income tax, which increased by 0.53 percentage points. In contrast, personal income tax as percentage of labour costs remained at the same level in 2013 and 2016. During that period, there was a slight decline in social security contributions, which

FIGURE 5: **CHANGES IN OECD TAX WEDGE COMPONENTS BETWEEN 2007 AND 2016**



Notes: Single individual without children at the average wage level.
Source: *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.
1. Includes payroll taxes where applicable.

was evenly shared among employee and the employer contributions; i.e. by 0.08 percentage points each.

The changes in the tax wedge for the single taxpayer on average earnings also varied widely across OECD countries (Figure 6):

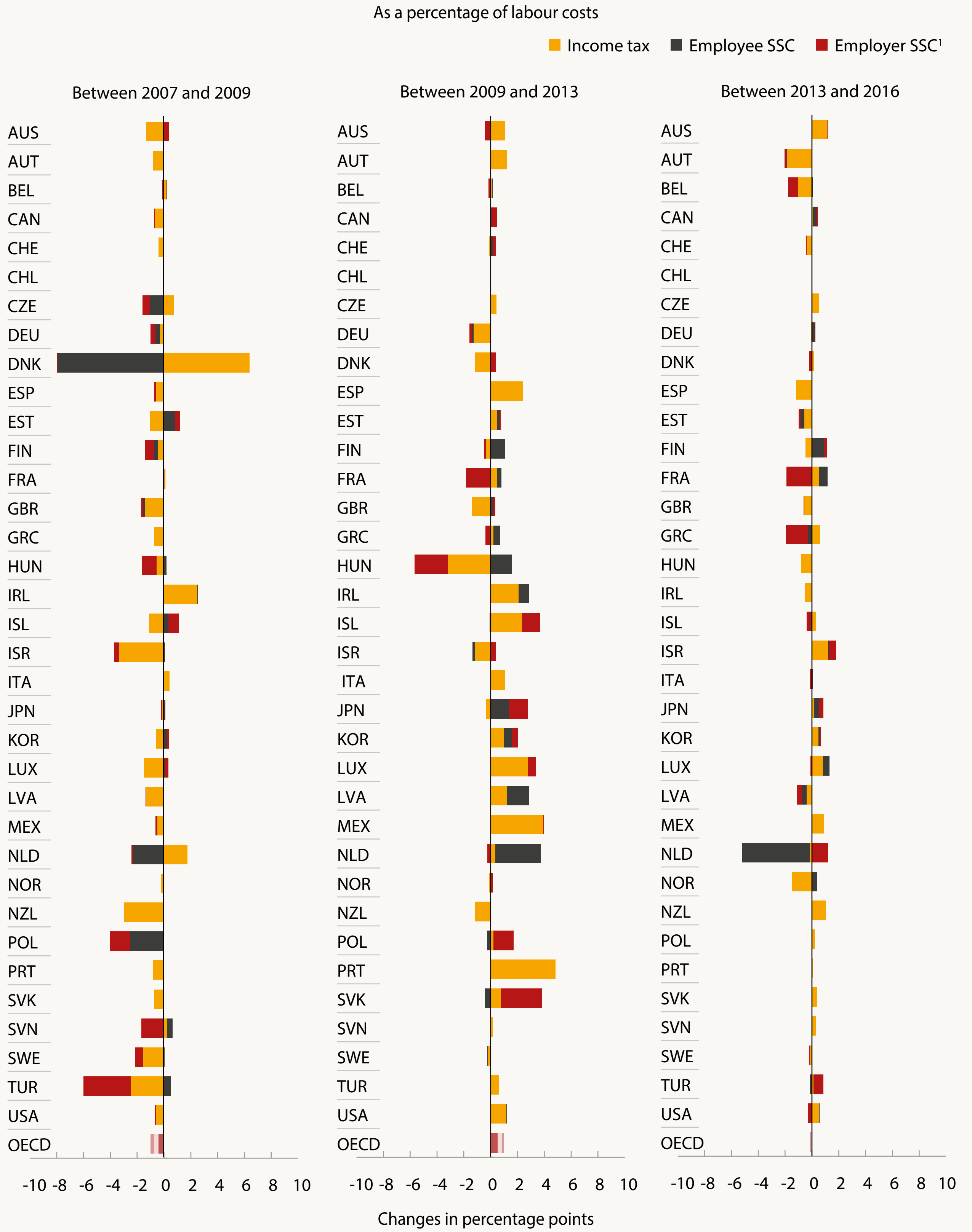
- Between 2007 and 2009, the OECD average tax wedge was decreasing and this trend was observed in 29 countries. Decreases of more than one percentage point were observed in 13 of those countries – Germany (1.01) Slovenia (1.05), Luxembourg (1.15), Latvia (1.36), Finland (1.39), Hungary (1.44), Denmark (1.58), United Kingdom (1.72), Sweden (2.09), New Zealand (3.00), Israel (3.63), Poland (4.04) and Turkey (5.48). In contrast, in this same period the tax wedge increased in five countries – Belgium, Estonia, France, Ireland and Italy, with the largest increase in Ireland (2.51 percentage points). The tax wedge remained unchanged in Chile.

- Between 2009 and 2013, the OECD average tax wedge was increasing and the tax wedge increased in 25 countries. There were increases of more than one percentage point in 15 of those countries – Italy (1.05), United States (1.17), Austria (1.24), Poland (1.45), Korea (2.04), Japan (2.39), Spain (2.40), Latvia (2.83), Ireland (2.84), Luxembourg (3.36), Slovak Republic (3.41), Netherlands (3.49), Iceland (3.59), Mexico (3.93) and Portugal (4.84). In contrast, the tax wedge decreased in eight countries with changes of more than one percentage point in six of them – France (1.02), United Kingdom (1.05), Denmark (1.14), New Zealand (1.19), Germany (1.57) and Hungary (4.07). The tax wedge was recorded at the same level in 2009 and 2013 in Chile and Belgium. In the latter, there were variations between the two years, but the tax wedge returned to its 2009 level in; i.e. 55.7%. In Chile, the tax wedge remained at 7% through this entire period.

- Between 2013 and 2016, the OECD average tax wedge decreased slightly, with the tax wedge decreasing in 16 countries. Among those, seven experienced decreases of more than one percentage point – Latvia (1.10), Norway (1.13), Spain (1.18), Greece (1.35), Belgium (1.70), Austria (2.04) and Netherlands (4.05). In contrast, the tax wedge increased in 18 countries. Increases of one percentage point or more were observed in four of those countries – New Zealand (1.00), Australia (1.17), Luxembourg (1.21) and Israel (1.78). The tax wedge remained unchanged in Chile.

> After falling during the financial crisis, the effective tax rate on the labour costs of the average worker increased by 1 percentage point between 2009 and 2013 before decreasing slightly up to 2016.

FIGURE 6: **CHANGES IN TAX WEDGE COMPONENTS ACROSS OECD COUNTRIES BETWEEN 2007 AND 2016**



Notes: Single individual without children at the average wage level.
Source: Data from *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.
1. Includes payroll taxes where applicable.

Tax wedge trends between 2000 and 2016

The evolution of the OECD average tax wedge as a percentage of labour costs over the period from 2000 to 2016 for the single worker on average earnings and on the one earner married couple on average earnings with two children is presented in Figure 7. In the case of both these household types, the tax wedge decreased between 2000 and 2016. The OECD average tax wedge decreased by one percentage point from 37.0% to 36.0% for the single taxpayer on average earnings and by 1.3 percentage points from 27.9% to 26.6% for the one earner married couple on average earnings with two children.

During the period between 2000 and 2016, the changes in the tax wedge varied widely among the OECD countries for the single average worker and the one earner married couples on average earnings with two children (figure 8).

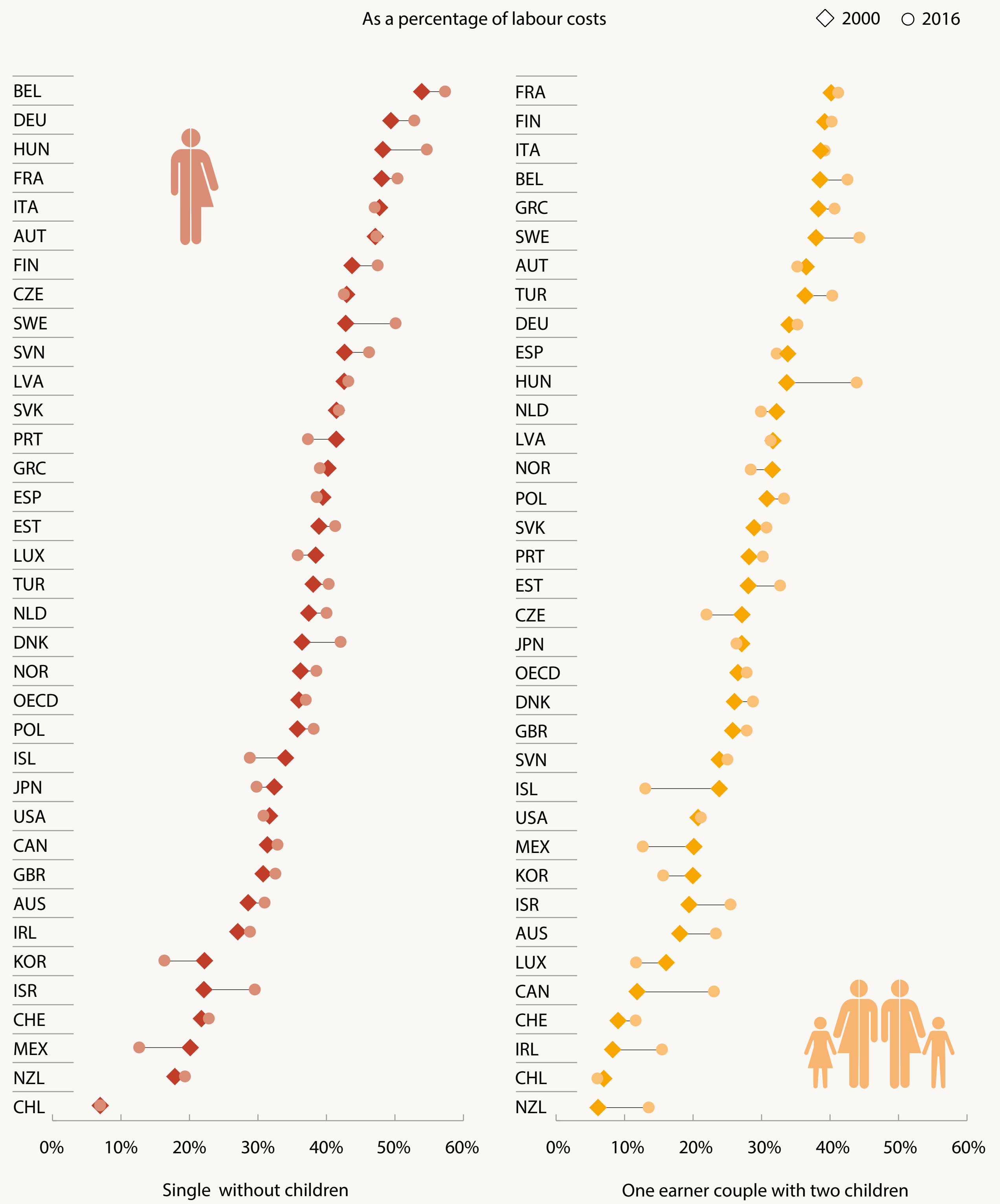
For the single average worker, there was a decline in 23 OECD countries over the 16 years and increases in 11. The tax wedge remained the same in one country, Chile. The magnitude of these changes differed across the OECD:

- The largest decline was 7.4 percentage points in Israel. There was also a decline of more than seven percentage points in Sweden (7.3). There was a reduction in the tax wedge of more than five percentage points in 2 other countries – Denmark (5.6) and Hungary (6.4).
- The largest increase was by 7.5 percentage points in Mexico. There was an increase in the tax wedge of more than five percentage points in 2 other countries – Iceland (5.2) and Korea (5.8).

Figure 7: **THE OECD TAX WEDGE TRENDS BETWEEN 2000 AND 2016**

Notes: The family type 'single no child' corresponds to a wage level of 100% of average wage. The family type 'married one earner couple 2 children' corresponds to a combined wage level of 100%-0% of average wage.
Source: Data from *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.

Figure 8: **THE TAX WEDGES FOR SINGLE WORKERS AND ONE EARNER COUPLES IN 2000 AND 2016**



Notes: The family type 'single without children' corresponds to a wage level of 100% of average wage. The family type 'one earner couple with two children' corresponds to a combined wage level of 100%-0% of average wage.
Source: data from *Taxing Wages 2017* (OECD), www.oecd.org/ctp/tax-policy/taxing-wages.htm.

For the one earner married couple on average earnings with two children, the tax wedge declined in 23 OECD countries and increased in 12 over the 16 year-period:

- The largest decline was 11.2 percentage points in Canada. There was also a decline of more than 10 percentage points in Hungary (10.2). There was a reduction in the tax wedge of more than five percentage points in five other countries – Australia (5.3), Israel (6.1), Sweden (6.4), Ireland (7.2) and New Zealand (7.4).

  The largest increase was 10.8 percentage points in Iceland. There was an increase in the tax wedge of more than five percentage points in two other countries – the Czech Republic (5.2) and Mexico (7.5).

In several countries, changes to the tax wedge for the different family types moved in different directions across the 16 year period. The gap between the two family types increased in Greece, Italy, Portugal and the United States, where the tax wedge increased for the single taxpayer and decreased for the one earner married couple on average earnings with two children. In contrast, the opposite is observed in Austria, Latvia, the Netherlands and Norway. In Chile, the tax wedge remained unchanged for the single taxpayer, while it increased by 0.9 percentage points for the married couple during the 16 year period.

BOX 2: METHODOLOGY

The analysis in *Taxing Wages 2017* focuses on full-time employees. It is assumed that their annual income from employment is equal to a given percentage of the average full-time adult gross wage earnings for each OECD economy, referred to as the average wage (AW). This covers both manual and non-manual workers for either industry sectors C-K inclusive with reference to the International Standard Industrial Classification of All Economic Activities, Revision 3 (ISIC Rev.3) or industry sectors B-N inclusive with reference to the International Standard Industrial Classification of All Economic Activities, Revision 4 (ISIC Rev.4).

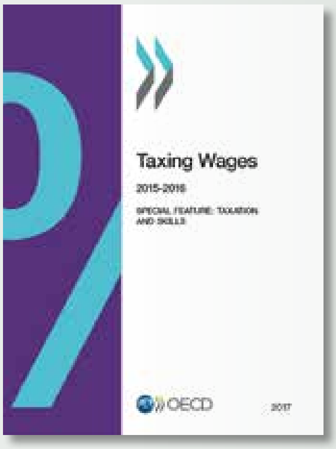
The term **tax** includes the personal income tax, social security contributions and payroll taxes (which are aggregated with employer social contributions in the calculation of tax rates) payable on gross wage earnings. Consequently, any income tax that might be due on non-wage income and other kinds of taxes – e.g. corporate income tax, net wealth tax and consumption taxes – are not taken into account. The benefits included are those paid by general government as cash transfers, usually in respect of dependent children.

For most OECD countries, the tax year is equivalent to the calendar year, the exceptions being Australia, New Zealand and the United Kingdom. In the case of New Zealand and the United Kingdom, where the tax year starts in April, the calculations apply a 'forward-looking' approach. This implies that, for example, the tax rates reported for 2016 are those for the tax year 2016-17. However, in Australia, where the tax year starts in July, it has been decided to take a 'backward looking' approach in order to present more reliable results. So, for example, the year 2016 in respect of Australia has been defined to mean its tax year 2015-2016.

The calculations also focus on the **net personal average tax rate**. This is the term used when the personal income tax and employee social security contributions net of cash benefits are expressed as a percentage of gross wage earnings. The net personal marginal tax rate shows that part of an increase of gross wage earnings that is paid in personal income tax and employee social security contributions net of cash benefits.

The tax wedge and the net personal average tax rate are shown in this brochure for two family types: a single worker earning 100% of the average wage; and a one-earner married couple, with two children, earning 100% of the average wage. *Taxing Wages 2017* presents comparable information for six other family types, assessing the tax burden at different levels of earnings, for two-earner couples, and single workers with or without children.

A full description of the methodology is set at in the *Taxing Wages 2017* Annex.



OECD (2017), *Taxing Wages 2017*, OECD Publishing, Paris. www.oecd.org/ctp/tax-policy/taxing-wages.htm.

FURTHER READING

OECD/IDB/CIAT (2016), *Taxing Wages in Latin America and the Caribbean 2016*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264262607-en

OECD Tax Database, www.oecd.org/tax/tax-policy/tax-database.htm

Paturot, D., K. Mellbye and B. Brys (2013), "Average Personal Income Tax Rate and Tax Wedge Progression in OECD Countries", *OECD Taxation Working Papers,* No. 15, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5k4c0vhzsq8v-en

For more information:

oecd.taxingwages@oecd.org

www.oecd.org/tax/tax-policy/taxing-wages.htm

@OECDtax

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