Analysis of policy reforms in the EU

2016-2018

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Preface

This report uses output of the OECD tax-benefit model (TaxBEN) to analyse the impact of tax-benefit policy reforms implemented between **July 1st 2016 and January 1st 2018** in the EU Member States and four other OECD economies. It updates the analysis provided in Bachelet et al. (2018).

The OECD tax-benefit model incorporates detailed policy rules for tax liabilities and benefit entitlements as they apply to working-age individuals and their dependent children across OECD and EU countries. The model allows calculating gross and net incomes for a broad set of *stylised* family types (sometimes referred to as "vignettes", e.g. a married couple of 40 years old adults with two children aged 4 and 6 respectively). Model users can freely choose many characteristics of these stylised families (e.g. earnings, number of children, months of unemployment, etc.), e.g. to explore the functioning of policy mechanisms and their implications for family incomes, or the consequences of policy reforms.

The model's policy scope includes the main taxes on employment income (earnings), social security contributions paid by employees and employers, as well as the main cash and near-cash benefit programmes: unemployment insurance and unemployment assistance programmes, family and childcare-related benefits, guaranteed minimum-income benefits and social assistance programmes, cash housing benefits for rented accommodation and employment-conditional ("in-work") benefits. Disability benefits and parental leave benefits are included for a sub-set of countries and years. The most important policy areas that are outside the scope of the model include taxes on wealth or property, indirect taxes, (early-) retirement benefits, sickness benefits and in-kind transfers, e.g. free school meals, subsidised transport and free health care.

The main body of this report (Chapter 1) consists of a comparative account of the principal tax-benefit reforms during 2016-2018 across countries. The impact of these reforms is assessed using a range of indicators of benefit adequacy and work incentives. The comparative analysis is complemented by individual country fiches (Annex A) which provide a concise overview of reforms and their implications for family incomes. Each country fiche contains three sections: the first two examine the policy levers that drive changes in the in-work and out-of-work incomes of selected family types. The third section shows the effect of changes in these income measures on a series of commonly used policy indicators. When policy changes have a "large" impact on family incomes, a box provides more in-depth information on the reform driving these results.

The data analysed in Chapter 1 are accessible online using the following link: Tax-benefit indicators 2016–2018. The results underlying the country fiches are organised in country-specific **"policy evaluation scoreboards"** which can be downloaded from within each of the fiches. A methodology document, attached to this report, explains how to read and navigate the country scoreboards (OECD, 2017).

Acknowledgements

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The authors thank officials in government administrations for the provision of detailed policy information on the tax and benefit programmes covered in this report, and for their active support in the validation of selected results. All views and any errors are the responsibility of the authors. In particular, the paper should not be reported as representing the official views of the OECD, of the European Union, or of their member countries.

1. Effects of policy reforms on benefit adequacy and work incentives

1. This chapter summarises key tax-benefit policy reforms and analyses the effect of these changes on selected indicators of benefit adequacy and work incentives. It considers reforms implemented between July 1 2016 and January 1 2018[1] in EU Member States, as well as in Iceland, Japan, Norway and the United States.

2. To ease the presentation and facilitate cross-country comparisons, indicators are first calculated for selected specific household types ("vignettes"), and then aggregated into an overall summary index for each country.[2] Indicators are calculated for three policy dimensions: 1) income adequacy for recipients of Guaranteed Minimum Income (GMI) benefits; 2) income adequacy for recipients of unemployment benefits; 3) financial incentives for GMI recipients to transition into employment. **Table 1.1** provides definitions of the indicators and **Annex C** provides a detailed description of the aggregation procedure for deriving summary indices.[3] The data analysed in this chapter are accessible online in an Excel file showing levels as well as changes that occurred between 2016 and 2018 for each summary index as well as the underlying individual indicators (Tax-benefit indicators 2016–2018).[4]

Table 1.1. Indicators for income adequacy and work incentives

Indicator			*Family and individual circumstances*			
	Scope	*Measure*	*Family types*	*Other means-tested entitlements*	*Reference earnings*	*Months of unemployment*
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Income adequacy / Benefit generosity	For recipients of GMI benefits	Net income in % of population median: $\frac{NetY_{ow}}{MedianY}$	One-earner couples and singles, with and without children	housing benefits	N.A.	N.A.

[1] From 2018 onwards, the reference date for the OECD tax-benefit model changed from 1 July to 1 January in order to allow for a more timely model update process.

[2] These indices are weighted averages of the individual indicators, with weights calculated using a statistical method that seeks to distil "the essence" of the original data by preserving, and therefore explaining, most of the cross-country (co-)variation in the original indicators. See Annex C.

[3] The income adequacy indicator used in this report for unemployment benefit recipients, i.e. the Net Replacement Rate (NRR) defined in Table 1.1, is a measure that captures well also financial incentives to take up employment. For this reason, the report does not show a separate measure of the financial incentives to transition from unemployment benefits into employment.

[4] Focusing on summary indices rather than individual indicators makes the analysis more concise while taking into account heterogeneous policy impacts across different household and individual circumstances. However, a potential disadvantage of aggregation is that it does not reflect situations where changes for one household type might be offset by opposite changes for another. Therefore, summary indices are only presented in this chapter for the purpose of the cross-country comparison whereas the country fiches analyse changes in the individual indicators.

	For recipients of unemployment benefits	*Net Replacement Rate:* $\frac{NetY_{ow}}{NetY_{iw}}$	One-earner couples and singles, with and without children	GMI (social assistance) and housing benefits	P10, P30, P50, P70 of earnings (for the in-work situation)	1 to 24 months (average)
Financial incentives for transitions into work (***Participation Tax Rate***)	For recipients of GMI benefits	Participation Tax Rate: $1 - \frac{NetY_{iw} - NetY_{ow}}{Gross}$	One-earner couples and singles, with and without children	housing benefits	P10, P30, P50, P70 of earnings (principal earner)	N.A.

Notes: - The indicators are calculated for selected family types and individual circumstances as reported in columns (3) to (6) of the table and then aggregated into summary indices following the procedure described in Annex C.
- $NetY_{ow}$: net out-of-work household income: $MedianY$: median equivalised disposable income in the population; $NetY_{iw}$: the net in-work household income; $Gross$: gross earnings. P10, P20,… , P90 are the 10th, 20th, … , 90th percentile points of the full-time earnings distribution.
- Adults are 40 years old and one is has "long" employment record (i.e. 22 years) when this is relevant for benefit eligibility and entitlement. In couple households, one partner is assumed to be economically inactive with no earnings. Calculations for families with children assume two children aged 4 and 6.
- Social assistance and cash housing supplements are assumed to be available subject to relevant income conditions (column 4). When 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. Cash housing benefits are calculated assuming private market rent, plus other charges, amounting to 20% of the full-time wage for all family types.

1.1. Summary of policy changes between 2016 and 2018

3. Considering the relatively short timeframe covered in this report, the direct effect of these reforms on family incomes may be expected to be small in most countries. However, observed changes in indicator values can sometimes result even in the absence of structural reforms, as a consequence of benefit erosion and fiscal drag. That is, when most earnings go up, benefit entitlements may fall, or tax liabilities rise if policy rules such as benefit amounts, tax allowances and thresholds are not adjusted in line with earnings in the economy.[5] Nonetheless, a number of countries implemented sizeable reforms between 2016 and 2018 (a detailed overview of tax-benefit reforms implemented between July 1st 2016 and January 1st 2018 is accessible online in an Excel file, with separate sheets referring to periods 2016-2017 and 2017-2018: Tax-benefit reforms 2016–2018):

- *Unemployment benefits*: Maximum benefit duration increased in **Bulgaria** and **Lithuania** but reduced in **Denmark** and **Finland**. Benefit amounts were increased in **Germany**, **Lithuania** and for those with lower previous earnings levels in **Croatia**, and at longer unemployment durations in **Portugal**. In **Denmark**, the minimum benefit level was removed, reducing entitlements for those with very low levels of previous earnings.
- *Guaranteed minimum income*: New social assistance benefits were introduced in **Greece** and **Italy**, two Member States that previously had no GMI. Benefit rates increased in **Belgium**, **Finland**, **France**, **Lithuania** and **Portugal**. **Lithuania** also removed the provision that reduced benefit entitlements at long benefit durations.[6] In

[5] Benefit erosion and fiscal drag effects appear when the monetary parameters of the tax-benefit system fail to keep pace with nominal earnings growth (see Annex B).

[6] Though note that benefits are still reduced if claimants do not participate in a useful social activity: in the OECD tax-benefit model it is assumed that claimants do participate and so do not have their benefits reduced.

most Member States, however, GMI benefit entitlements fell relative to average earnings levels as benefit rates did not increase as quickly as the average wage.

- *Cash housing assistance:* Support for housing costs was significantly expanded in **Iceland** and **Malta**, and extended to higher income levels in **Luxembourg**. Housing supplements in GMI benefits were increased in **Germany** also. By contrast, in **Greece** the rent allowance was abolished as a GMI benefit was introduced. Benefit entitlements fell in other countries too: in **Ireland**, the minimum rent contribution for couples was increased and in the **United Kingdom**, a reduction in the household benefit cap reduced housing benefit entitlements for some families.

- *Family benefits:* Benefit entitlements increased in a number of countries: a new universal child benefit was introduced to replace a child tax credit in **Lithuania** and benefit amounts were increased significantly in **Belgium** and **Greece,** and for working families in the **Czech Republic** and families with children under 3 in **Portugal**. Other countries (**Bulgaria** and **Slovenia**) extended benefits to higher-income families. In **Estonia** and **Germany**, the duration of alimony replacement benefits received by lone parents was extended. However, in the **United Kingdom**, benefit entitlements were significantly reduced for new claimants, particularly those with more than two children. Finally, in **Estonia**, the needs-based family benefit was abolished, but a new benefit for large families was introduced.

- *Social security contributions:* Contribution rates increased in **Bulgaria** and **Latvia** for both employees and employers, and in **Ireland** for employers only. Rates were reduced for employers in **Belgium** and **Hungary**. In **Finland** and **Romania**, contributions increased for employees but reduced for employers, whereas the opposite happened in **France**.

- *Personal income tax:* Income tax liabilities increased in many countries, mainly as a result of 'fiscal drag', but fell in others. **Belgium**, **Estonia**, **Latvia**, **Lithuania**, **Luxembourg**, **Poland**, **Romania** and the **United States** all implemented reforms to the system of tax credits and tax allowances which reduced income tax liabilities.[7] The generosity of existing credits and allowances was increased in **Croatia**, **Spain** and the **United Kingdom** too. Headline tax rates were reduced in **Finland**, **Luxembourg**, **Romania**, **Slovenia** and the **United States,** but increased in **Denmark** and the **Netherlands**. 'Secondary' income taxes and charges were an area of reform in some countries. These were reduced in **Ireland** and abolished in **Portugal**, both countries where these additional levies had been introduced following the global financial crisis, but tax rates were increased in **France**. Other countries made changes to the rate structure: additional rates were introduced in **Latvia** (particularly notable as the tax system was previously flat), **Luxembourg**, **Slovenia** and **Portugal**, whereas **Belgium**, **Croatia** and **Iceland** all reduced the number of tax brackets. In **Norway**, joint income taxation for couples was abolished.

- *Employment-conditional ("in-work") benefits:* There were relatively few changes in this policy area. **Malta** increased the generosity of the in-work benefit introduced in 2015 for couples and extended it to higher-income families. Benefit entitlements

[7] Though in the **United States**, tax liabilities for low-earner households with children increased in some cases as the refundable portion for the child tax credit has been limited (see Figure B.1 in the scoreboard for the United States).

increased in **Finland** but fell relative to average earnings levels in **France**, **Ireland**, **Sweden** and the **United Kingdom**.

1.2. Income adequacy for recipients of GMI and unemployment benefits

4. This section analyses the impact of policy reforms on the adequacy of benefit support for recipients of unemployment benefit and guaranteed minimum income benefits. The policy indicator used as a metric for the adequacy of GMI policies is the (equivalised) household income of jobless families receiving GMI benefits, as a percentage of the median (equivalised) household income in the entire population. This indicator therefore measures the distance of GMI recipients' income from a relative poverty line linked to median disposable income.[8] For recipients of unemployment benefits, the metric for benefit adequacy is the commonly used *Net Replacement Rate* (NRR), i.e., net household income when unemployed and claiming unemployment benefits as a percentage of net household income prior to job loss. The net replacement rate measures the proportion of net income that is maintained at different points in the unemployment spell.

5. Between 2016 and 2018, GMI benefits rose at least as quickly as median household income in roughly half of the EU Member States (**Figure 1.1**, blue bars showing percentage point changes in the index of income adequacy for GMI benefit recipients, black markers show levels; see Table 1.1 and Annex C for details). The slight increase in the average adequacy index for the EU as a whole is mainly driven by significant increases in benefit generosity in **Greece, Italy, Lithuania** and **Malta**.

6. In **Greece**, the introduction of a social assistance benefit in 2017 where there previously was none dramatically increased the incomes of those unemployed and not entitled to any other income-replacement benefit. Families with children also benefited from significant increases in Child Support Allowance. Similarly, the introduction of the new REI (*Reddito di inclusion)* programme in **Italy** in 2018 increased benefit entitlements for this group, who had not been entitled to any cash support in July 2016.[9] Note, however, that in both of these countries GMI benefit levels remain significantly below the EU28 average. In **Lithuania**, the duration of unemployment benefits was extended, the amounts increased and social assistance benefits no longer fall at very long unemployment durations if claimants participate in socially useful activities. In **Malta**, housing benefit entitlements for GMI recipients increased as cash support for housing costs was expanded. Smaller

[8] For instance, a value below 60 implies that the net incomes of benefit recipients are below 60% of the median equivalised disposable income, which is the poverty line used by Eurostat to calculate the at-risk-of-poverty rate in EU countries. The equivalence scale used in the calculations is the square root of the household size. The data on median disposable income is obtained from the OECD Income Distribution Database. For the latest years, missing data points are imputed by applying CPI growth to the latest available observation.

[9] A different GMI benefit existed in Italy between September 2016 and January 2018 called "SIA" (*Sostegno per l'Inclusion Attiva*). Since this was introduced after the start and abolished before the end of the period covered by this report, its effects do not show up in the analysis of changes between July 2016 and January 2018. However, the impact of its introduction is assessed in the policy evaluation scoreboard for Italy for 2016-2017, and the impact of its replacement with the REI is assessed in the scoreboard for 2017-2018.

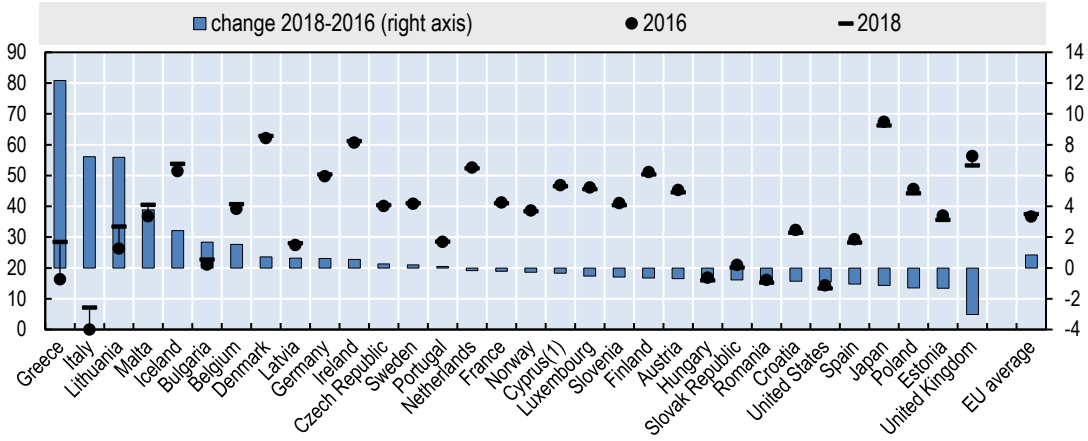
increases in the income adequacy index were observed in **Belgium** and **Bulgaria**[10]**,** where social assistance amounts increased. Means-tested family benefits were made more generous in **Belgium** too. Finally, in **Iceland** the increase in the income adequacy index was due to increased family benefits and reformed housing benefit entitlements for GMI benefit recipients.

7. The adequacy index decreased elsewhere, most notably in the **United Kingdom** and, to a lesser extent, in **Poland, Japan, Spain** and the **United States**. In each of these cases this was partly due to benefit erosion, that is when social assistance, housing and/or family benefits are frozen in cash terms as household incomes increased or did not increase as quickly as median incomes. In the **United Kingdom**, this was compounded by reduced housing benefit entitlements following a reduction in the household benefit cap and lower family benefit entitlements for new claimants.

Figure 1.1. Impact of policy reforms on incomes of GMI benefit recipients, 2016-2018

Incomes of GMI benefit recipients as a percentage of median disposable household income

Levels (black markers) and changes (blue bars)



Note: See Table 1.1 and Annex C for definitions. Median disposable household incomes are calculated adjusting for household size, using the square-root of household size as equivalence scale.
(1) For Cyprus, 2016 data are not available, 2016 indicators are based on 2017 data.
Source: Secretariat calculations using the OECD tax-benefit model and the OECD Income Distribution Database (IDD).

8. On average, out-of-work support for unemployment benefit recipients did not increase as quickly as market incomes in the EU over the period 2016-2018 (**Figure 1.2**, blue bars showing percentage point changes and black markers showing levels of the income-adequacy index for unemployment benefit recipients, which considers the average benefit entitlements (NRRs) over a two-year unemployment spell for jobseekers aged 40 with "long" and uninterrupted employment and contribution records). NRRs fell in almost

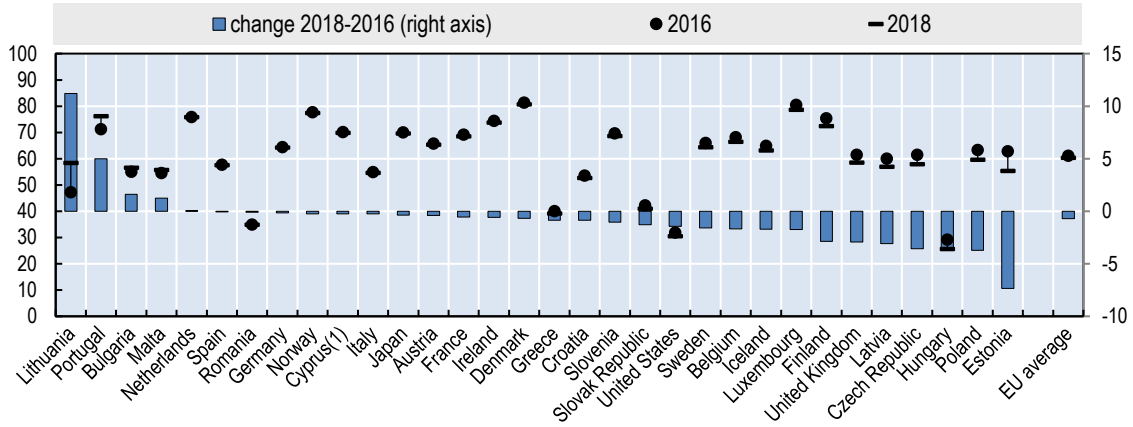
[10] Note that in **Bulgaria**, median disposable incomes increased much less quickly than average wages. This is also true for the **Czech Republic, Estonia, Hungary, Iceland, Lithuania, Latvia, Poland, Romania** and the **Slovak Republic** where the growth in median disposable income between 2016 and 2018 is at least 5 percentage points smaller than the growth in average wages (Annex B). This should be taken into account when comparing results in Figure 1.1 of this report (which are expressed relative to median disposable income) and Annex A (where results are expressed relative to average wages).

all EU Member States, particularly in those with strong earnings growth where benefit levels were increased less quickly, notably the **Czech Republic**, **Hungary, Latvia** and **Poland** (see Annex B), though in many other cases the reduction in NRRs was very small. In the **United Kingdom**, although average earnings growth was more moderate, the reductions in housing and family benefits discussed above also applied to this group, and hence NRRs fell more significantly. In **Estonia**, the decrease in NRRs is driven by large reductions in the indicator for families with children, who lost out from the abolition of the needs-based family benefit. In **Finland,** average NRRs across the unemployment spell fell due to reductions in the maximum unemployment insurance benefit duration and the introduction of an activity test that reduces the benefit received if, as is assumed in this analysis, the claimant does not work or participate in employment proportion measures.

9. Only a few Member States implemented reforms to the unemployment benefit system between 2016 and 2018 that increased NRRs for unemployment benefit recipients. **Lithuania** increased benefit amounts as well as the maximum unemployment benefit duration. Furthermore, a new universal child benefit was introduced which increased NRRs further for families with children. The maximum unemployment benefit duration also increased in **Bulgaria**. In **Portugal**, a provision that reduced unemployment insurance benefits by 10% after six months was abolished. The moderate increase in NRRs in **Malta** is driven by higher maximum housing benefit amounts.

Figure 1.2. Impact of policy reforms on Net Replacement Rates, 2016-2018

Levels (black markers) and changes (blue bars)



Note: See Table 1.1 and Annex C for definitions.
(1) For Cyprus, 2016 data are not available, 2016 indicators are based on 2017 data.
Source: Secretariat calculations using the OECD tax-benefit model.

1.3. Work incentives for recipients of GMI benefits

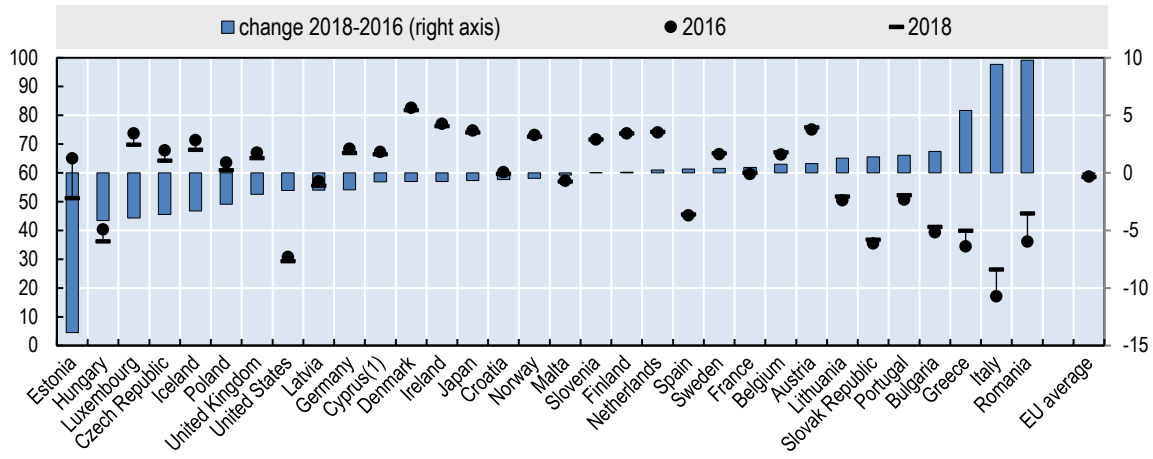
10. This section analyses the impact of policy changes between 2016 and 2018 on financial incentives for recipients of GMI benefits to move into paid work. The measure used is referred to as the *Participation Tax Rate* (PTR), essentially the proportion of earnings that are lost to higher taxes or social security contributions or lower benefits when moving into work (see Table 1.1 for more details). The individual country fiches examine work incentives in more detail by including analysis of the incentive faced by recipients of unemployment benefits and by second earners in couples, as well as *Marginal Effective Tax Rates* (METRs), which measure the incentive to increase earnings for those who are

already at work. Similar to PTRs, METRs measure the percentage of additional earnings that is lost due to higher tax liabilities or lower benefit entitlements.

11. The PTR index increased in roughly half of EU Member States and fell in the other half, though changes were typically small (**Figure 1.3**, see also Table 1.1 and Annex C). Stronger work incentives, indicated by lower PTRs, were often the result of tax reforms that reduced tax liabilities for those who are in work. For instance, **Estonia** and the **United Kingdom** increased tax allowances and **Latvia**, **Luxembourg** and the **United States** increased the generosity of tax allowances and reduced tax rates.[11] **Hungary** increased the family tax base allowance that can be used to offset income taxes and social security contributions. Benefit changes that increased entitlements in work (but not out of work) also sometimes played a role, for example, an increase in family benefits for working families reduced PTRs in the **Czech Republic**. Finally, erosion of minimum income benefits relative to average earnings levels was an additional driver for reducing PTRs, especially in **Hungary**, **Iceland**, **Poland** and the **United Kingdom**.

Figure 1.3. Impact of policy reforms on PTRs of GMI benefit recipients, 2016-2018

Levels (black markers) and changes (blue bars)



Note: See Table 1.1 and Annex C for definitions.
(1) For Cyprus, 2016 data are not available, 2016 indicators are based on 2017 data.
Source: Secretariat calculations using the OECD tax-benefit model.

12. PTRs increased significantly in the two Member States where a new GMI benefit was introduced where none existed previously: **Greece** and **Italy**.[12] Workers now lose more benefit on entering work in these two Member States. The other Member State with a significant increase in PTRs was **Romania**, where employee social security contributions were significantly increased. However, this simply represented a change in the formal liability of social security contributions from employers to employees – employer

[11] Though in the **United States**, work incentives for low-earner households with children weakened in some cases (see footnote 7).

[12] Though note that the *level* of PTRs remains fairly low in these Member States compared to the EU28 average.

contributions were reduced by approximately the same amount at the same time – a change that would be expected to have no impact on the total labour cost to the employer, or the net earnings received by the employee.[13] It is unlikely, then, that this change would affect the gain to individuals from taking up work.

[13] Economic theory predicts that wages would rise to compensate in this case; see the country fiche for Romania for a fuller discussion.

Annex A. Individual country fiches

This annex contains individual country fiches for the EU Member States covered in this report (Sections A.1 – A.28).[14]

Each country fiche contains three sections: the first two sections examine the policy levers that drive changes in the in-work and out-of-work incomes of selected family types. The third section shows the effect of changes in these income measures on a series of commonly used policy indicators. When policy changes have a "large" impact on family incomes, a box provides more in-depth information on the reform driving these results.

Results underlying the country fiches are organized in country-specific **"policy evaluation scoreboards"** (OECD, 2017) which are available online and can be downloaded from within each fiche. A methodology document, also accessible online, further explains how to read and navigate the policy evaluation scoreboards.

[14] Results for the non-EU countries are illustrated in the main body of the report and in the country scoreboards that are available online: Iceland (2016-2017, 2017-2018, 2016-2018), Japan (2016-2017, 2017-2018, 2016-2018), Norway, (2016-2017, 2017-2018, 2016-2018), United States (2016-2017, 2017-2018, 2016-2018).

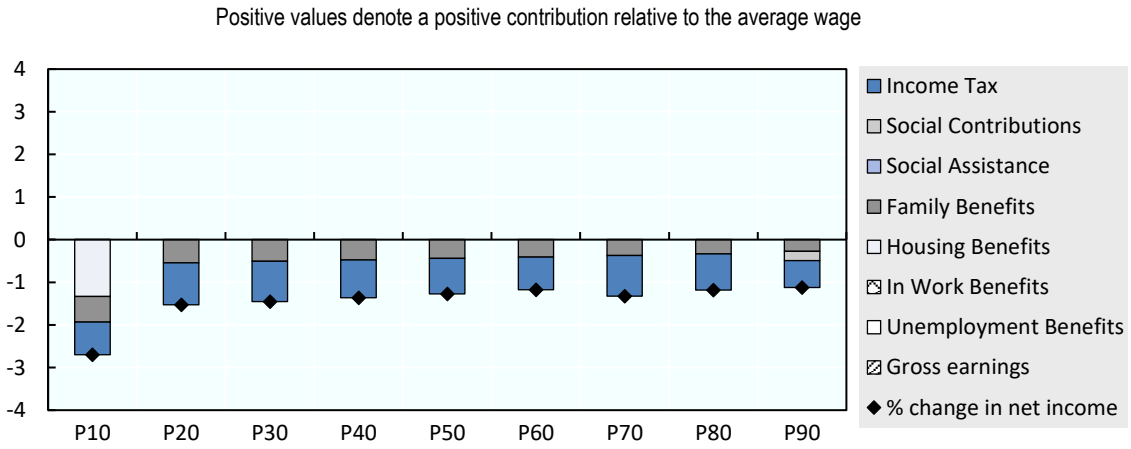
A.1 Austria

1. Please click on the following links to open policy evaluation scoreboards for Austria for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work incomes

2. Changes in tax-benefit rules were limited in Austria between 2016 and 2018. Most tax thresholds remained fixed in cash terms at 2016 levels. As a result, net incomes for working families fell slightly relative to the average wage. Moreover, although family benefit amounts increased slightly in 2018, this increase was less than growth in average earnings. Net household incomes therefore fell relative to the average wage across the range of the full-time earnings distribution (Figure A.1.1). The larger reduction observed at the 10th percentile of the earnings distribution is the result of lower housing allowance entitlements (off-white bar): housing benefit amounts increased in cash terms between 2016 and 2018 but less quickly than growth in average earnings. In contrast, the income ceiling for social security contributions increased more quickly than the average wage between 2016 and 2018 and this induced an additional negative impact on net income relative to the average wage at the 90th percentile (light grey bar).

Figure A.1.1. Percent change in net income components across the earnings distribution



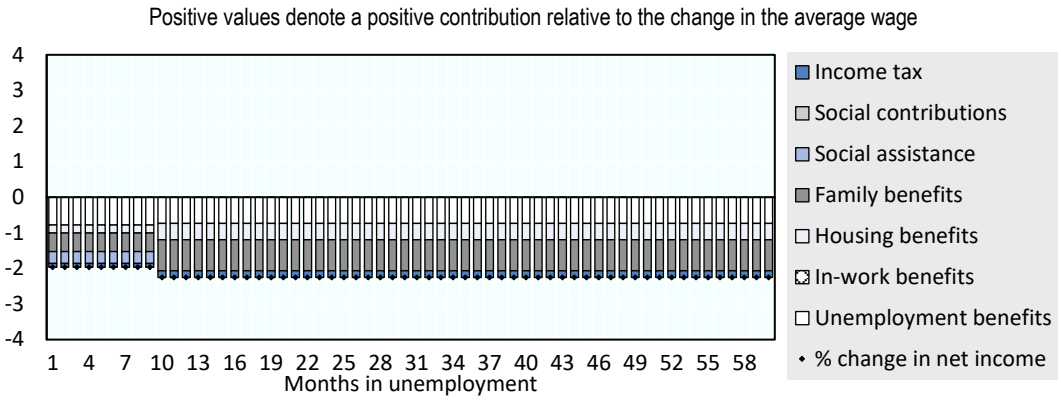
Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work incomes

3. The fall in benefits amounts relative to the average wage between 2016 and 2018, either through unchanged cash benefit amounts or increases that were smaller than average

earnings growth, reduced net incomes for workless families too. Unemployment, insurance benefits, unemployment assistance, social assistance and family benefits were all affected in this way (Figure A.1.2). As a result, out-of-work incomes decreased between 1 and 2.5 percentage points relative to the average wage depending on the family type considered.

Figure A.1.2. Percent change in net income components across the unemployment spell



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

4. As out-of-work incomes fell a little more than in-work incomes relative to the average wage, NRRs for unemployment benefit recipients decreased slightly. The largest reductions are about 1 percentage point across all family types analysed in the scoreboard (Figures D.1 and D.2 in the scoreboard).

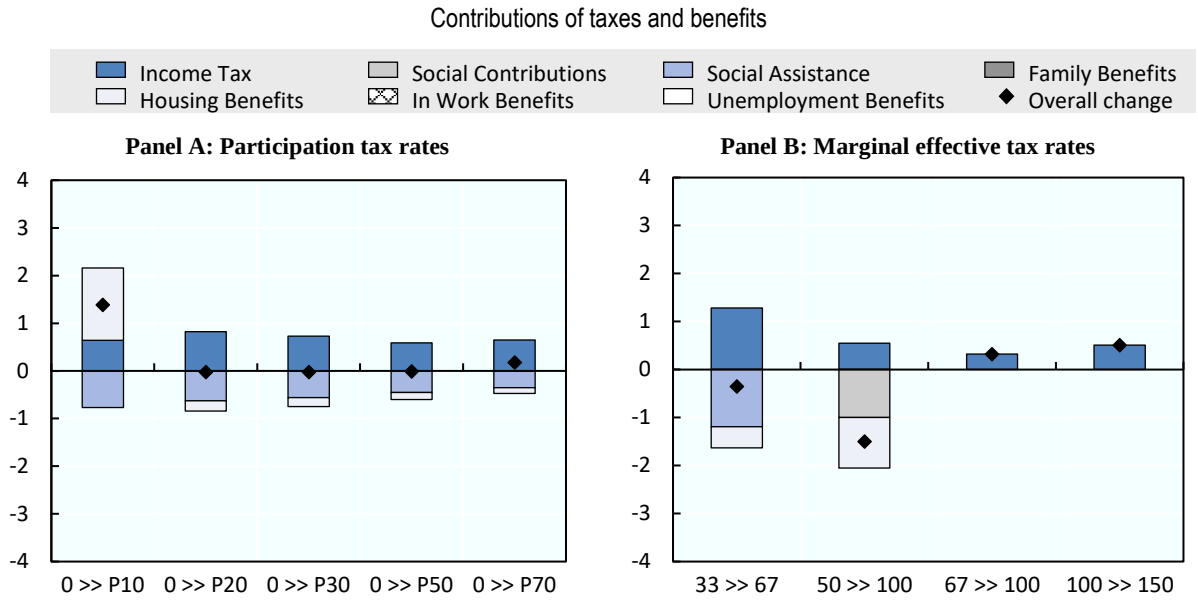
5. The impact of policy changes on financial work incentives was also small. As the thresholds at which housing allowance starts to be withdrawn did not increase as quickly as average earnings, entitlements to housing allowance phase out more quickly. Families thus receive less housing benefits when in work earning at the 10th percentile of the full-time earnings distribution, and this reduction is larger than the fall in housing benefit entitlements when not working. The PTR thus increases, weakening the financial incentive to take up employment (Figure A.1.3, Panel A). At higher earnings levels, the nominal freeze of income tax thresholds weakens the incentive to take up work but this is almost exactly offset by falls in social assistance and housing benefit amounts relative to the average wage when out of work (light-blue and white bars). PTRs are thus essentially unchanged at earnings levels between the 20th and 70th percentiles of the full-time earnings distribution.

6. Incentives to increase working hours from 33% to 67% of full-time work at median earnings strengthened slightly for families who are eligible to social assistance benefits (Figure A.1.3, Panel B). This is because entitlements fell for those working 33% of a full-time work week, so there is less social assistance to lose if they increase their earnings (light-blue bars).

7. The incentive to increase hours from 50% to 100% of full-time work strengthened across all family types. This occurred for two reasons. First, housing allowance entitlements fell for those working 50% of a full-time work week as benefit amounts were

not increased in line with earnings growth (off-white bars). They therefore have less housing allowance to lose if they increase their earnings. Second, these individuals now pay a higher unemployment contribution rate, because earnings thresholds regulating the different contribution rates for low-income households were not uprated in line with the average wage (light grey bars). As a result, they lose less of any increase in earnings to higher social security contributions. (At higher earnings ranges, METRs were essentially unchanged for all family types shown in the scoreboard, see Figure A.1.3 Panel B and Figure C.3 in the scoreboard.)

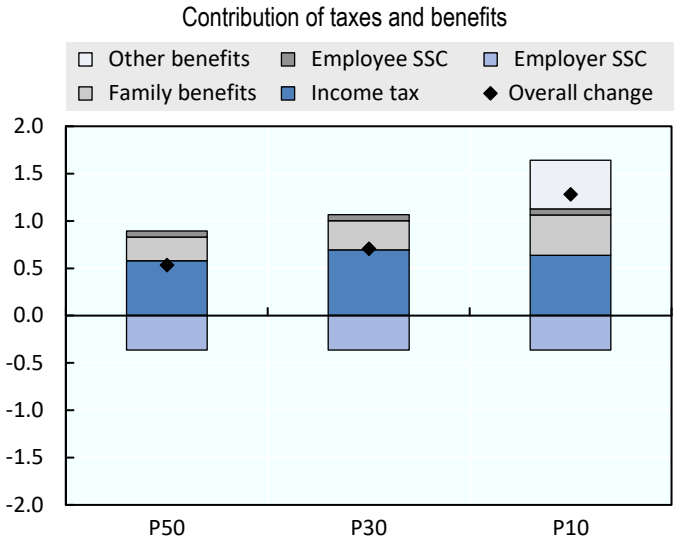
Figure A.1.3. Changes in work incentives



Note: For a couple without children. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

8. In line with the changes in the other indicators, the effective tax rates on labour increased slightly for all family types shown in the scoreboard, and especially for low-earning households: income tax liabilities increased due to fiscal drag and benefit entitlements fell because of the erosion of benefit rates relative to the average wage. The slight reduction in the employer payroll tax to the Family Burden Equalisation Fund in 2017 and 2018 was not sufficient to compensate this (Figure A.1.4).

Figure A.1.4. Changes in effective tax rates on labour by earnings level



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P50 values in the horizontal axis refer to the deciles points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

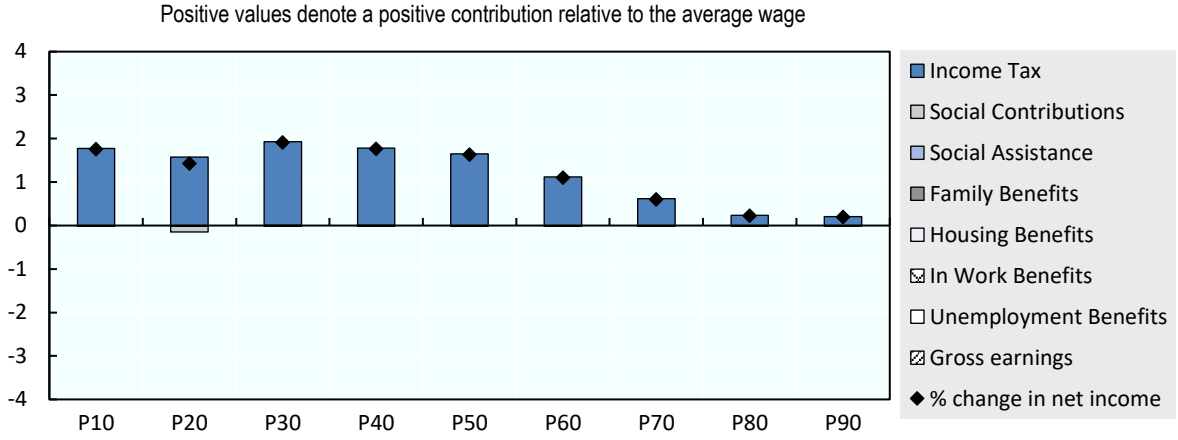
A.2 Belgium

1. Please click on the following links to open policy evaluation scoreboards for Belgium for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. A reform of income tax in 2018 led to an increase in net incomes for working families (Figure A.2.1). In 2016, Belgium implemented a 'tax shift' which aimed to reduce the tax burden on labour. As part of this reform, the deduction for work related expenses now increases more quickly as income rises, and reaches its maximum at a lower income level. Furthermore, the 30% tax bracket was abolished and replaced by a wider 25% bracket. Both of these were responsible for a reduction in income tax liabilities at low and middle earnings levels.

Figure A.2.1. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

3. Social assistance rates increased by 7% between 2016 and 2018, and the rates of *Allocation Familiale Garantie* (AFG) (a means-tested family benefit) increased by up to 20% depending on the age of children and family size. These changes increased out-of-work incomes for families eligible to guaranteed-minimum income benefits. By contrast, the incomes of those eligible for unemployment benefits did not change significantly, as there were no significant policy reforms in this area.

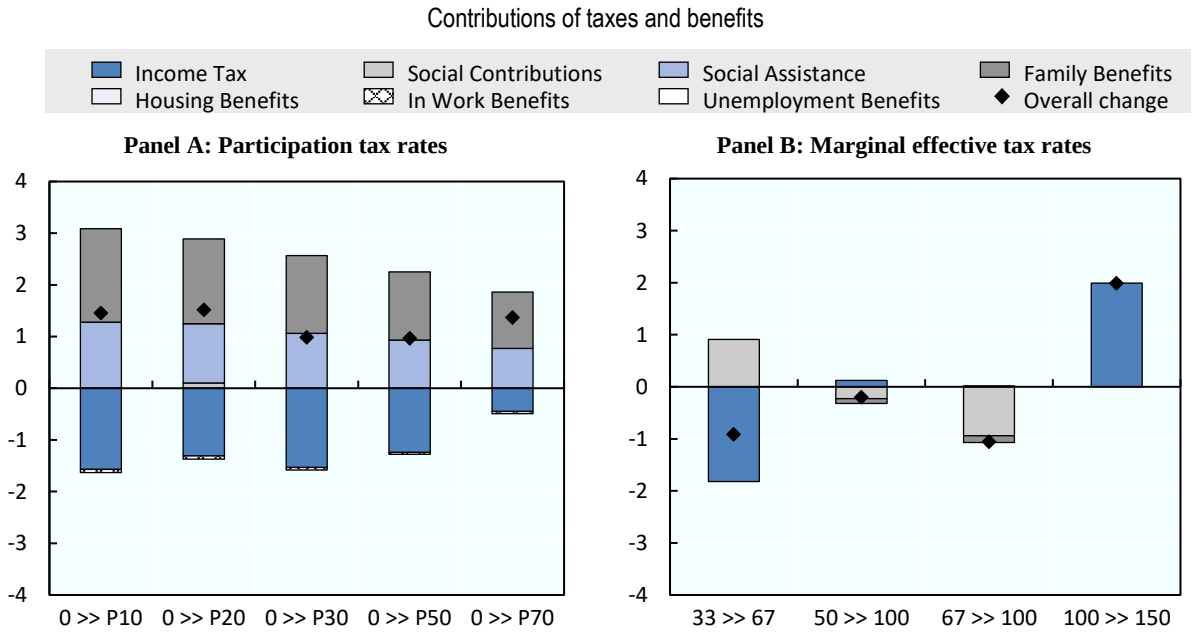
Changes in selected indicators

4. Lower income tax liabilities strengthened incentives to move into work, but this was offset by higher social assistance payments and/or increased of family benefit out of

work (Figure A.2.2, Panel A). Those moving into work thus lost more benefit entitlement, but lost less of their earnings to income tax. These offsetting effects meant that increases in PTRs were fairly modest, at less than 2 percentage points for all family types and earnings levels shown in the scoreboard.

5. Changes in income taxes reduced METRs at low earnings levels, but increased them at higher levels. This is because the reductions in income tax liabilities were larger at low earnings levels (Figure A.2.2, Panel B).

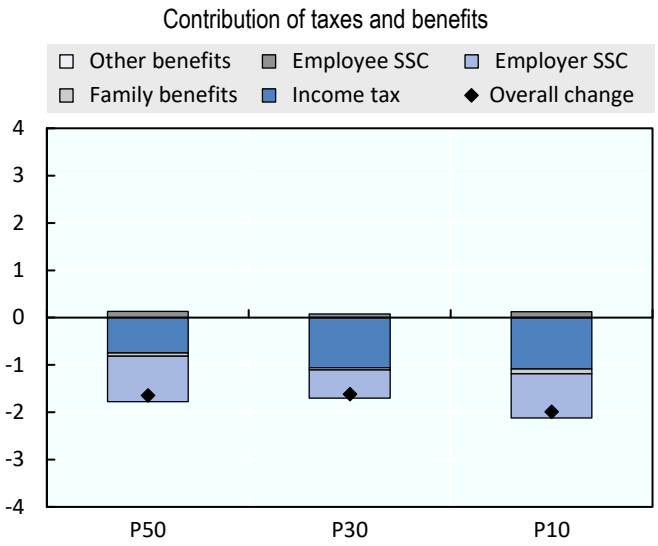
Figure A.2.2. Changes in work incentives



Note: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

6. From January 2018, a new phase of the tax-shift came into effect. The basic employer social security contribution rate fell from 32.15% to 26.69%. The structural reduction in contributions was also reformed. The basic discount (€1,752 per year) and the reduction for high salaries were abolished from January 2018. The only structural reduction that remains is that for the low-wage earners, which was increased. Consequently, for salaries that exceed the limit of 35,400€ per year, there is no longer any structural reduction. Together with the reductions in income tax, these changes reduced the effective tax rate on labour (Figure A.2.2).

Figure A.2.2 Changes in effective tax rate on labour



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P50 values in the horizontal axis refer to the decile points of the full-time earnings distribution
Source: Secretariat calculations using the OECD tax-benefit model.

A.3 Bulgaria

1. Please click on the following links to open policy evaluation scoreboards for Bulgaria for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. The minimum wage in Bulgaria increased very significantly between 2016 and 2018: even during a period of rapid nominal earnings growth, it grew more quickly than the average wage. As a result, gross earnings at the 10th percentile of the full-time earnings distribution increased (Figure A.3.2, striped bars).[15]

3. Tax and benefit changes also affected working families' net incomes. For those without children, increases in the rate of employee social security contributions (from 12.9% in 2016 to 13.34% in 2017 and then 13.78% in 2018) were the key factor in reducing net incomes by just over 1% (Figure A.3.2, light grey bars). (Since social security contributions are tax deductible, the increase in the social security contribution rate slightly reduced income tax liabilities).

4. For families with children, reforms to family benefits also had an important effect (Figure A.3.2, grey bars, see Box A.3.1 for more details). Broadly speaking, these reduced benefit rates for those already entitled to benefits, but extended eligibility to higher earnings levels.

Box A.3.1. Reforms to family benefits in Bulgaria in 2018

Until 2018, family benefits in Bulgaria were fully withdrawn when gross income per family member exceeded a threshold. Following a reform in 2018, this threshold became a step at which the benefit amount is now reduced by 20%, and the benefit is now fully withdrawn from a higher income threshold.

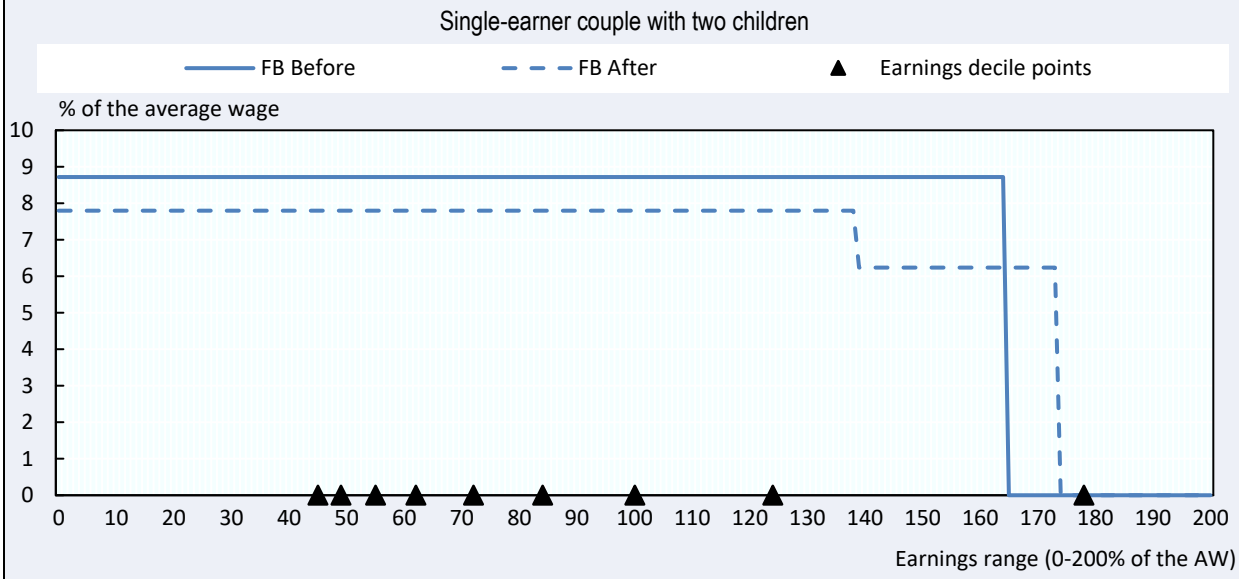
At the same time, nominal benefit amounts increased, but by less than the increase in average earnings between 2016 and 2018. The increase in benefit amounts was greater for families with fewer children.

The net effect of these changes was to reduce benefit entitlements relative to earnings for lower-income families, but to extend eligibility to families with higher levels of earnings (Figure A.3.1). In the case examined below, a single-earner couple with children has lower

[15] Detailed data on the distribution of earnings in 2018 is not yet available. In this report, it is assumed that each percentile of the full-time earnings distribution grew in line with the average wage since the last available data point (2016 for Bulgaria). However, the 10th percentile of the full-time earnings distribution is increased to the level of the 2018 minimum wage in cases (such as Bulgaria) where it would otherwise be less than this level.

benefit entitlements up to the 80th percentile of the full-time earnings distribution. Some single-earner couple families in the ninth decile of the earnings distribution (that is, between the 80th and 90th percentiles of the full-time earnings distribution) receive the lower benefit rate, including some families who would not have qualified for benefit previously.

Figure A.3.1. Family benefit entitlement by earnings level, 2016–2018

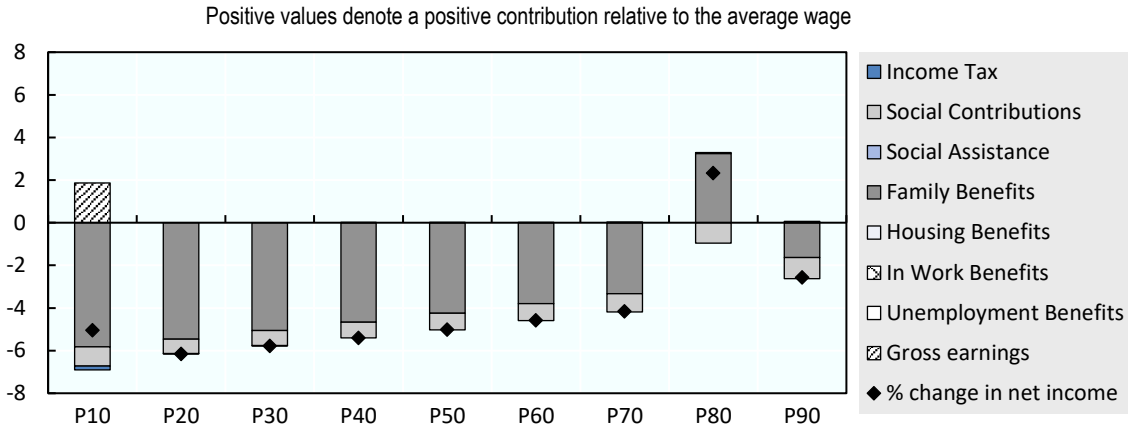


Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive.
Source: Secretariat calculations using the OECD tax-benefit model.

There were changes to other family benefits in Bulgaria over this period too. The alimony advance payment received by lone parents in the TaxBEN model (it is always assumed that support from non-resident family members is not forthcoming) was frozen in nominal terms, and so fell significantly relative to average earnings levels. Finally, the first grade school allowance (a one-off payment received when a child starts school at age 7) was also frozen in nominal terms, but the maximum income limit was increased in nominal terms but still fell relative to the average wage. As the scoreboard examines families where children are aged 6 and 4, this allowance is not received by any families in the scoreboard, but these changes reduced the incomes of other families.

5. Overall, lone parents lost the most from these changes because of the reduction in the level of alimony advance payment relative to average earnings. Losses for this group exceeded 6% of net income in some cases (Figure A.3.2). But some other families with children gained from reforms overall as a result of the extension of family benefit entitlement to those with higher incomes (an example is a lone parent with two children earning at the 80th percentile of the full-time earnings distribution, see Figure A.3.2).

Figure A.3.2. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

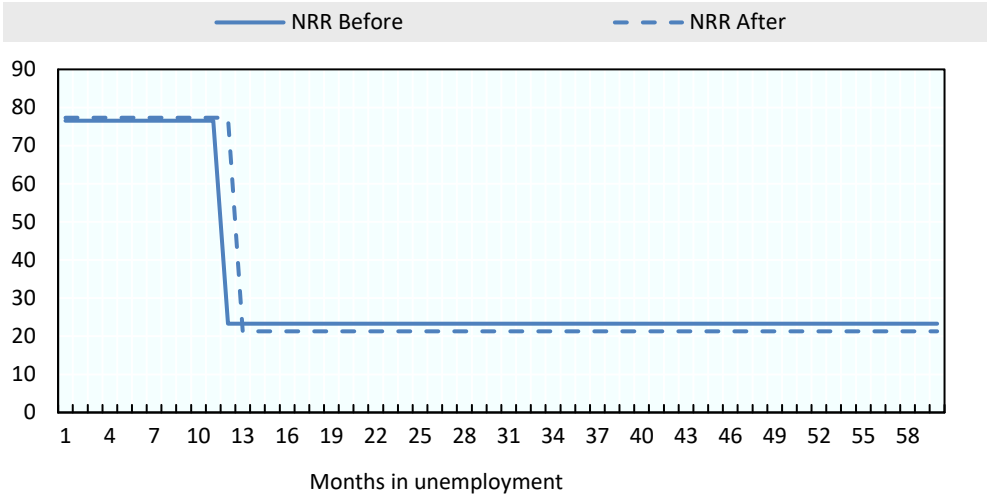
Changes in out-of-work-incomes

6. Reductions in the value of family benefits relative to average earnings also reduced the net incomes of non-working families with children. Rates of social assistance benefits also did not grow as quickly as the average wage, reducing net replacement rates at longer unemployment durations.

7. For the initial part of the unemployment spell, however, unemployment benefit levels were unchanged. The duration of unemployment benefits was also increased for claimants with a relatively long contribution record, but reduced for some others with shorter records. Of relevance for the case examined in the scoreboard of a 40 year old with a long and continuous employment record, the past contribution record required to be eligible for the maximum 12 month duration fell from 25 to 15 years. The benefit duration for the individuals examined in the scorecard thus increased from 11 to 12 months and so the net replacement rate in the 12th month of an unemployment spell increased significantly. Unemployment benefit durations also increased for those with slightly shorter contribution records. Since 2017, only 11 years of contributions rather than 15 are required to be entitled to 10 months of benefits. However, for those with between 5 and 7 years of contributions, the benefit duration fell from 8 to 6 months.

Figure A.3.3. Net replacement rate across the unemployment spell

Single person without children, previous earnings at 10th percentile of full-time earnings distribution



Note: For a single person without children aged 40 with a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

8. Policy changes affected the PTRs of different family types in different ways. For second earners in couples, increases in the social security contribution rate increased PTRs. However, for the first earner in a couple, and for single people without children, this increase in social security contributions in work was more than offset by the reduction in the level of social assistance benefits when out of work (except in some cases at high earnings levels). As the gain from working is now higher, the PTR fell.[16]

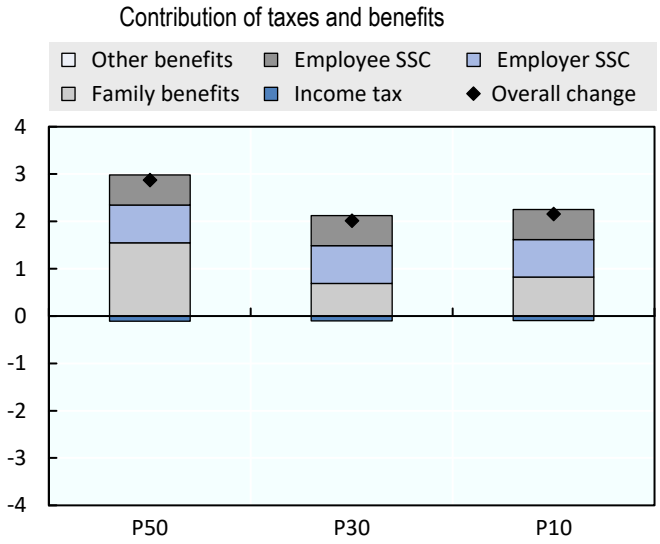
9. For lone parents, the interaction of the alimony advance payment and social assistance leads to an increase in PTRs. Since social assistance benefits increased more than alimony advance payment rates, lone parents now receive more social assistance when not working: a larger social assistance payment is required to top their incomes up to the social assistance level. As social assistance is then withdrawn on moving into work (whereas alimony advance payment is not), more benefit is then lost on starting work. PTRs therefore increase for this group.

10. The increase in social security contribution rates also increases METRs. For families without children, this is the only relevant policy change, but for those with children other policy changes also had an impact. In particular, the changes to family benefits (see Box A.3.1) change the size and location of the 'cliff edge' where benefit entitlement is withdrawn and introduce an additional one where the benefit amount is reduced by 20%. As a result, very strong disincentives to earn more than a certain amount are removed from some earnings ranges and introduced to others.

[16] For the cases at higher earnings levels where the PTR increases, the opposite is true: the increase in social security contributions when working is greater than the reduction in social assistance received when not working.

11. The effective tax rate on labour increases not just because of increases in the employee social security contribution rate and reductions in the level of family benefits relative to earnings, but also because of increases in the employer contribution rate. The employer social security contribution rate increased from 18.1% in 2016 to 18.66% in 2017 and then 19.22% in 2018. (For both employer and employee contributions, it was those relating to pensions that were increased).

Figure A.3.4. Changes in effective tax rate on labour



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse earns 67% of the average wage. For the other spouse, earnings range between the 10th (P10) and the 50th (P90) percentiles of the full-time earnings distribution along the horizontal axis.
Source: Secretariat calculations using the OECD tax-benefit model.

A.4 Croatia

1. Please click on the following links to open policy evaluation scoreboards for Croatia for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. The minimum wage in Croatia increased relatively quickly between 2016 and 2018. As a result, growth in earnings at the 10th percentile of the full-time earnings distribution was particularly strong.[17] As social security contributions are payable on these additional earnings, for some family types net incomes for those at the 10th percentile of the earnings distribution increased by less than gross income.

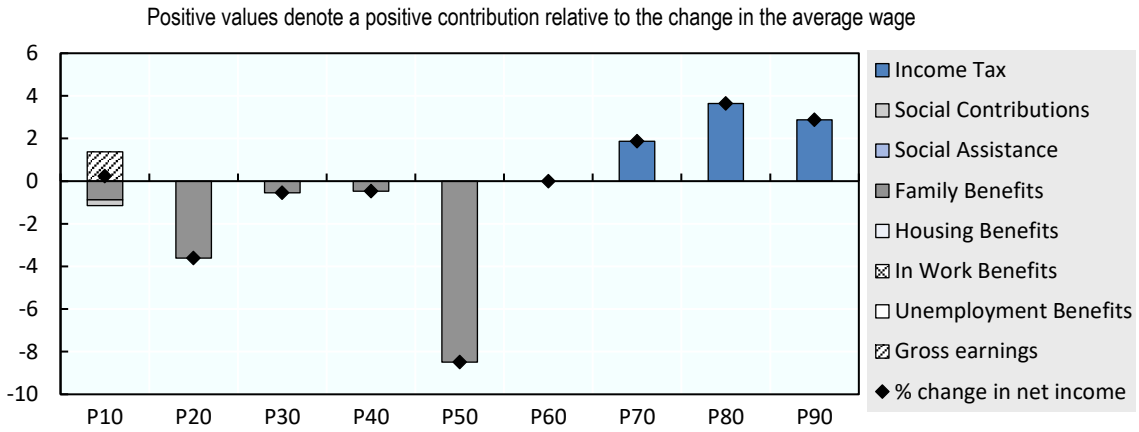
3. In others, however, reductions in income taxes led to further increases in net incomes. The 12% income tax bracket was abolished in 2017. At the same time, the personal income tax allowance was increased, with the effect that the zero-rate band expanded to cover some of the former 12% bracket, but the threshold at which the 25% rate starts to be applied was also lowered, and the rate reduced to 24%. The net effect of these changes was that those who had previously paid the 12% rate at saw their tax liabilities reduced, and those who already paid the 25% rate were broadly unaffected. In the scoreboard, gains from this change are observed up to the 40th percentile of the full-time earnings distribution in the case of a single person without children and a two-earner couple without children. Other family types benefited only at higher earnings levels as tax allowances are much higher for those with a dependent spouse or children. These families also benefited from increases in these allowances in 2017. Overall, these changes to income tax increased net incomes by up to 3½%.

4. Entitlements to family benefits for those with children generally fell, however, as benefit rates did not increase in nominal terms between 2016 and 2018 and so reduced in value relative to the average wage. 'Bracket creep'[18] also caused big reductions in family benefit entitlements in some cases. As the level of family benefit entitlement depends on which income bracket the family falls into, a small increase in income between two years can push a family into a higher income bracket if the thresholds are not adjusted. In the scoreboard, this occurs for the lone parent at the 20th and 50th percentiles of the full-time earnings distribution (Figure A.4.1, grey bars), and for the single-earner couple with children at the 40th percentile. In these cases, net incomes can fall by as much as 8½%.

[17] Detailed data on the distribution of earnings in 2018 is not yet available. In this report, it is assumed that each percentile of the full-time earnings distribution grew in line with the average wage since the last available data point (which in Croatia is 2016). However, the 10th percentile of the full-time earnings distribution is increased to the level of the 2018 minimum wage in cases (such as Croatia) where it would otherwise be less than this level.

[18] That is, when tax or benefit thresholds do not increase as quickly as incomes over time and so more and more people become liable to higher income tax rates and fewer and fewer are entitled to means-tested benefits.

Figure A.4.1. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

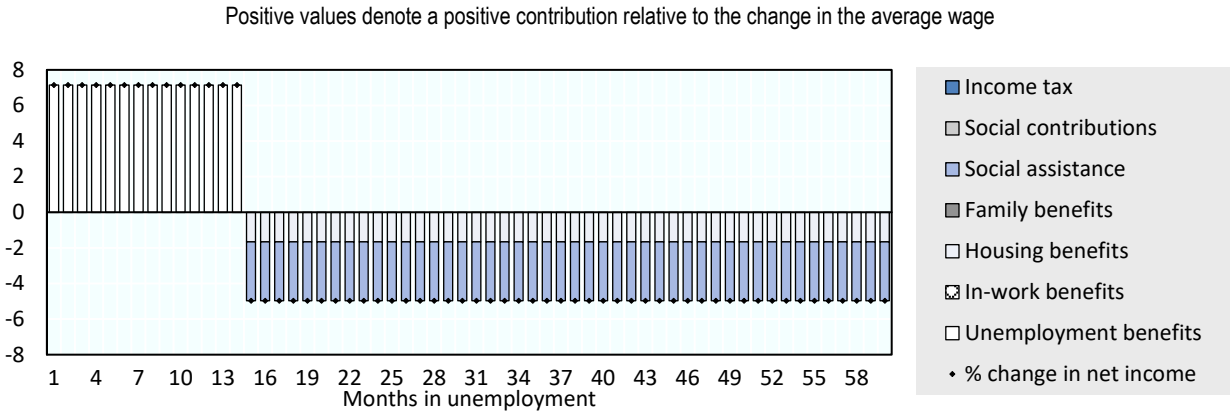
Changes in out-of-work-incomes

5. Like family benefits, maximum amounts of social assistance and housing benefits were frozen in nominal terms between 2016 and 2018. Workless families reliant on these benefits thus saw their incomes reduced relative to the average wage.

6. There were more significant changes to unemployment benefit in 2017. Previously, unemployment benefit had been set as a percentage of earnings net of social security contributions. A reform in 2017 changed the structure of the benefit so that it is now set as a percentage of gross earnings (before social security contributions are deducted), but the percentage amount was reduced. The overall effect was to increase benefits for those with previous earnings up to the median of the full-time earnings distribution, where the maximum benefit level is not binding. The maximum benefit level was increased in line with growth in average earnings so there was no change in benefit amounts relative to the average wage for those with higher earnings.

7. The combined effect of these two changes was to increase net incomes at the beginning of an unemployment spell, but to reduce them at longer unemployment durations (Figure A.4.2).

Figure A.4.2. Percent change in net income components across the unemployment spell



Note: For a single person without children aged 40 with a "long" and continuous contribution history and previous earnings at the median of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

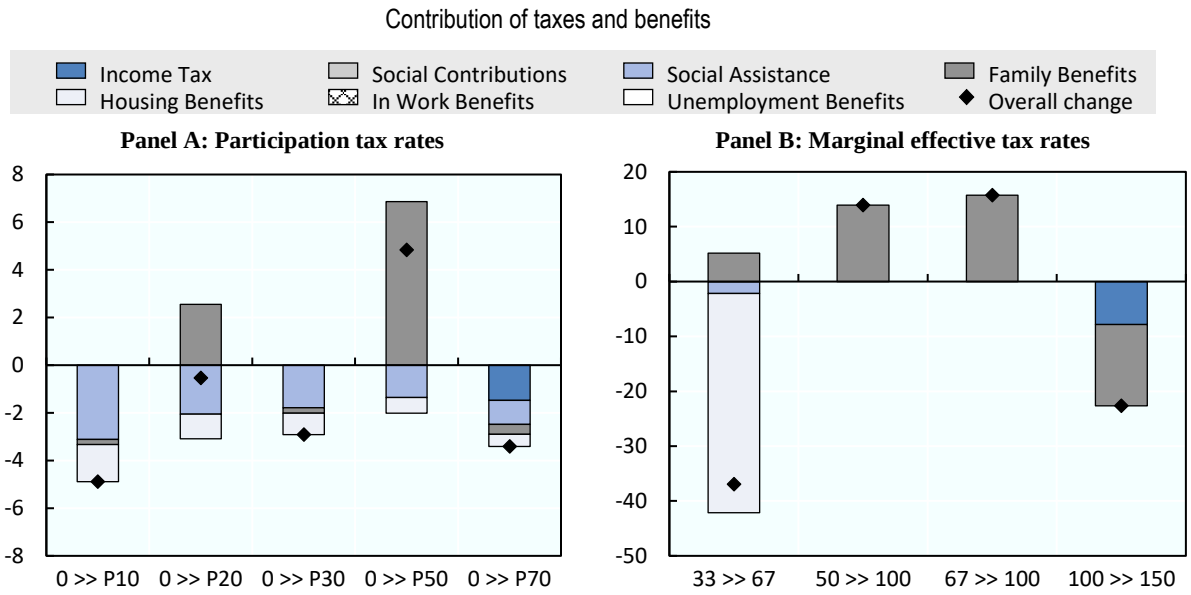
Changes in selected indicators

8. Policy changes between 2016 and 2018 tended to strengthen the incentive for individuals to work at all (rather than not working). PTRs generally fell because of lower income tax liabilities in work and lower entitlements to social assistance and housing benefits when not working.

9. The exception to this is for those who saw their entitlements to family benefits when in work fall significantly as a result of small increases in earnings bringing them into a higher income bracket. For these individuals, incomes in work fell more than those out of work and so PTRs rise in these instances (for example, for a lone parent with two children at the median of the full-time earnings distribution, see Panel A of Figure A.4.3).

10. The impact of reforms on METRs is less clear cut. The changes to family benefits shift lower the points where family benefit entitlements suddenly fall and hence METRs are very high. For example, for the lone parent examined in the scoreboard, METRs rise over lower earnings ranges, but fall at higher earnings ranges (Panel B of Figure A.4.3).

Figure A.4.3. Changes in work incentives



Note: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

11. Changes to income tax similarly affect METRs differently at different earnings levels. Some of those previously facing the 12% marginal income tax rate now face a zero rate because of increases in tax allowances. Those who were at the upper end of this tax bracket, however, saw their marginal income tax rate increase from 12% to 24% and so their overall METR also increased.

A.5 Cyprus

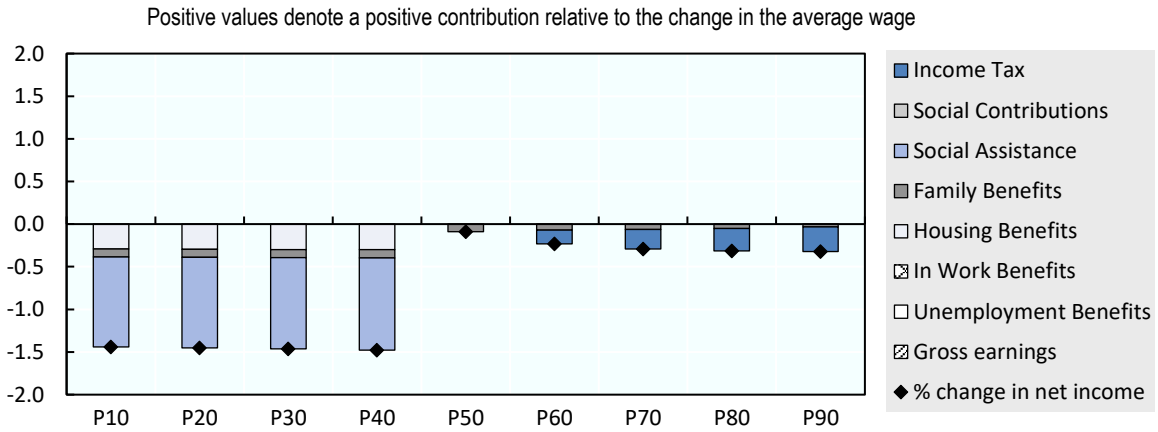
12. Please click on the following link to open the policy evaluation scoreboard for Cyprus for the period 2017–2018. Note that policy information for Cyprus was not provided for 2016, so the analysis in this section only focuses on changes between 2017 and 2018.

Changes in in-work-incomes

13. There were very few changes to the tax-benefit system in Cyprus in 2018. Almost all parameters remained the same as in 2017 in nominal terms. However, as nominal earnings growth was relatively low at 1.4%, 'fiscal drag' did not cause net incomes to fall significantly relative to the average wage: in all cases, reductions in income were less than 1½%. Indeed, the impact of policy changes was exactly zero for a number of families examined in the scoreboard. These are families without children with incomes too low to pay income tax but too high to receive means-tested benefits.

14. As a result of the nominal freeze in tax-benefit parameters, income tax liabilities increased and levels of family benefits fell relative to average earnings. Some low-income couples also receive social assistance (which includes a housing element that is classified as a housing benefit in the TaxBEN model) when they are in work: entitlement to these benefits also fell as maximum benefit amounts were frozen in nominal terms (Figure A.5.1, blue and off-white bars).

Figure A.5.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

15. For families with more than two children, eligibility to family benefits was extended to a higher income level in 2018. As the scoreboard only examines families with two children, the impact of this reform is not visible in the scoreboard. Moreover, the

income limit for family benefits is in any case relatively high: a single-earner family would have to have earnings well above the 90th percentile of the full-time earnings distribution not to qualify. This reform therefore benefited only a small number of high-income families with at least three children.

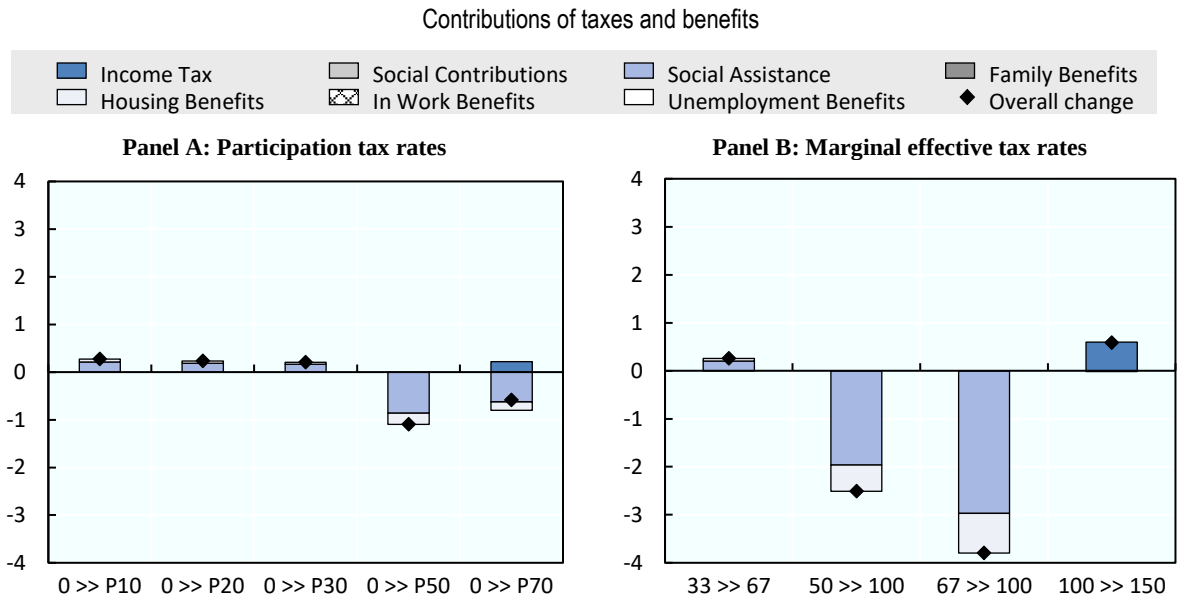
Changes in out-of-work-incomes

16. The non-indexation of social assistance benefits (including the housing component) also reduced the incomes of non-working families. For those not entitled to unemployment benefits, incomes fell by around 1½%. For most of those claiming unemployment benefits, changes in incomes were smaller as benefit amounts are linked to previous earnings levels and so rise as earnings do. This was not however the case for those with high levels of previous earnings (from the 80th percentile of the full-time earnings distribution upwards) for whom the maximum benefit amount is binding. In this case, the benefit amount remained frozen in cash terms and thus fell relative to the average wage.)

Changes in selected indicators

17. Work incentives generally strengthened in 2018. The reduction in social assistance benefits when not working was greater than the increase in income taxes in work in most cases, reducing PTRs (Figure A.5.2, Panel A). The exceptions are those where there is also entitlement to social assistance in work: here, benefit entitlement falls by a similar amount both in and out of work so PTRs were unchanged. METRs, however, fall for those entitled to social assistance when in work: entitlements to social assistance fall, so there is less social assistance entitlement to lose if they increase their earnings (Figure A.5.2, Panel B).

Figure A.5.2. Changes in work incentives



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.6 Czech Republic

1. Please click on the following links to open policy evaluation scoreboards for the Czech Republic for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Earnings growth was particularly strong in the upper-middle of the earnings distribution in the Czech Republic between 2016 and 2018. However, tax-benefit changes were a more important determinant of changes in net incomes for working families over this period.

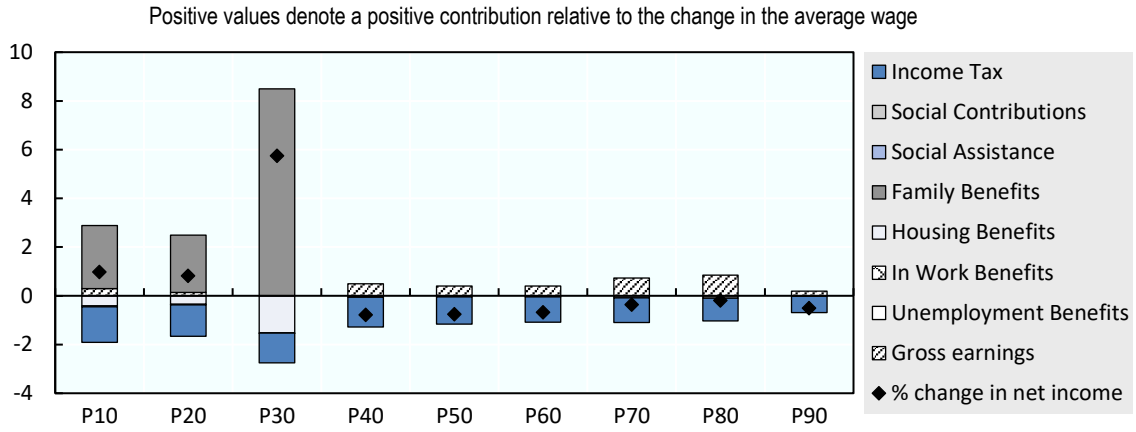
3. For families without children, tax-benefit changes generally reduced net incomes. Personal tax allowances were frozen in cash terms over this period, increasing income tax liabilities through 'fiscal drag'. For the single person without children examined in the scoreboard, housing benefit entitlements also fell at lower earnings levels as maximum rent levels for which benefits can be claimed were reduced. (This policy change does not appear for the other family types examined in the scoreboard as maximum rent levels for larger households are not binding for the rent level assumed in the scoreboard of 20% of the average wage. Those with higher rent levels would have been affected by these changes, however).

4. Changes to family benefits increased the incomes of low-income working families with children (Figure A.6.1, grey bars). A new higher rate of child allowance was introduced in 2018 for families where at least one parent earns more than a certain threshold. Moreover, the threshold at which entitlement to child allowance is removed increased slightly more quickly than did average earnings, so a small number of families who were previously not entitled to child allowance at all became entitled. An example of this in the scoreboard is the lone parent earning at the 30th percentile of the full-time earnings distribution (Figure A.6.1). Similarly, child tax credits increased more quickly than average earnings,[19] so increases in income tax liabilities were also smaller for families with children. However, higher-income families still faced higher income tax liabilities as a result of the non-indexation of the personal tax allowance.

5. Overall, changes in net incomes among the working families examined in the scoreboard were relatively modest, ranging from -4% for low-earning single people without children who faced higher income taxes and lower entitlements to housing benefit to +6% for some low-income families with children.

[19] More precisely, there was a significant cash increase in the child tax credit amount for the first child in 2018 and for the second and subsequent children in 2017.

Figure A.6.1. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

6. Social assistance benefit rates remained unchanged in cash terms between 2016 in 2018. Since nominal earnings growth was relatively rapid over this period at 12.9%, this represented a significant fall relative to the average wage. Child allowance amounts for workless families similarly did not increase in cash terms. Changes to maximum housing benefit amounts affected both working and non-working families: as for working families, this only affected the incomes of single people without children in the scoreboard, but in reality affected other groups paying high rents. Overall, workless families not entitled to unemployment benefits saw their incomes fall between 6% and 8% relative to the average wage.

7. Unemployment benefits in the Czech Republic are set as a proportion of previous net earnings, that is after income tax and social security contributions. Increases in income taxes in work thus reduced the level of unemployment benefits received at the start of the unemployment spell.

8. Nonetheless, as unemployment benefits are set relative to previous earnings, they still increased roughly in line with earnings growth. Higher unemployment benefit entitlement reduced entitlement to social assistance benefits in some cases, however,[20] and in some cases, entitlement to social assistance was eliminated altogether. This matters because those who receive any social assistance – no matter how little – are also entitled to a top-up of housing benefits to their maximum level. These families thus lose a significant amount of housing benefit when their entitlement to social assistance is eliminated. Examples of this can be found in the scorecard, e.g.:

- the lone parent with previous earnings at the 10th percentile of the full-time earnings distribution in months 3 and 4 of the unemployment spell,
- the couple without children with previous earnings at the 10th percentile in months 1

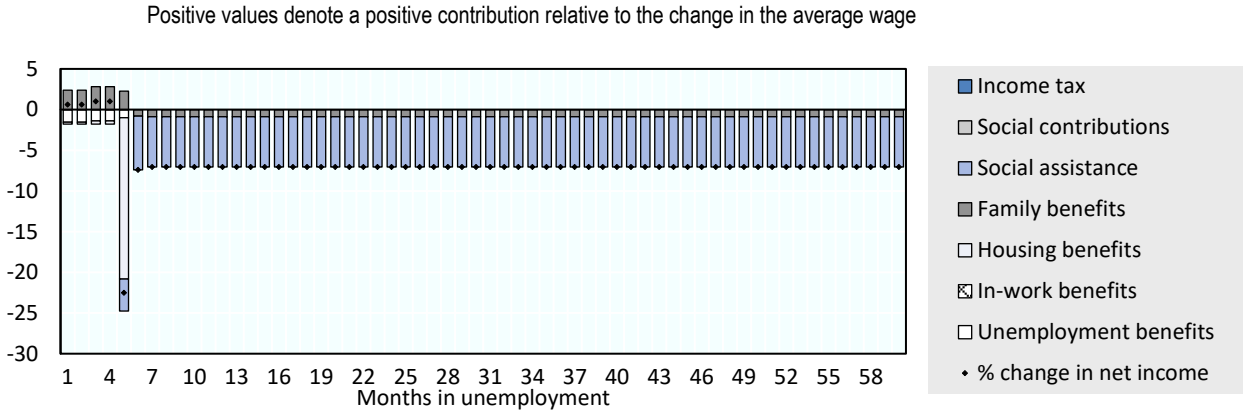
[20] This happens because unemployment benefits are taken into account in the means test for social assistance.

and 2,

- and the couple with children with previous earnings at the 50th percentile in month 5 (Figure A.6.2, off-white bars).

9. Other than in these cases, reductions in net income were often lower for those entitled to unemployment benefits. Indeed, as unemployment benefit claimants are also entitled to the new higher rate of family benefits for workers (see above), net incomes of unemployed people with children increase in some cases at short unemployment durations (Figure A.6.2).

Figure A.6.2. Percent change in net income components across the unemployment spell



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive.The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

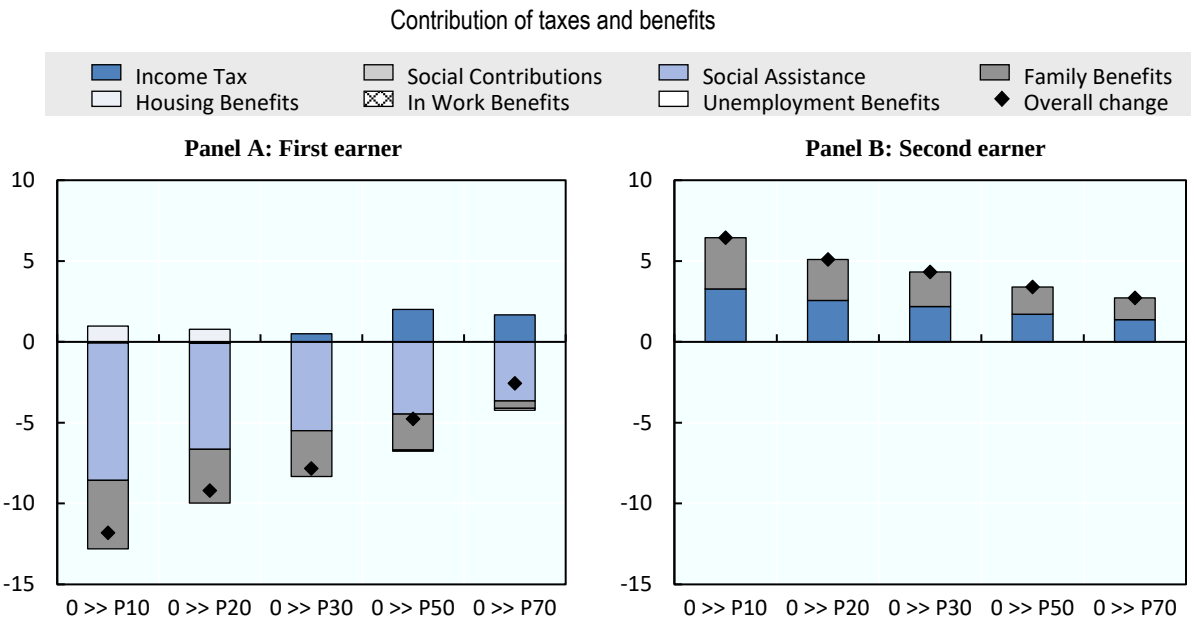
10. For those without a working partner (that is, single people and those whose partner is not in paid work), the incentive to work at all (as opposed to not working) strengthened between 2016 and 2018. Lower levels of social assistance and housing benefits when out of work, and (for those with children) higher levels of child allowance in work increase the gain from working, lowering PTRs. These effects more than offset the impact of increased income tax liabilities in work. Reductions in PTRs were quite substantial at more than 10 percentage points (ppts) in some cases (Figure A.6.3, Panel A).

11. Work incentives weakened for the second earner in the couple, however. Higher levels of child allowance for single-earner couples mean that there is more to lose when the second person enters work and the family's income exceeds the maximum level for receiving child allowance. Higher income taxes in work also weaken work incentives for this group: increases in PTRs can be as much as 6½ppts (Figure A.6.3, Panel B).

12. By contrast, the incentive for those who are already in work to increase their earnings generally weakened, though for different reasons in different cases. At very low earnings ranges, the reduction in the personal income tax allowance relative to earnings levels increases METRs as individuals can now earn less before earnings start to be taxed. For those with children, higher levels of child allowance when in work at low earnings leads to higher METRs if they increase their earnings, since they have more child allowance

to lose if they increase their earnings above the maximum income threshold for receiving this benefit.

Figure A.6.3. Changes in work incentives



Note: For a couple with two children aged 6 and 4. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

A.7 Denmark

1. Please click on the following links to open policy evaluation scoreboards for Denmark for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

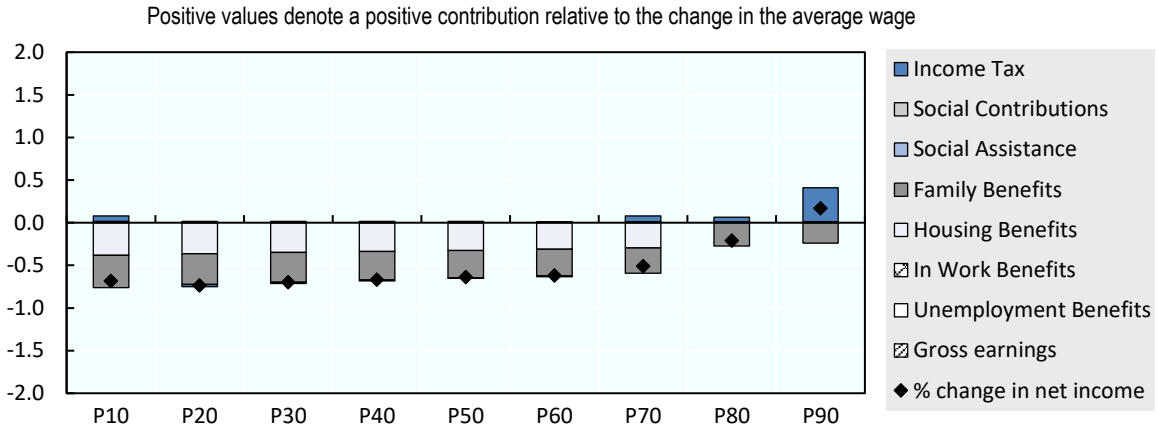
Changes in in-work-incomes

2. There were few structural tax-benefit changes in Denmark between 2016 and 2018; instead, most existing tax-benefit rates and thresholds were simply uprated. As a result, net incomes changed very little relative to the average wage, by less than 1% for most family types shown in the scoreboard (Figure A.7.1). Housing and family benefit amounts increased by less than average earnings, so benefit entitlements and hence net incomes fell relative to the average wage for recipient families (grey and off-white bars).

3. Income tax liabilities increased slightly for lower and middle earners. This occurred because, first, income tax allowances and credits were not uprated in line with the average wage, raising tax liabilities: the tax credit for workers increased only slightly in cash terms (by less than average earnings growth) and the amount of the Green Check fell substantially. Second, the lower tax rate, which applies up to the 70th percentile of the full-time earnings distribution increased. By contrast, the maximum amount for the worker's tax credit increased, benefiting families earning at least the median wage. Furthermore, the top tax rate did not change, leading to an increase in net incomes relative to the average wage at the 90th earnings percentile for all family types.[21]

[21] A somewhat different picture appears for one-earner couples. These families also saw a reduction in the social assistance received by the non-working spouse (in the scoreboard it is assumed that the non-working spouse fulfils the criteria to receive these benefits). However, as social assistance is taxed, lower social assistance entitlements reduced income tax liabilities for these families (Figure B.1 in the scoreboard).

Figure A.7.1. Percent change in net income components across the earnings distribution



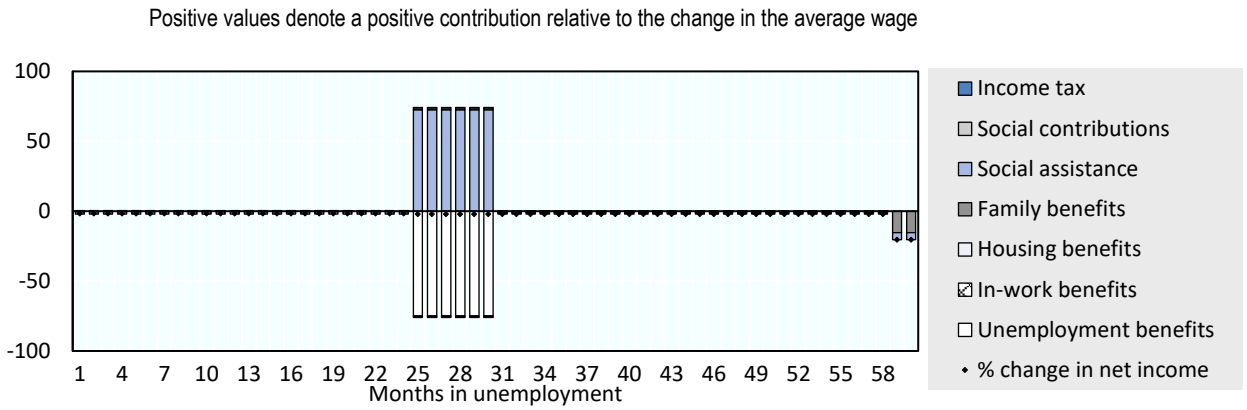
Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

4. Net incomes for those out of work were affected by two reforms to unemployment insurance benefits. First, in 2017 the minimum amount of unemployment insurance benefits was abolished and eligibility was made dependent on previous earnings rather than on hours worked only (Box A.7.1). Second, temporary benefits, which extended the duration of unemployment benefits from 24 to 30 months in 2016 (at reduced rates), phased out entirely in 2018. However, for most family types this reduced entitlement to unemployment benefits between months 25 and 30 of the unemployment spell (white bars) led to an increase in social assistance entitlements (light-blue bars), which offset this loss almost entirely (Figure A.7.2).[22] By contrast, those families who were already dependent on receiving social assistance saw their benefit amounts fall as social assistance rates were not uprated in line with earnings growth (Figure B.1 in the scoreboard, left-hand panel).

[22] An exception are couples where one partner is working and the other is unemployed, who receive less social assistance than they would have received in unemployment insurance benefits during months 25 to 30 in unemployment. Overall, however, a decrease of 12 percent in net incomes out of work relative to the average wage remains. Related to this, also NRRs decreased significantly for this family type, while they remained almost unchanged for all other household types (see Panel D in the scoreboard).

Figure A.7.2. Percent change in net income components across the unemployment spell

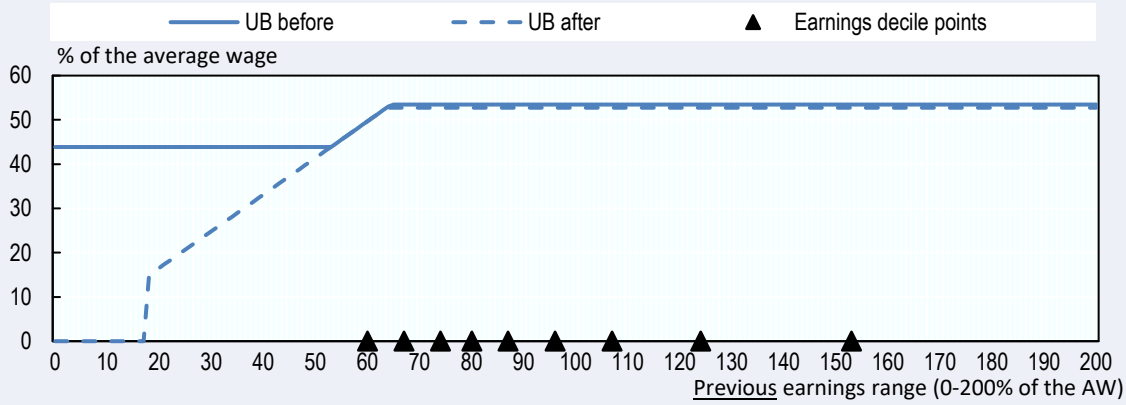


Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Box A.7.1. The reform of unemployment benefits in 2017

Up until 2016, the unemployment insurance system in Denmark guaranteed a minimum benefit at around 44% of the average wage. This lower bound on unemployment insurance benefits was abolished in 2017. Unemployment benefits are now calculated as 90% of previous earnings (for the family types considered in this report and subject to an upper bound), even if earnings are low. Another important change to the unemployment benefit system concerns the eligibility criteria. Whereas in 2016, the qualifying criteria for access to unemployment benefits were based upon hours worked, the primary condition as of 2017 is previous earnings: in 2018, previous earnings at 54% of the average wage during the last 36 months are required to qualify (i.e. 18% of the average wage per year assuming constant earnings and continuous employment). Therefore, since the reform, there is no longer a minimum benefit level, and unemployment benefits are not granted below previous annual earnings of 18% of the average wage (Figure A.7.3). Above that level, benefits are calculated as a proportion of previous earnings until the latter reach about 60% of the average wage. Hereafter, the cap on unemployment benefits becomes binding. This reform only affected households with previous earnings well below the 10th percentile of the full-time earnings distribution, so its effects do not show up elsewhere in the scoreboard.

Figure A.7.3. Unemployment benefits before and after the reform



Note: For a single-parent family with two children aged 6 and 4. The adult is aged 40.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

5. As social assistance amounts were not uprated in line with average earnings growth, eligible families received less benefits out of work. This slightly strengthened the incentives to move into working at all percentiles of the full-time earnings distribution (Figure 7.A.4, Panel A, light-blue bars). The increase in income tax liabilities in work slightly offset this effect (dark-blue bars). [23]

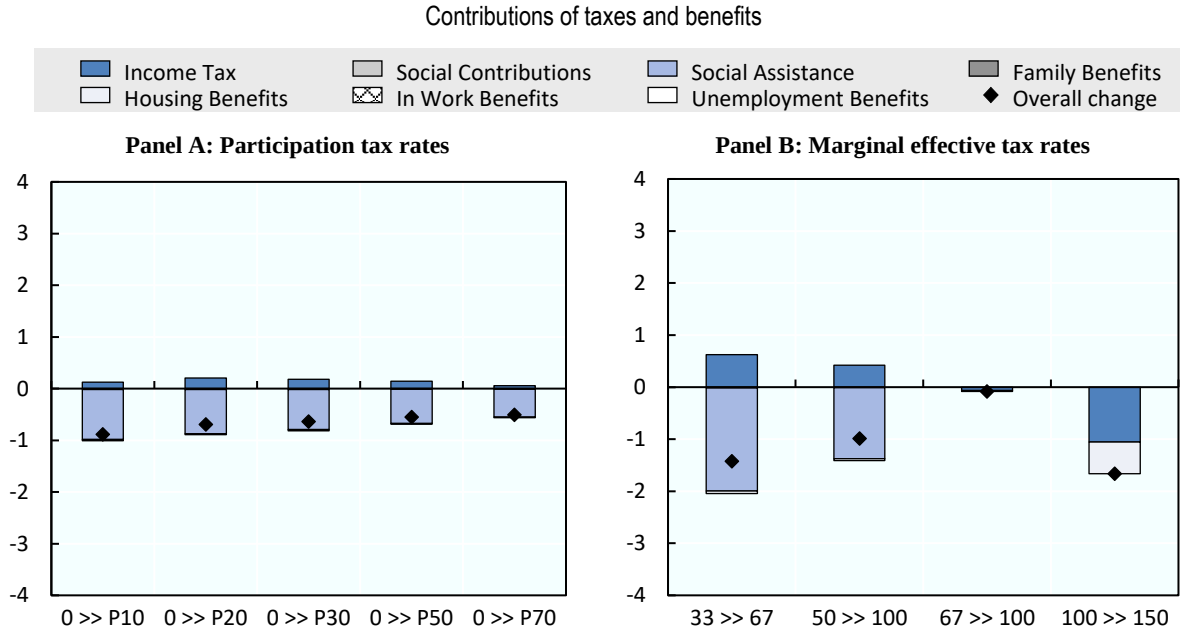
6. Furthermore, the incentive to increase hours worked strengthened for most family types (Figure A.7.4, Panel B). METRs fell for single people when increasing hours up to

[23] An exception to this overall trend are again one-earner couples as they receive social assistance benefits for the non-working spouse also when the principal earner is working at earnings levels below the 70th percentile of the full-time earnings distribution. Thus, PTRs remain unchanged in that earnings range for these families (see Panel C in the scoreboard).

full-time at median earnings, as social assistance amounts fell relative to the average wage (light-blue bars).[24] They thus have less social assistance to lose if they increase their earnings. Again, this effect is partly offset by income tax liabilities increasing more quickly over lower earnings ranges (dark-blue bars). In contrast, since tax liabilities decreased at higher earnings as outlined above, METRs also decrease when moving from 100% to 150% of full-time work for all family types. This impact is reinforced by a reduction in housing benefits relative to the average wage when working full-time at median earnings (off-white bar): there is now less housing benefit to lose if someone increases their earnings beyond the median.

7. Effective tax rates on labour increased slightly for all family types shown in the scoreboard. The largest increases were experienced by lone parents (up to 1 percentage point) due to erosion of housing benefits and by one-earner couples (up to 1.5 percentage points) as a result of less social assistance benefits in work (Figure E.1 in the scoreboard).

Figure A.7.4. Changes in work incentives



Note: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

[24] Principal earners are eligible to social assistance benefits when working part-time.

A.8 Estonia

1. Please click on the following links to open policy evaluation scoreboards for Estonia for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Several policy reforms affected incomes of working families in Estonia in 2016-2018. First, the tax credit (introduced as an experiment in 2016) was abolished. Instead, the amount of personal tax allowance almost tripled, but the amount is now lower for those with higher incomes. The net effect of these two changes varies across income levels and family types. Thus, for singles and two earner-couples the gains in net income from the reform are generally higher at lower earnings levels. Indeed, at high earnings levels, the effect of the reform can be negative (e.g. for singles at the 90th wage percentile). However, at very low earnings levels, the gain from the increased tax allowance is counterbalanced by the loss of the abolished tax credit. For one-earner couples the strongest effect is in the middle of the earnings range because at low earnings the couple cannot utilise the tax allowance in full (Figure A.8.1, blue bars). [25]

3. Second, the needs-based family benefit was abolished. This resulted in losses for low-income couples with children (Figure A.8.1, grey bars). This reform was partially offset by an increase in subsistence benefit, including its housing component (here classified as a housing benefit, off-white bars).

4. Third, in 2017 a reform to maintenance allowance made it available as a long-term support for a lone parent in situations when the other parent does not fulfil their obligations.[26] Previously, the allowance was available for a maximum of 90 days. This led to a significant increase in net incomes for lone parents.[27]

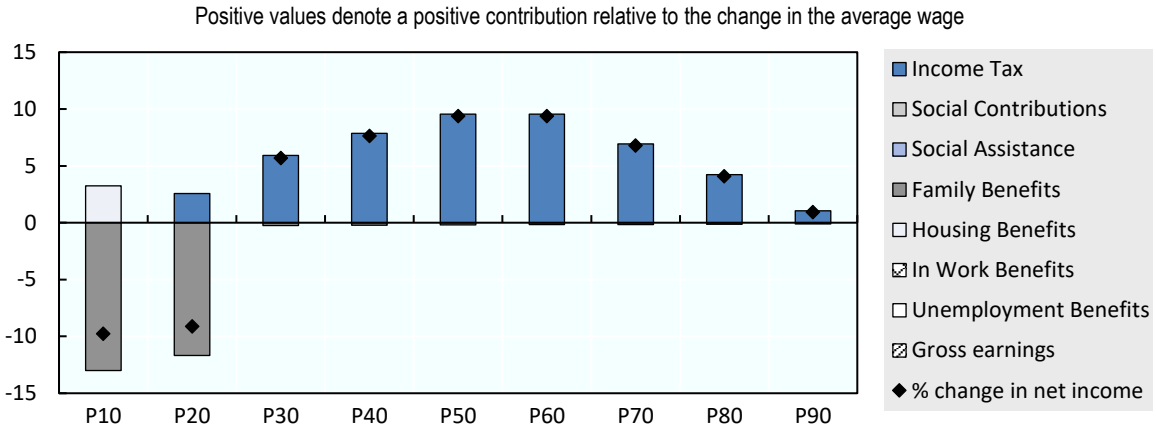
5. Finally, a new supplement for large families with three children or more was introduced in 2017 of EUR 300-400 per month per family. This benefit is not means-tested and not taxable. The reform has a positive effect on incomes of large families. However, this reform has no impact on the families examined in the scoreboard as only a family with two children is considered here.

[25] Since 2017, joint taxation of married couples was abolished. However, the transfer of personal tax allowance remains possible, except for families with very high income, outside of the range covered in the scoreboard.

[26] Note that this is the situation for lone parents that is assumed in the TaxBEN model.

[27] In 2008-2016, the maintenance allowance was not covered in the model due to its temporary nature. Since 2017, the allowance is included in the model because it can be received as a long-term support. Thus, the increase in net income in the model overestimates the effect of the policy in the short run.

Figure A.8.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

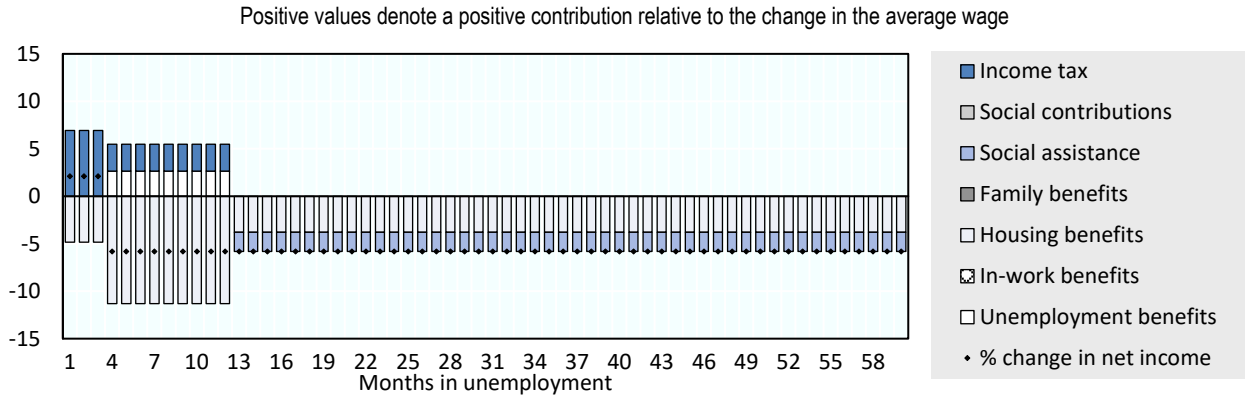
6. The minimum amount of unemployment insurance benefit and the unemployment assistance benefit were both increased between 2016 and 2018. The former increased unemployment benefit entitlements for those with low levels of previous earnings and a long and continuous employment record from the 4th to the 12th month of unemployment (Figure A.8.2, white bars).

7. In addition, as unemployment benefits are taxable in Estonia, recipients benefited from the reductions in the income tax. In 2016, the tax credit was available only to those who worked during the year for at least 6 months. Thus, many unemployed were excluded from eligibility. By contrast, the more generous personal tax allowance introduced in 2017-2018 (see previous sub-section) benefited both unemployed and employees in the same way.

8. For families without children, subsistence benefit amounts increased in nominal terms but did not keep up with the growth in average wages (Figure A.8.2, light blue bars). For families with children, the increase in subsistence benefit was stronger due to a rise in the equivalence scale used in the calculation of the benefit for children.[28] However, this increase in subsistence benefit was counterbalanced by the abolition of the needs-based family benefit.

[28] In addition to the increase in the basic amount of subsistence benefit by almost 8%, the weight assigned to children increased from 1 to 1.2, leading to an overall increase in the amount for children of almost 30%.

Figure A.8.2. Percent change in net income components across the unemployment spell



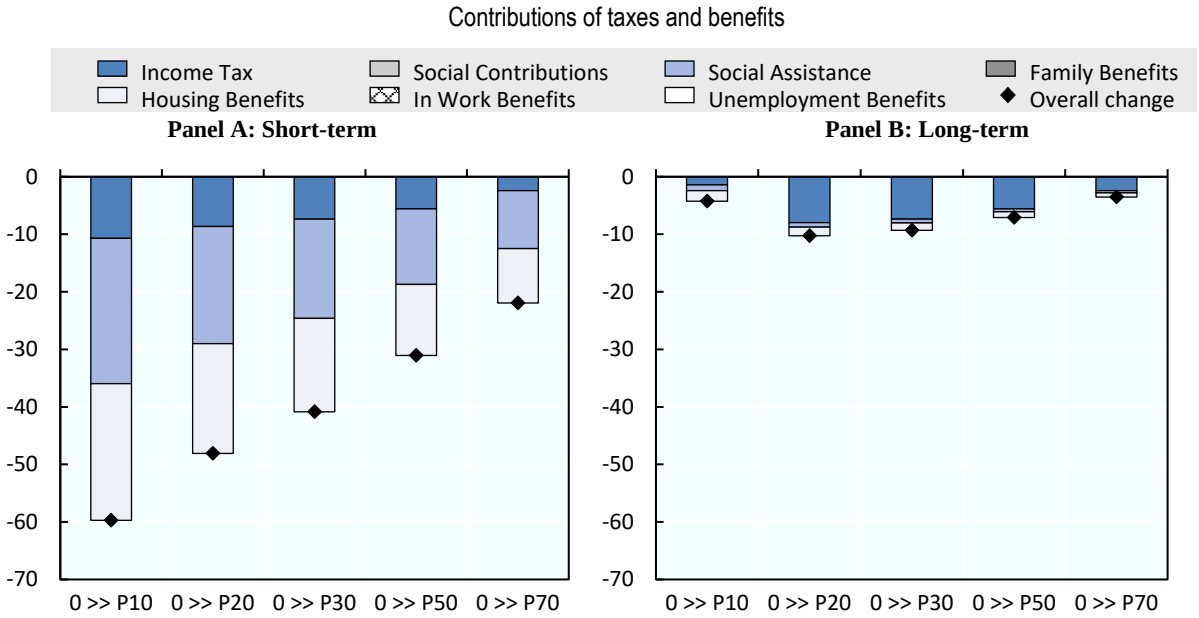
Note: For a single person without children aged 40 with a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

9. The increase in the personal income tax allowance reduced tax liabilities and strengthened incentives to take up employment (Figure A.8.3, blue bars). The effect of taxes is the same in the short term (Panel A) and in the long term (Panel B), except at the 10th percentile of the full-time earnings distribution (P10). Here, the effect is smaller in the long term, because the tax credit that was available for low-income workers before the reform had a similar effect on tax reduction as the new tax allowance. However, the tax credit was not available to low-income workers in short term as only those who were employed for at least 6 months in the year were eligible. Thus the impact of the change is bigger when considering the short-term effect.

10. In 2018, temporary earnings disregards were introduced in the income test for subsistence benefit (Panel A). 100% of earnings are disregarded in the first 2 months, and 50% in the following 2 months. This strengthened work incentives when considering the immediate impact of entering work on net income.

Figure A.8.3. Changes in participation tax rates



Note: For a single person without children aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

11. METRs decreased at low and medium earnings, providing stronger incentives to work more hours. However, at high earnings work incentives weakened because gradual withdrawal of the tax allowance increased the effective marginal income tax rate.

A.9 Finland

1. Please click on the following links to open policy evaluation scoreboards for Finland for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Over the 2016-2018 period, policy reforms moderately increased net incomes of working families relative to the average wage, which remained stable.[29]

3. Tax rates in the first and the last income brackets decreased by 0.5ppts, and in the middle brackets by 0.25ppts. Tax thresholds, the tax allowance for work-related expenses, and the maximum amount of the basic tax allowance increased, reducing tax liabilities further. Offsetting this, the broadcasting tax was raised and the child tax credit was discontinued. However, the overall effect of tax reforms on net incomes was positive at all earnings levels (Figure A.9.1, blue bars).

4. The earned income tax credit, which is classified as an in-work benefit in the OECD tax-benefit model, also increased Figure A.9.1, checked bars). The maximum amount of the credit increased by more than 20% and the income threshold at which the credit expires increased by 5%.

5. Social insurance contribution rates for employees increased over this period (Figure A.9.1, light grey bars). An income limit (around 30% of the average wage, well below the 10th percentile of the full-time earnings distribution) was introduced for paying the health insurance daily allowance: the contribution is not paid if income is below the limit, but if income is above the limit the contributions is paid on the whole amount of earnings.

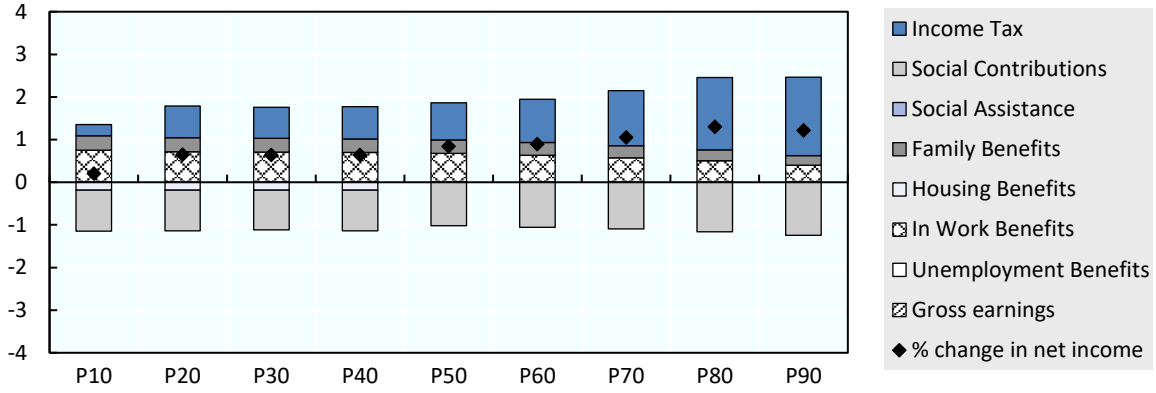
6. Finally, child benefit was reduced in nominal terms in 2017 and remained frozen in 2018. Income disregards used in housing benefits also marginally decreased leading to lower benefit entitlements for working families.[30] By contrast, maintenance allowance and social assistance were uprated every year by slightly more than average earnings growth. Child benefit supplement for lone parents increased by 10% in 2018.

[29] The average wage increased by only 0.3% between 2016 and 2018.

[30] Acceptable housing costs covered by housing benefit also reduced in some areas (by up to 5%). However, this was not the case in Helsinki, which is assumed in the model. Maximum housing costs covered by social assistance in Helsinki increased by 0-3% for families with 3 members or less, and decreased by 2-6% for larger families. However, these limits are not binding in the cases examined in the scoreboard where rents are set at 20% of the average wage, and therefore changes to these limits had no effect.

Figure A.9.1. Percent change in net income components across the earnings distribution

Positive values denote a positive contribution relative to the change in the average wage



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

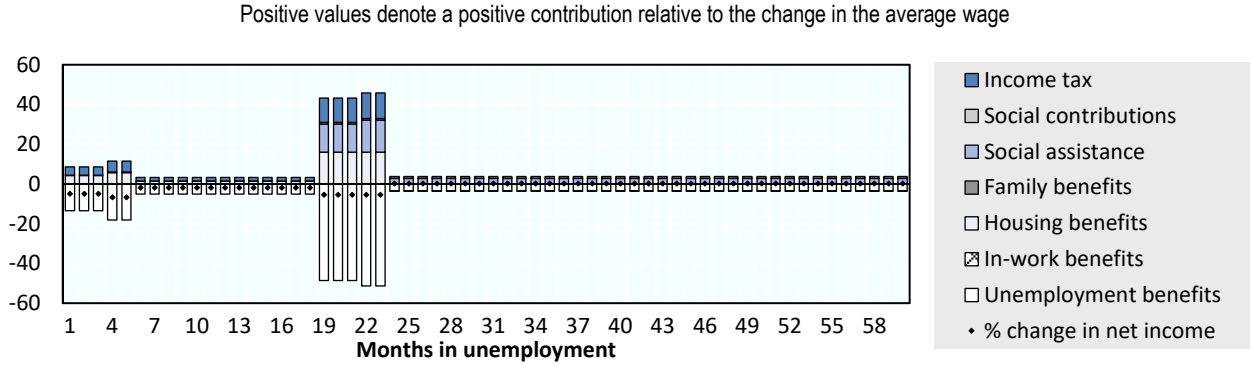
Changes in out-of-work-incomes

7. Non-working families who are not eligible for unemployment benefits saw their net incomes slightly increase because of an increase in social assistance and family benefits for lone parents (see previous sub-section).

8. Those receiving unemployment benefits experienced a drop in income due to reforms in unemployment benefits in some cases (see Box A.9.1). Unemployment benefits decreased the most at the beginning of the unemployment spell in the case of a person with a long contribution history who was eligible to an increased benefit amount before the reform (months 1 to 5 in Figure A.9.2). The same happens in the middle of the unemployment spell once the earnings-related benefit expires, earlier than this would have happened before the reform, and a smaller labour market subsidy is received instead (months 18 to 23 in Figure A.9.2). During other months, the benefit is reduced if the benefit recipient does not fulfil the activity requirement test (this occurs in months 4 to 23 and 24 to 60 in Figure A.9.2).

9. The reduction in unemployment benefits is partly offset by an increase in means-tested social assistance and housing benefits and a reduction in taxes and social security contributions (unemployment benefits in Finland are subject to taxes and selected social security contributions). Note that those with a working partner are not entitled to means tested benefits, such as social assistance and housing benefit, as these are assessed on the joint income of a couple. Income losses are therefore larger for couples where one partner is working and the other is unemployed.

Figure A.9.2. Percent change in net income components across the unemployment spell



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40, has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution. The person is assumed not to fulfil the activity test.
Source: Secretariat calculations using the OECD tax-benefit model.

Box A.9.1. Reforms in unemployment benefits in Finland

Finland implemented several changes in unemployment benefits in both 2017 and 2018.

In 2017:

- The maximum duration of earnings-related unemployment benefit (UI) decreased by 100 payment days[a] (that is, from approximately 23 to 18 months for those with a contribution record of 3 years or more, and from 18 to 14 months for those with an employment record of less than 3 years). After UI expires, a means-tested unemployment assistance benefit, labour market subsidy (UA), is paid for an unlimited duration. The change does not apply to those aged 58 or over.
- There was a change in the eligibility conditions for the increased amount of the benefit. Only benefit recipients who participate in employment promotion measures are now eligible for the increased amount (note that the model assumes no participation in these measures). Previously the unemployed with a long and stable working history of at least 20 years were also eligible.
- The basic unemployment benefit amount, supplements for children and the threshold for calculating the earnings-related component fell slightly (by less than 1%).

In 2018:

- The activity requirement test was introduced. An unemployed jobseeker must fulfil the test during each review period comprising 65 payment days* (i.e. 13 weeks) in order to be entitled to the full benefit amount for the next 65 payment days. The criteria for the activity test are met if a benefit recipient:
  - was employed for at least 18 hours during the 13 week review period, or
  - earned at least EUR 241 during this period, or
  - participated in employment promotion measures or other similar activities for at least five days during this period.

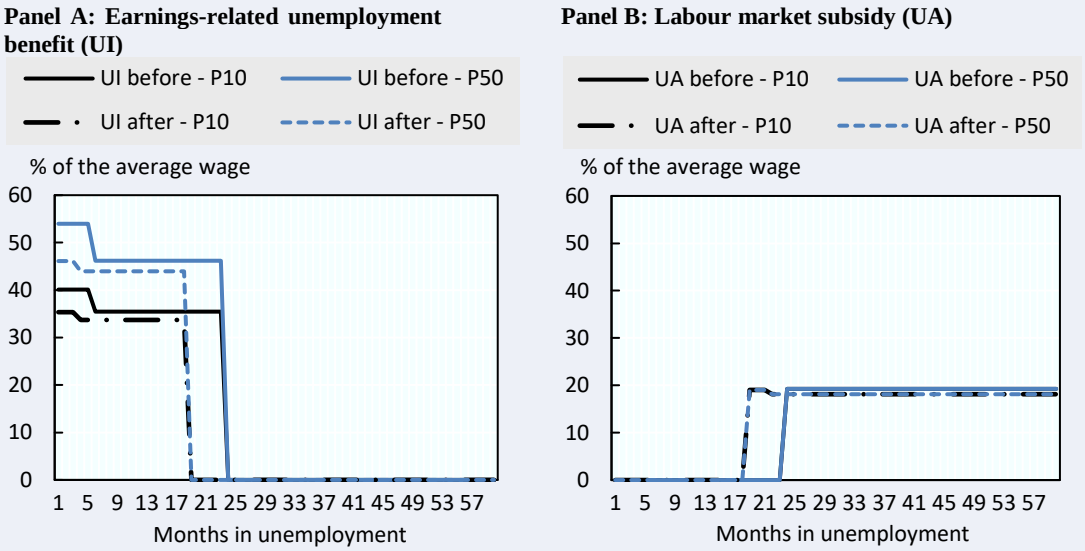
  If an unemployed jobseeker does not fulfil the activity requirement, the unemployment benefit is reduced by 4.65% for the next 65 payment days. The 4.65% reduction is applied to the total amount including possible child increases and increased amounts. The reduction is only applied once, i.e. reductions do not accumulate over time if the

conditions are not met in successive periods, and the first 65 days of each benefit (both UI and UA) are always paid in full.

In certain situations (e.g., a person with disability or a family carer) the activity is not monitored and the allowance is not reduced.

These reforms reduced unemployment benefit amounts for the case examined in the scoreboard of someone with a stable working history of 22 years who does not participate in employment promotion measures and does not work while receiving unemployment benefit, and who therefore does not satisfy the activity requirement test. Before the reform, such jobseekers were eligible to an increased UI amount for the first 5 months because of their long contribution history. After the reform, this is no longer the case. In addition, after the reform, as they do not fulfil the activity requirement test, the UI amount is reduced after the first 3 months of receipt (Panel A). The same happens to UA after the first 3 months of receipt (Panel B). The duration of UI is also reduced by approximately 5 months (lines shift to the left in Panel A) and hence UA, the benefit paid after UI expires, starts 5 months earlier (lines shift to the left in Panel B).

Figure A.9.3. Unemployment benefits before and after the reform



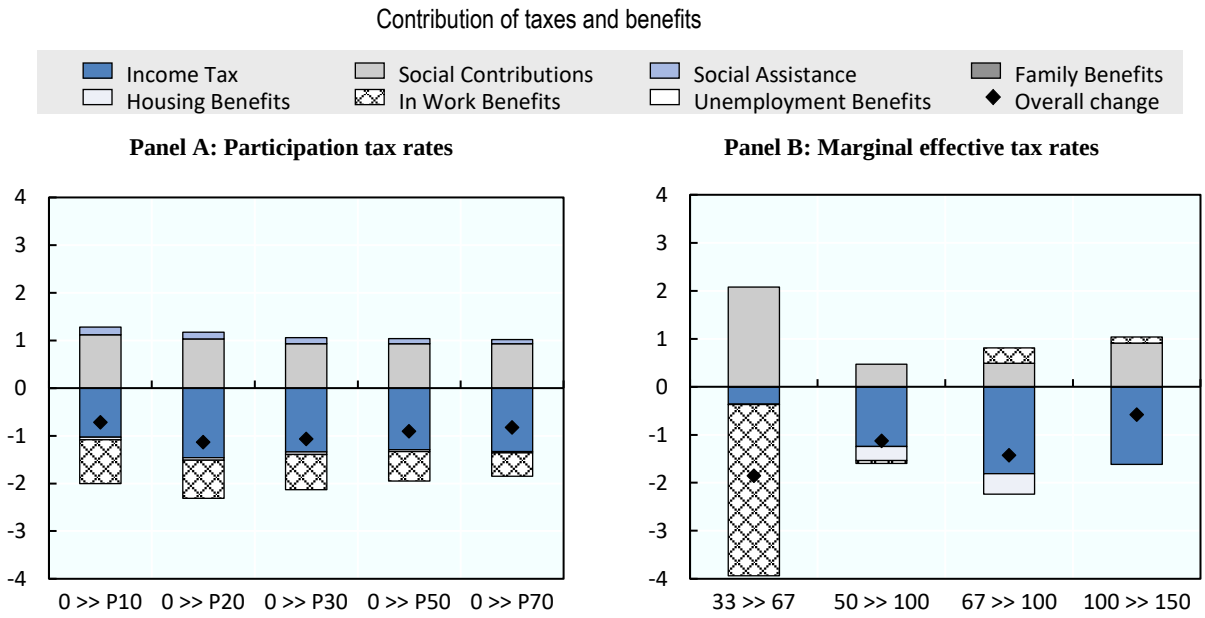
Note: For a single person without children. The jobseeker is 40 years old with a "long" and stable contribution history (22 years). The P10 and P50 values refer to the decile points of the full-time earnings distribution. The person is assumed not to participate in employment promotion measures and not to work during the unemployment spell (i.e. activity test is not met).
Source: Secretariat calculations using the OECD tax-benefit model.

[a] Note that unemployment benefits in Finland are paid 5 days per week.

Changes in selected indicators

10. Work incentives generally strengthened for most family types due to reductions in taxes and increases in in-work benefits, which increased incomes in work and thus reduced PTRs and METRs (Figure A.9.4). The increases in social security contributions and in social assistance benefits when not working slightly offset this, with the effect that overall reductions in PTRs and METRs were not large at less than 2ppts in all cases. Indeed, for those in couples with children whose partner does not work and lone parents at low earnings work incentives were almost unchanged as increases in out of work benefit entitlement were larger for this group, increasing the amount of benefit lost on entering work.

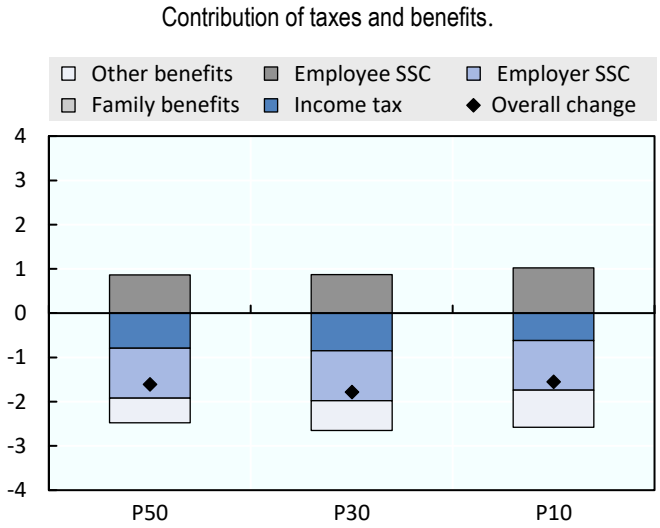
Figure A.9.4. Changes in work incentives



Note: For a single person without children aged 40. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

11. The effective tax rate on labour decreased. In addition to the policy changes described in the previous two sections, a decrease in the average social security contribution rates paid by employers also contributed to this effect (Figure A.9.5).

Figure A.9.5. Changes in effective tax rates on labour by earnings level



Note: For a single person without children aged 40. The P10-P50 values in the horizontal axis refer to the decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.10 France

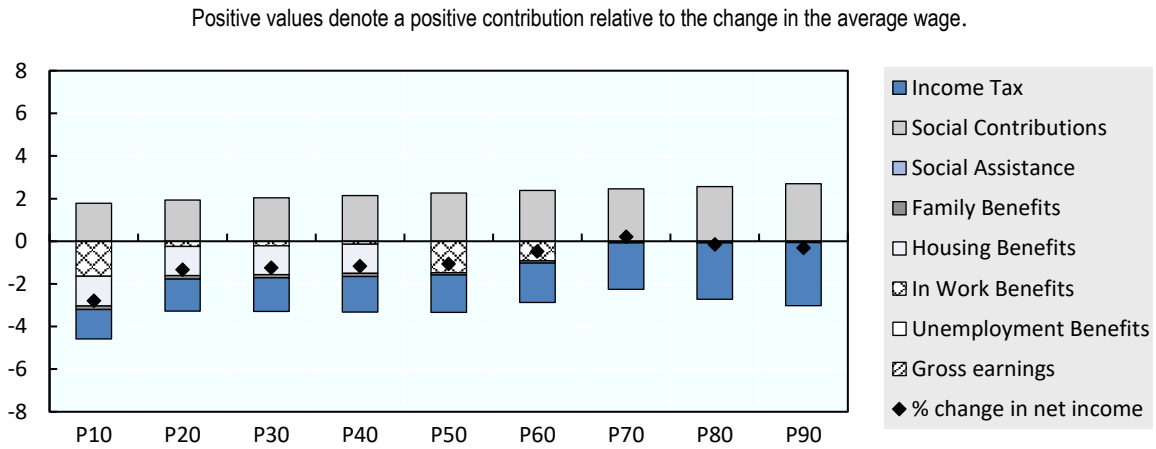
1. Please click on the following links to open policy evaluation scoreboards for France for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. There was significant 'benefit erosion' in France between 2016 and 2018. With the exception of social assistance, most benefit rates and income limits were frozen in nominal terms (e.g. housing and family benefits) or increased by less than growth in average earnings during this period (e.g. the prime d'activité, an in-work benefit), and thus fell relative to average earnings (Figure A.10.1). Net incomes thus fell relative to average earnings levels for most working families.

3. Moreover, income tax liabilities increased for working families between 2016 and 2018. This occurred both because of an increase in the Universal Social Contribution (CSG) paid by employees (classified in the OECD tax-benefit model as a second income tax) – the CSG rate increased from 5.1% to 6.8% in 2018 – and because of fiscal drag in the standard income tax. Tax thresholds were frozen in cash terms in 2017, and grew more slowly than average earnings in 2018. Social security contributions fell, however: in 2018, the sickness contribution of 0.75% of earnings was abolished, and the unemployment contribution was reduced from 2.4% to 0.95%.[31]

Figure A.10.1. Percent change in net income components across the earnings distribution



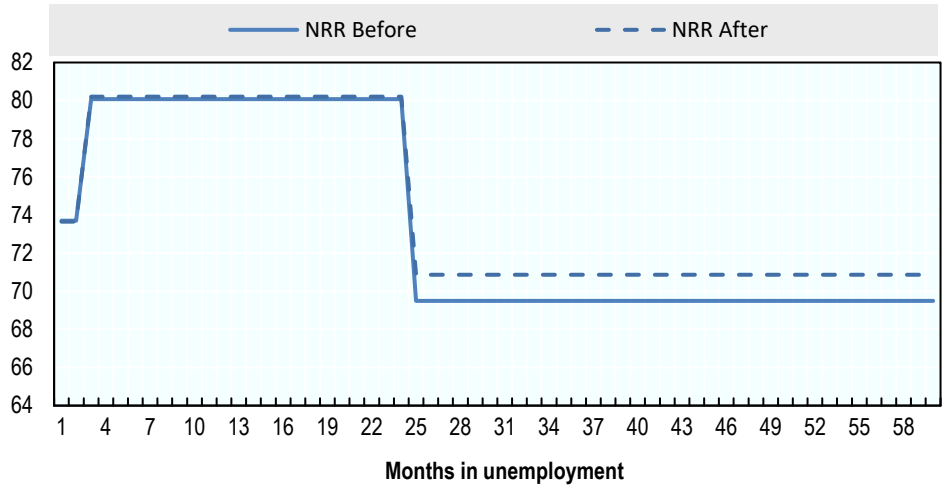
Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

[31] This contribution was subsequently abolished on 1 October 2018, after the reference date for this report of 1 January 2018.

Changes in out-of-work-incomes

4. Benefits fell relative to average earnings levels for workless families as both unemployment benefit, family benefit and housing benefits levels did not grow as quickly as the average wage. This decrease was offset for beneficiaries of social assistance by an increase in the RSA rate of 2.3% in 2017 and 1.3% in 2018. Consequently, the net replacement rate increased for those receiving social assistance. This includes those not entitled to unemployment benefits, lone parents and workless couples with children after 24 months of unemployment in the case where previous earnings were at the 10th percentile of the full-time earnings distribution (Figure A.10.2).

Figure A.10.2. Net replacement rate across the unemployment spell

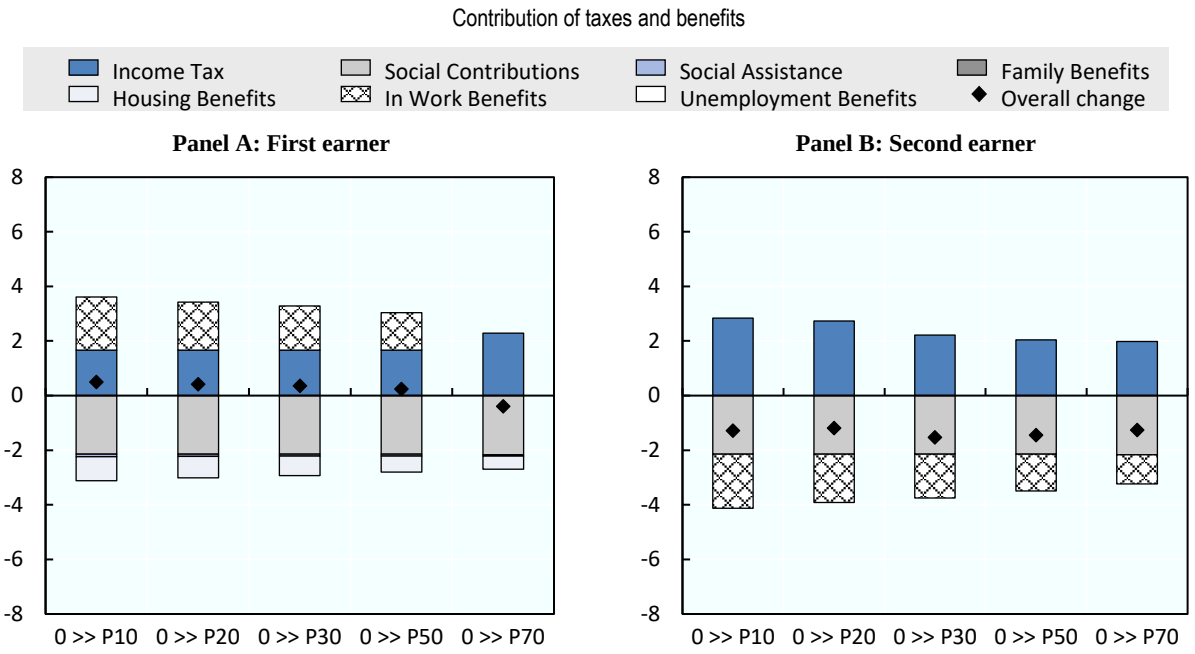


Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40, has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

5. The increase in the CSG paid by employees weakens incentives to work, whereas the reduction in social security contributions for employees strengthens them. These two changes roughly balanced each other out. However, the reduction in-work benefits relative to average earnings levels weakens the incentive for one member of the couple to work (rather than none) but strengthens the incentive for both members of the couple to work (rather than just one, see Figure A.10.3). Couples receive less in-work benefits when one person works, lowering the gain from the first member of the couple entering work (the same also holds for lone parents). However, since the benefit is means-tested against family income, this also means that there is less benefit to lose when the second member of the couple enters work, or if the first earner increases their earnings. As a result, METRs for the first earner and PTRs for the second earner fall.

Figure A.10.3. Changes in participation tax rates



Note: For a couple without children. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

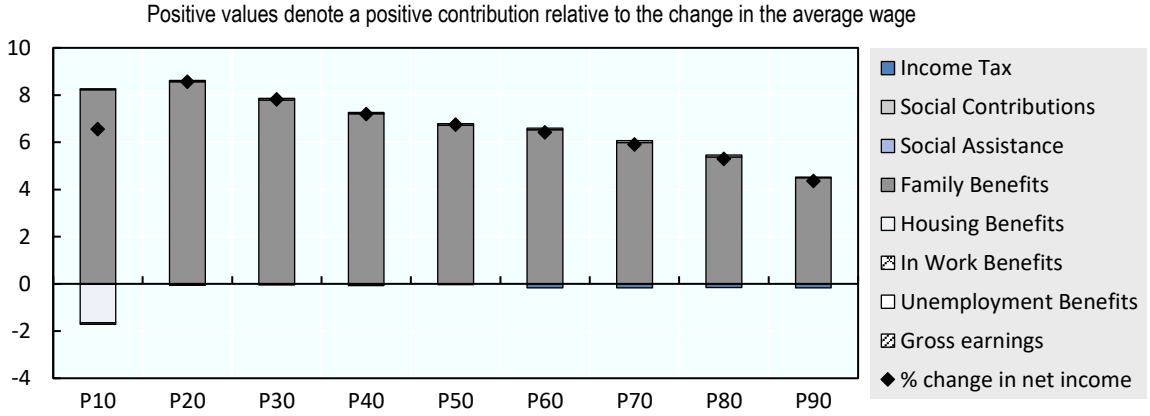
A.11 Germany

1. Please click on the following links to open policy evaluation scoreboards for Germany for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Germany implemented few policy changes for working families between 2016 and 2018. The most important change was an increase in family benefits for lone-parent families due to a reform of alimony advance payments in 2017 (see Box A.11.1), which increased net incomes (Figure A.11.1, dark grey bars). Other family benefits were also raised: child tax credits increased slightly in 2017 and 2018, but less than the growth in the average wage, and the supplementary child allowance[32] increased by 6% in 2017, more than the 4.5% increase in the average wage between 2016 and 2018. Overall, these changes led to reductions in family benefit entitlements relative to average earnings levels for some of the other family types with children (Panel B in the scoreboard).[33]

Figure A.11.1. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

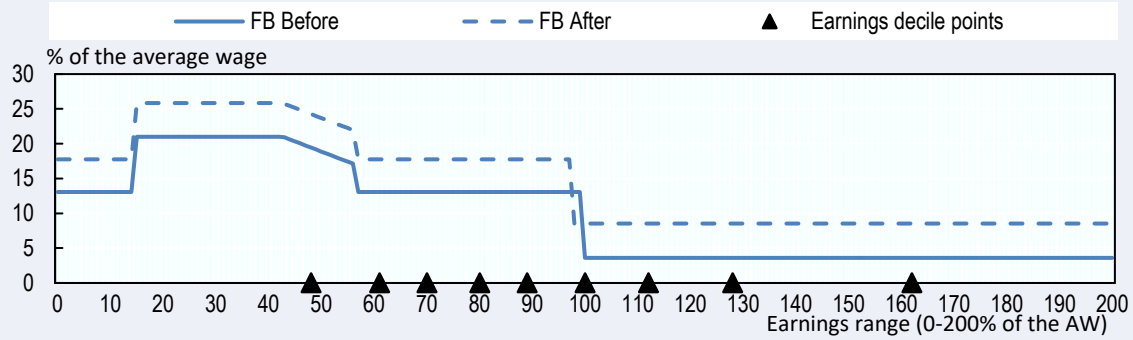
[32] The supplementary child allowance is paid to families with children who would otherwise be entitled to social assistance.

[33] Family benefits decreased more significantly for a one-earner couple with children at the 90th earnings percentile of the income distribution. This decrease however was compensated by a decrease in income taxes. In Germany, the child tax credit (classified as a family benefit in the OECD tax-benefit model) is replaced by the child tax allowance (modelled as part of income taxes), if the latter is more favourable for a family, which is precisely what happened in this case.

Box A.11.1. The reform of the alimony advance payment in 2017

A reform of the alimony advance payment for lone parents became effective in Germany in 2017.[a] First, the reform increased benefit rates for children below age 6 by 3.4% and for children between age 6 and 11 by 3.6%. Additionally, a new payment rate was introduced for children aged 12 to 17 under certain conditions (which does not impact on the results presented in the scoreboard, as children are assumed to be aged 4 and 6). Second and more importantly, the 72-months limit for receipt of the of alimony advance payment was abolished. As the OECD tax-benefit model assumes that alimony advance payments have been granted continuously from the birth of a child, they were not granted to the 6-year old child in 2016 given the 72-month limit. This changed after the reform in 2017. The increase in family benefits as shown in Figure A.11.2. is almost entirely driven by this change in alimony advance payment, which is the only benefit that is granted throughout the entire earnings range in the figure.[a]

Figure A.11.2. Family benefits before and after the reform



Note: For a single-parent family with two children aged 6 and 4. The adult is aged 40.
Source: Secretariat calculations using the OECD tax-benefit model.

[a] The alimony advance payment is made to lone parents who do not receive maintenance payments from the non-resident parent. Since the OECD tax-benefit model assumes that if maintenance payment are required they are not forthcoming, all lone parents receive this benefit in the model.

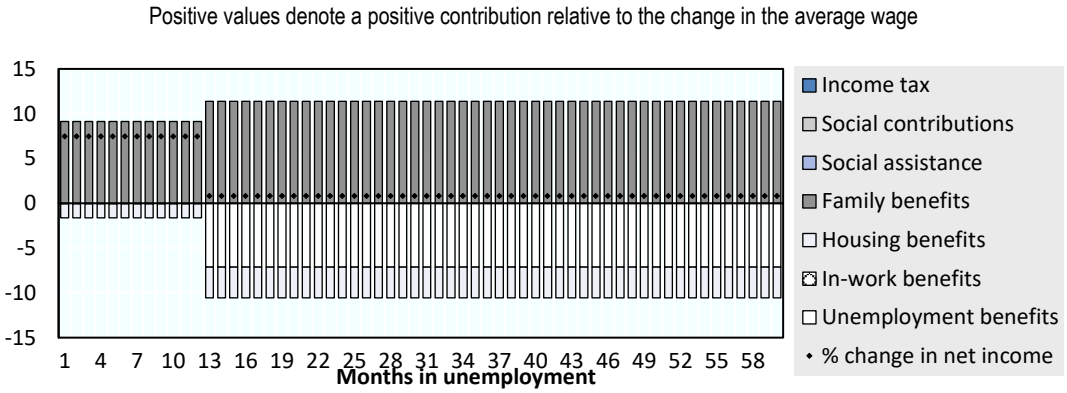
[b] For earnings at 15% of the average wage, supplementary child allowance is added but gradually phased-out between earnings at 40% and 53% of the average wage. Then, benefits from the education and participation package are withdrawn at 57% of the average wage, and the child tax credit is replaced with the child tax allowance at 99% of the average wage (see footnote 33), leaving only alimony advance payment.

Changes in out-of-work-incomes

3. The increase in alimony advance payment described in Box A.11.2 also affected the net incomes of workless lone-parent families. During the first 12 months of unemployment in Figure A.11.3, the family receives unemployment insurance benefits and fully benefits from the increase in alimony advance (dark-grey bars). After 12 months, the household becomes eligible to unemployment assistance (and a related housing supplement). As family benefits are taken into account in the means test for these benefits, higher alimony advance payment reduces entitlement to unemployment assistance (white

bars), leaving only a marginal increase in net incomes. Housing benefit parameters[34] and unemployment assistance amounts were not uprated in line with earnings growth for most family types, which led to slight reductions in incomes out of work. An exception are one-earner couples with children, who benefited from the increase in unemployment assistance supplements for partners and children and especially the increased housing supplement for a four-person family.

Figure A.11.3. Percent change in net income components across the unemployment spell



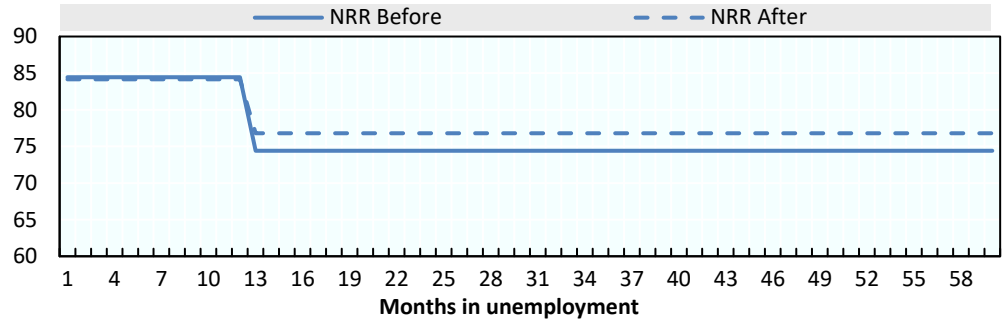
Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40, has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

4. The similar changes in incomes in and out of work left NRRs almost unchanged for most family types. For the reasons outlined above, an exception are again one-earner couples with two children, for whom NRRs increased by around 3 percentage points from the 13th month of unemployment onwards for previous earnings equal to the 10th percentile of the full-time earnings distribution (Figure A.11.4).

[34] Housing allowance parameters were frozen in nominal terms in 2017 and 2018; the maximum amounts for applicable housing expenditure used in the calculation of the housing supplement to social assistance increased in 2018 only for all family types while the maximum amounts for applicable heating costs decreased both in 2017 and 2018.

Figure A.11.4. Net replacement rate across the unemployment spell



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

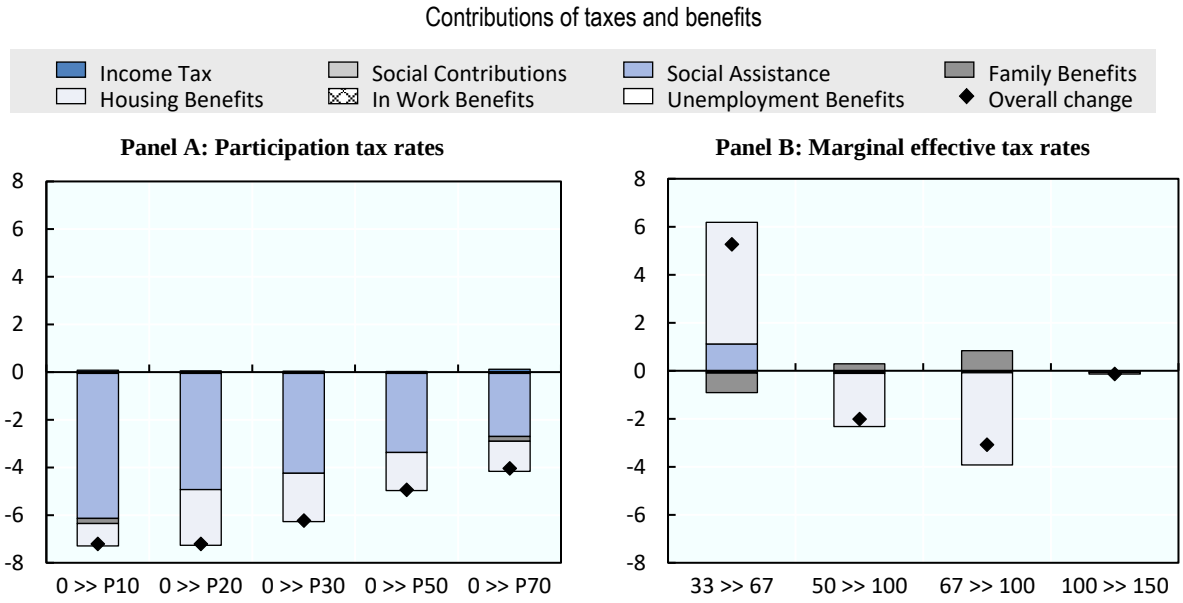
5. The largest changes in incentives to enter work were for lone parent families. PTRs fell by up to 6 percentage points for this group. This arises because less social assistance and housing supplements are now received when out of work as increased family benefits reduce entitlements to these benefits (light blue and off-white bars in Figure A.11.5, Panel A). There is therefore less benefit to lose by entering work: the alimony advance payment is not means tested and so increasing this benefit does not affect incentives to work.

6. The opposite occurred for some other groups, however. Increased social assistance and housing supplements out of work weakened incentives for those in couples with children to enter work, as they now lose more benefits when doing so. For other family types PTRs changed only slightly because of benefit erosion relative to the average wage and bracket creep effects.

7. The incentives to increase working hours from one-third to two-thirds of a full-time work week weakened significantly for a median earner in a couple with two children whose spouse does not work (Figure A.11.5, Panel B). This occurred because this family received higher social assistance benefits and housing supplements in 2018 when working one-third of a full-time work week at median earnings and thus had more to lose if they increased their earnings. Furthermore, housing allowance (which is received at higher earnings levels) phased-out more quickly over low earnings ranges. But this also had the effect of *strengthening* work incentives for those moving from 50% and 67% of a full-time work week at median earnings to full-time as there is now *less* withdrawal of housing allowance over this earnings range.

8. For other family types, lower entitlement to social assistance benefits and housing supplements at lower earnings levels strengthened incentives to increase working hours: less benefit is lost if they increase their earnings (see Figure C.3 in the scoreboard).

Figure A.11.5. Changes in work incentives



Note: Panel A: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Panel B: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The notation "33 >> 67" in the horizontal axis refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.12 Greece

1. Please click on the following links to open policy evaluation scoreboards for Greece for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Very significant changes were made to the benefit system in Greece in both 2017 and 2018. These greatly increased the incomes of some families, both working and not working, but others saw little change in their net incomes.

3. Low-income working families with children were among those who saw large increases in their net incomes. Increases in the generosity of family benefits in 2018 (see Box A.12.1 below) increased the incomes of these families by up to 20% in some cases (Figure A.12.1, grey bars). Middle-income families with children also benefited from these changes, but increases in net income were more modest at between 2% and 7%. Only the highest income families with children (those with two earners, with combined earnings more than 175% of the average wage) did not gain from these changes, as they still do not receive family benefits after the reform.

Box A.12.1. Reforms to family benefits in Greece in 2018

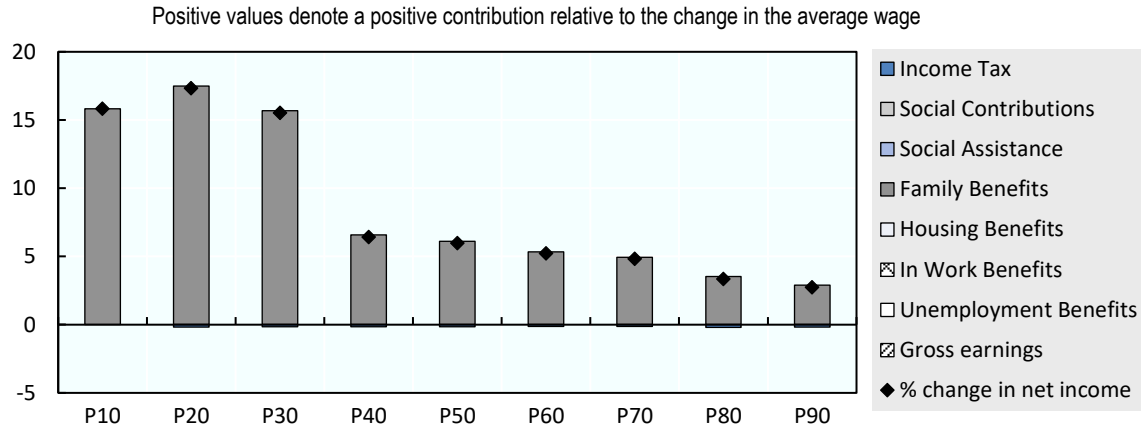
The Single Child Support Allowance was introduced in 2013, and together with the system of low-income support for children in compulsory education is now the only family benefit available in Greece following the abolition of the basic child benefit in 2015, the benefit for unprotected children in 2017 and the special allowance for larger families in 2018.[a] Until 2018, the structure of the benefit was as follows. The maximum benefit amount was €40 per child per month, and the benefit was withdrawn in three stages at thresholds based on equivalised income. Five changes were made to this structure in 2018, namely:

- The basic benefit amount increased to €70 per month.
- Higher amounts were introduced for the second child (€140 per month), and for third and subsequent children (€210 per month).
- The amount by which the benefit amount falls at each threshold changed. Until 2018, it fell by ⅓ at the first income threshold and another ⅓ at the second threshold, but now it falls by 40% at the first threshold and a further 20% at the second threshold. Nevertheless, as maximum benefit amounts are so much higher, the amount received by families above these thresholds is still higher than it was previously.
- The equivalence scale used to calculate family equivalised income was changed (it was previously ⅓ for the second adult in the family and ⅙ for each child, but is now ½ for the second adult and ¼ for each child other than the first child in a lone parent family, for whom it is ½),

- The second and third income thresholds were reduced from €12,000 and €18,000 to €10,000 and €15,000 respectively. The combined effect of these last two changes was to increase effective income thresholds for a lone parent family with two children but leave them essentially unchanged for a two-adult two-child family.

[a] Note that the impact of abolishing these two benefits was more than offset by the increase in generosity of the main child benefit in 2018.

Figure A.12.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

4. By contrast, working families without children were unaffected by changes to benefits and saw their net incomes fall relative to average earnings levels. This happened because of 'fiscal drag' in the income tax system: income tax credits, band limits and thresholds were unchanged in cash terms between 2016 and 2018. However, as earnings growth was sluggish over this period – the average wage increased by less than 1% between 2016 and 2018 – the size of this income loss was small, at most 0.2%.

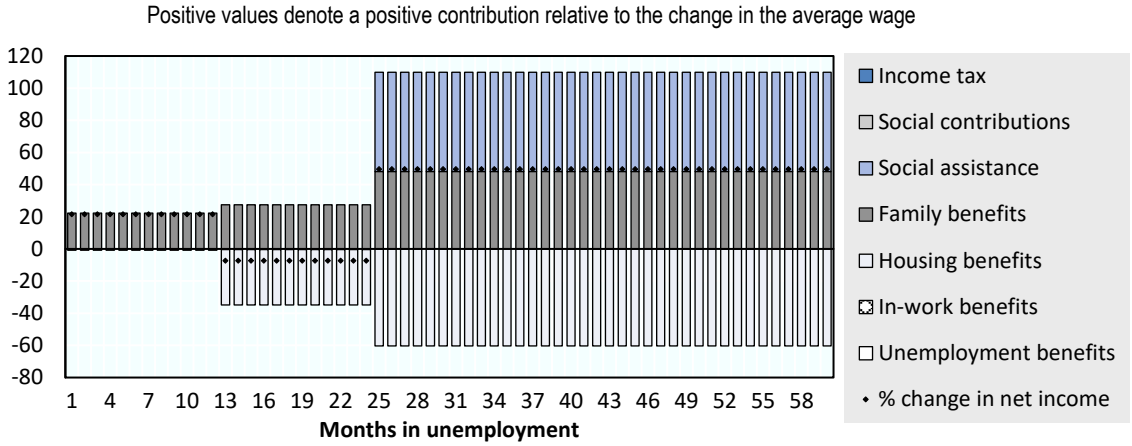
Changes in out-of-work-incomes

5. Workless families not entitled to unemployment benefits were another group to see big increases in their incomes over the period from 2016 to 2018. The introduction of a social assistance benefit in 2017 where there previously was none dramatically increased the incomes of this group, threefold for those without children. For those without children, this more than offset the abolition of the rent allowance in 2017. For families with children, the loss from the abolition of the rent allowance was approximately the same as the gain from the introduction of the social assistance benefit, but incomes still increased by virtue of the increases in family benefits also observed for working families (see Box A.12.1). As a result, net replacement rates for this group increased to levels more in line with those in other EU Member States.

6. There was generally little change for those who were entitled to unemployment benefits, however. Although benefit amounts did not change in cash terms between 2016 and 2018, since earnings growth was so low, this did not represent a significant reduction

relative to average earnings levels. The exceptions to this rule were families receiving unemployment assistance who received rent allowance until 2017 but are not entitled to the new social assistance benefit. An example of this in the scorecard for is the couple with two children in the second year of the unemployment spell (Figure A.12.2, off-white bars).

Figure A.12.2. Percent change in net income components across the unemployment spell



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

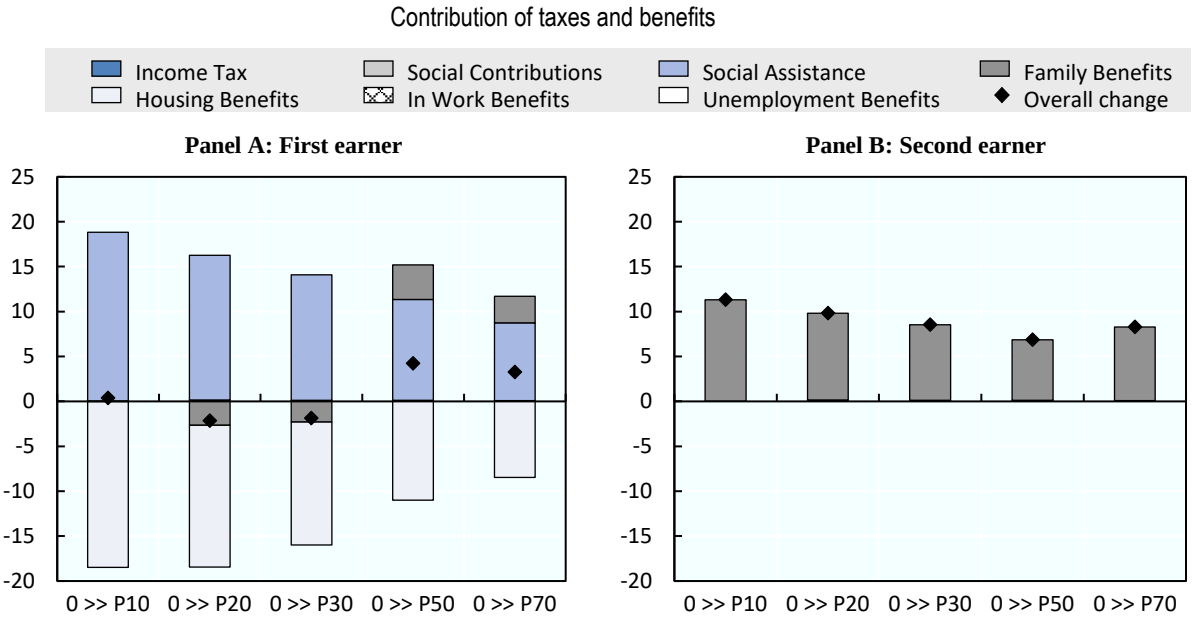
Changes in selected indicators

7. These sizeable changes to the structure of the benefit system gave rise to a wide range of impacts on the incentive to work at all. For those without children who are single or have a partner who is not in paid work, incentives to work weakened because of the introduction of a social assistance benefit out of work (which is larger than the rent allowance that was abolished). PTRs increased by more than 20 percentage points (ppts) in some cases as this benefit is withdrawn on entering work, though remained at moderate levels overall, around 50% at most.

8. For those with children, the effects are less clear cut as the increase in net income out of work resulting from the introduction of the social assistance benefit was approximately offset by the loss from the abolition of rent allowance. Furthermore, for those with a partner who is not working, the increase in family benefits is roughly the same both in and out of work and thus PTRs overall did not change significantly, remaining within 5ppts of their initial value.

9. For those with children whose partner is in paid work, however, the changes to family benefits increase PTRs significantly. Since family benefits are withdrawn in stages when the second member of the couple enters work, the increase in family benefits for single earner couples means that more is lost when the second member of the couple enters work.

Figure A.12.3. Changes in work incentives



Note: For a couple with two children aged 6 and 4. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

10. For lone parents, the change to equivalence scales in the Single Child Support Allowance (see Box A.12.1) has the effect that the benefit is withdrawn at higher levels of earnings. Family benefit receipt thus increases by more in work than out of work, lowering the PTR.

11. Finally, those in couples without children who have a working partner are unaffected by these benefit changes whether they work or not. They therefore have no effect on their work incentives. Instead, PTRs for this group increase very slightly because of fiscal drag in the income tax system.

12. The incentive for individuals to increase their earnings generally weakens, however. For those without children, this effect is negligible (METRs rise by at most 0.3ppts) and arises because of 'bracket creep' in the income tax system that lowered the level of each tax bracket relative to average earnings levels. For those with children, increases in METRs are much more significant and are the result of increased entitlements to family benefits at lower earnings levels: more benefit entitlement is lost if earnings are increased.

A.13 Hungary

1. Please click on the following links to open policy evaluation scoreboards for Hungary for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Strong earnings growth between 2016 and 2018 significantly increased the incomes of working families in Hungary before taxes and transfers. As there were no tax and benefit changes that affected the net incomes of those without children, this also led to an increase in net incomes for this group. Families without children do not receive cash benefits unless their earnings are well below the 10th percentile of the full-time earnings distribution, and income taxes and social security contributions remained the same fixed percentage of earnings.

3. By contrast, there were policy changes that affected the incomes of families with children though these had offsetting effects. First, family allowance rates were left frozen in nominal terms during a period of rapid nominal wage growth, reducing the value of these benefits relative to the average wage. Counteracting this, the family tax base allowance (which can be used to offset income tax or employee social security contributions but is not refundable)[35] was significantly increased in both 2017 and 2018 for families with two children (but not increased at all for those with more or fewer children). These two changes had opposite but roughly equal effects for most two-child families, leaving net incomes less than 1% lower relative to the average wage than before in most cases.

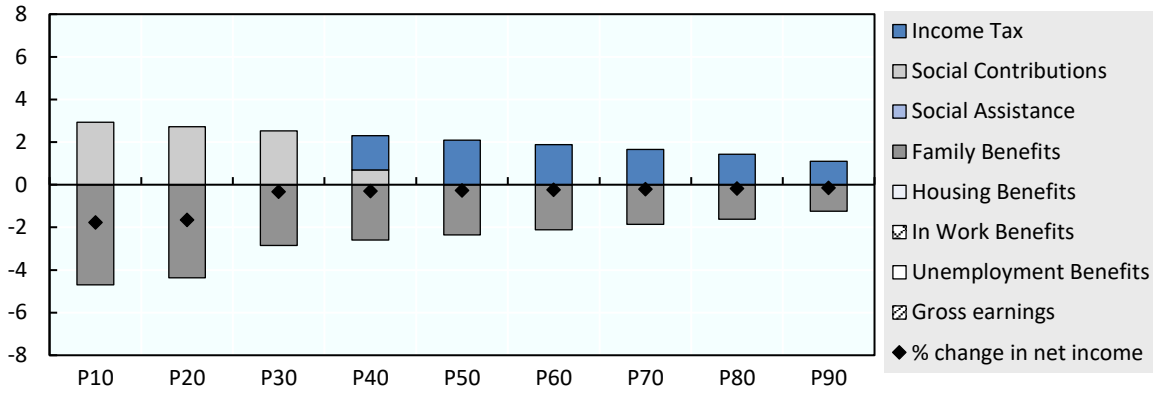
4. Some lower-income families are also entitled to the regular child protection allowance (Figure A.13.1). The amount of this benefit and the income threshold at which it is withdrawn were both increased over this period by less than growth in average earnings. As a result, a single-earner couple with children earnings up to the 20th percentile of the full-time earnings distribution lost their entitlement to this benefit. Income losses were slightly larger for these families, but still less than 2%.

5. Other family types not examined in the scoreboard had larger losses. Since families with one, three, or more children did not see an increase in the value of the family tax base allowance, they would not have benefited from the lower income tax or social security contributions observed in Figure A.13.1. Indeed, as the level of the family tax base allowance did not increase in nominal terms for these families, they saw an increase in their income tax liabilities or social security contributions.

[35] In other words, for families for whom the allowance is greater than their income tax liability, the allowance reduces their social security contributions. This occurs up to the 40th percentile of the full-time earnings distribution for the family type examined in Figure A.13.1. It is also possible for families to share the allowance between the two parents if its value exceeds the total income tax and social security contributions paid by one parent.

Figure A.13.1. Percent change in net income components across the earnings distribution

Positive values denote a positive contribution relative to the change in the average wage



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

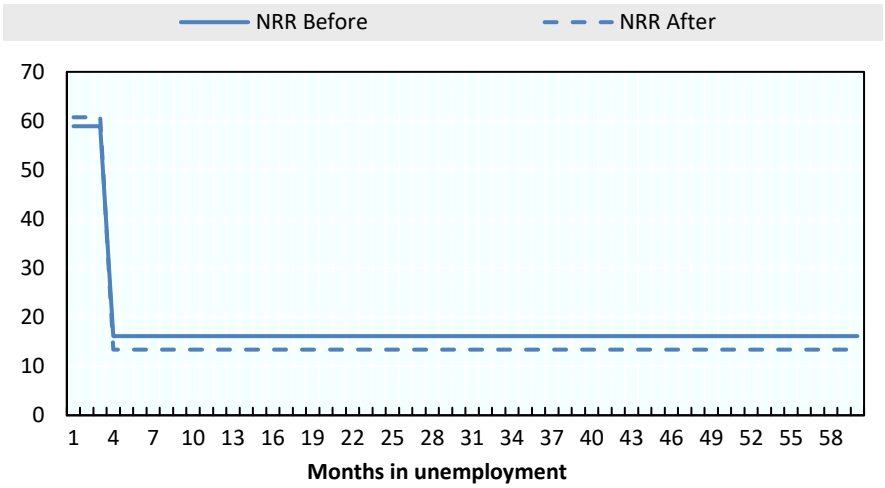
Changes in out-of-work-incomes

6. Social assistance benefit amounts were frozen in nominal terms between 2016 and 2018 and thus fell relative to the average wage. Reductions in net incomes were increased for workless families with children as a result of the non-indexation of family allowance rates. This also affected working families, but unlike working families, workless families did not benefit from the increase in the family tax base allowance as this is not refundable to those who pay no income taxes or social security contributions.

7. Minimum and maximum levels of unemployment benefits increased slightly more than growth in average earnings, as these are increased in line with increases in the minimum wage. Thus, for those without children whose previous earnings were above the 40th percentile of the full-time earnings distribution, NRRs increased slightly for the first three months of the unemployment spell.[36] However, NRR at longer unemployment durations fell as a result of the nominal freeze in social assistance amounts (Figure A.13.3). For those with children, the reduction in family allowance rates more than offset the increase in unemployment benefits during the first three months, so NRRs fell throughout the unemployment spell.

[36] There was no change for those with lower levels of earnings, for whom the unemployment benefit rate is 60% of their previous earnings.

Figure A.13.2. Net replacement rate across the unemployment spell

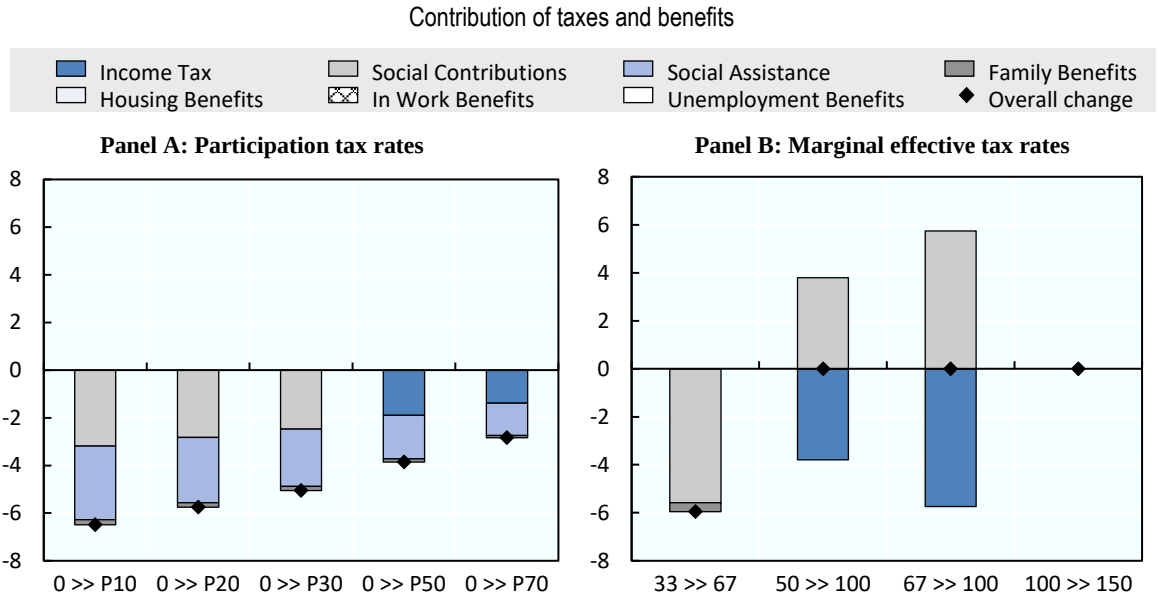


Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

8. For those without a spouse in paid work (that is, single people and those with a non-working spouse), policy changes reduced PTRs over the 2016-2018 period. This was the result of lower levels of social assistance benefits relative to earnings when not working, and for those with children, lower income taxes and/or social security contributions in work following the increase in the family tax base allowance. These changes also reduced METRs at very low earnings levels where some social assistance is received in work or the family does not make full use of its family tax base allowance: there is less social assistance to lose by increasing earnings, and more can be earned before income taxes or social security contributions become payable.

Figure A.13.3. Changes in work incentives

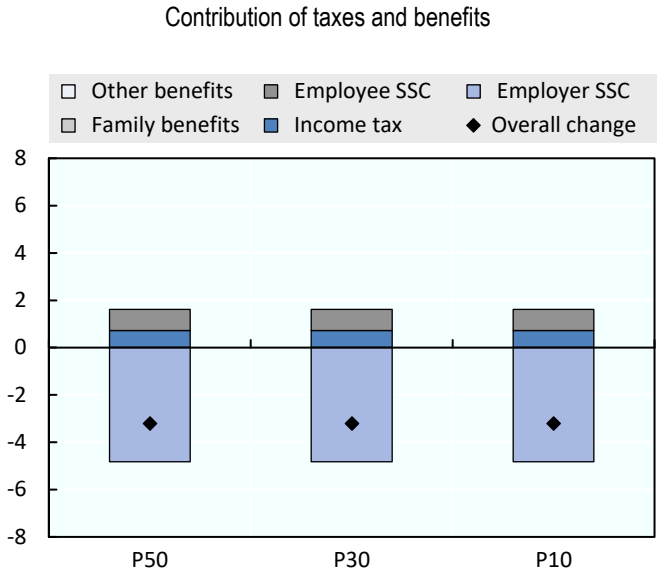


Note: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

9. For those with a spouse in paid work, work incentives were not affected by policy reforms: unless their partner's earnings are very low, these remove any entitlement to social assistance, and use the full family tax base allowance.

10. The effective tax rate on labour income fell reasonably significantly (by between 3 and 5ppts, see Figure A.13.4), largely as a result of a sizeable reduction in employer social security contributions (light blue bars): the contribution rate for employers fell from 27% in 2016 to 22% in 2017 and then 19.5% in 2018. (Note that even though income tax and employee social security contributions are unchanged in the situation examined in Figure A.13.4, income taxes and employee social security contributions rise as a share of the gross labour cost – that is, earnings plus employer social security contributions – as employer social security contributions fall.)

Figure A.13.4. Changes in effective tax rates on labour by earnings level



Note: For a single person aged 40 without children. The P10-P50 values in the horizontal axis refer to the decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.14 Ireland

1. Please click on the following links to open policy evaluation scoreboards for Ireland for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Both tax and benefit policies had an impact on the incomes of working families in Ireland during the 2016-18 period. The benefit changes were fairly straightforward: child benefit rates were frozen in nominal terms during this period and thus fell relative to average earnings (Figure A.14.1, grey bars), as were the levels of Family Income Supplement (now renamed Working Family Payment, an in-work benefit, see checked bars). For lone parents, two changes to One Parent Family Payment (a means-tested benefit for lone parents that can be received both in and out of work) had more or less offsetting effects on net incomes in work. Although the benefit amount did not increase as quickly as average earnings, the earnings disregard increased substantially in 2017.

3. Income tax changes had a more varied range of effects.[37] In the standard income tax, tax credits were frozen in nominal terms and the threshold at which the 40% rate starts to be paid did not rise as quickly as the average wage. Both of these changes tended to increase income tax liabilities through 'fiscal drag'. At the same time, Universal Social Charge (USC) liabilities fell as the lowest three rates were reduced from 1%, 3% and 5.5% to 0.5%, 2% and 4.75% respectively.[38] Since these two taxes have different bases and credits in the standard income tax vary by family type, these changes have somewhat different impacts for different types of family.

4. For single people without children, the gain from the reductions in USC rates is not sufficient to offset the losses from the non-indexation of tax credits at the lowest earnings levels. But the gain from lower USC rates grows as earnings rise, and a single person without children gains from income tax changes overall from the 30th percentile of the full-time earnings distribution. From median earnings levels upwards, however, this individual starts to pay income tax at the 40% rate and so is affected by the under-indexation of the threshold at which this rate starts to be paid. Beyond this earnings level, gains from lower USC rates continue to accumulate, and when earnings exceed the 70th percentile of the full-time earnings distribution the overall impact of income tax changes is to increase net income. Similar patterns occur for second earners in couples.

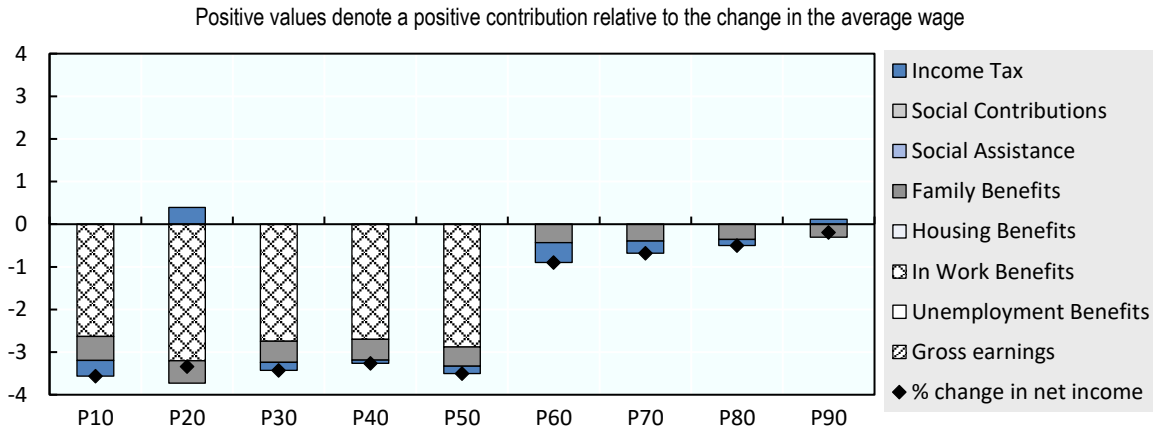
[37] Note that both the standard income tax and the Universal Social Charge (USC) are counted as income taxes in the TaxBEN model.

[38] All three rates were reduced by 0.5 percentage points (ppts) in 2017, and the second rate by a further 0.5ppts and the third rate by 0.25ppts in 2018.

5. For those with a dependent spouse, the standard income tax is not payable until a higher earnings level since the married couple's tax credit is twice that for a single person. As a result, up to the 20th percentile of the full-time earnings distribution for those without children and up to the median full-time earnings for those with children,[39] families gain from the reductions in the USC but do not pay any standard income tax. Beyond that level, the pattern of gains and losses is similar to that for single people without children: at slightly higher earnings levels, the loss from the freeze in tax credits is offset by gradually increasing gains from the lower USC rates. Then, from the 60th percentile of the full-time earnings distribution upward, there is a further loss resulting from the under-indexation of threshold for the 40% tax rate.

6. For lone parents, the story is somewhat more complicated. At very low earnings levels (up to the 10th percentile of the full-time earnings distribution), the lone parent receives One Parent Family Payment, which is subject to the regular income tax but not the USC. At this earnings level, losses from the freeze in tax credits exceed the gain from lower USC rates. One Parent Family Payment is withdrawn when earnings exceed a threshold that is below the 20th percentile of the full-time earnings distribution. At the 20th percentile, since taxable income is actually lower following the withdrawal of One Parent Family Payment, the lone parent gains from lower USC rates but is not liable to the standard income tax. Once earnings reach the 30th percentile of the full time earnings distribution, however, the lone parent is again liable to the standard income tax and the losses from the freeze in tax credits again exceed the gains from lower USC rates. Above this earnings level, the gain from lower USC rates continues to grow but the lone parent is also (like other family types) affected by the under-indexation of the 40% income tax threshold when earnings exceed this amount (which occurs at the 60th percentile of the full-time earnings distribution, see Figure A.14.1, blue bars).

Figure A.14.1. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

[39] A single-earner couple with children also benefits from the Home Carer's Allowance and so does not start to pay income tax until a higher level of earnings.

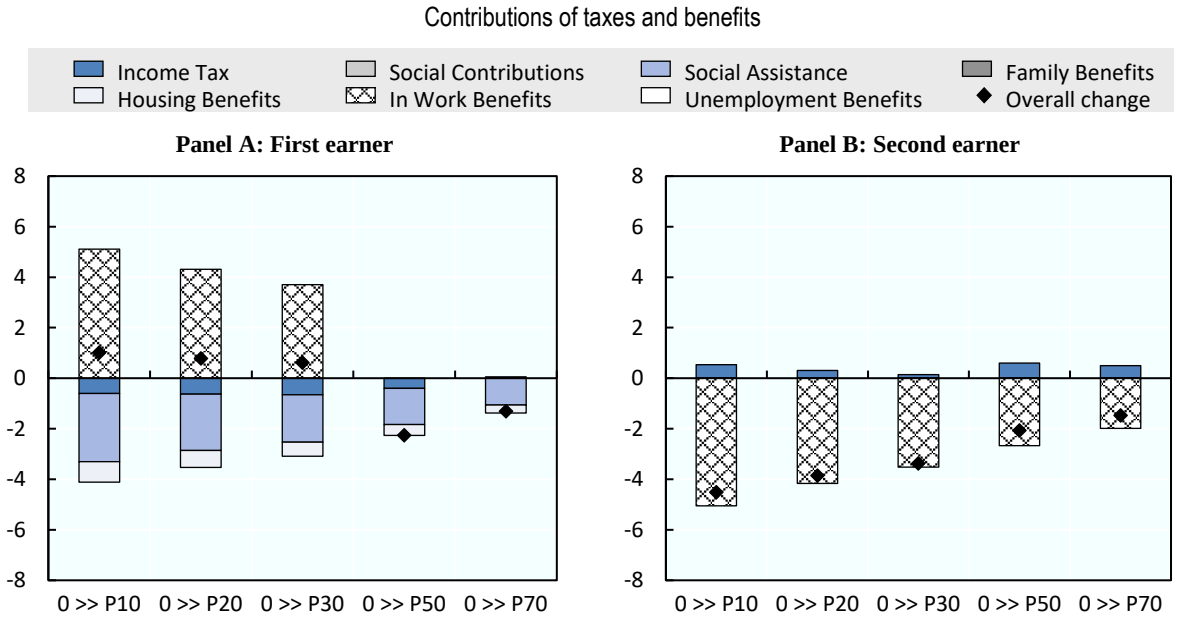
Changes in out-of-work-incomes

7. Benefits fell relative to average earnings levels for workless families as both unemployment benefit, social assistance and family benefit levels did not grow as quickly as the average wage. Housing benefit entitlements also fell for most workless families: maximum housing benefit amounts were frozen in nominal terms over this period, and the minimum contribution towards the rent was increased significantly for couples in 2017. Note that the lone parent examined in the scoreboard is an exception to this: in this case, lower entitlement to One Parent Family Payment leads to higher housing benefits since One Parent Family Payment is included as income in the means test for housing benefit.

Changes in selected indicators

8. In couples with children, the freeze in in-work benefit rates weakens the incentive for one member of the couple to work (rather than none) but strengthens the incentive for both members of the couple to work (rather than just one, see Figure A.14.2, checked bars). Couples receive less in-work benefits when one person works, lowering the gain from the first member of the couple entering work. (The same also holds for lone parents). However, since the benefit is means-tested against family income, this also means that there is less benefit to lose when the second member of the couple enters work, or if the first earner increases their earnings. As a result, METRs for the first earner and PTRs for the second earner fell.

Figure A.14.2. Changes in participation tax rates



Note: For a couple with two children aged 6 and 4. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

9. For those without children, PTRs fell as a result of lower levels of out-of-work benefits relative to average earnings levels: there is less benefit to lose on entering work. Changes to income taxes also have an effect, but these are relatively small.

10. In addition to the tax-benefit policy changes already mentioned, employer social security contribution rates were increased by 0.1ppts in 2018, increasing the effective tax rates on labour. Taken in conjunction with other policy changes that reduced benefit entitlements, the effective tax rate on labour increased for most of the cases considered in the scoreboard.

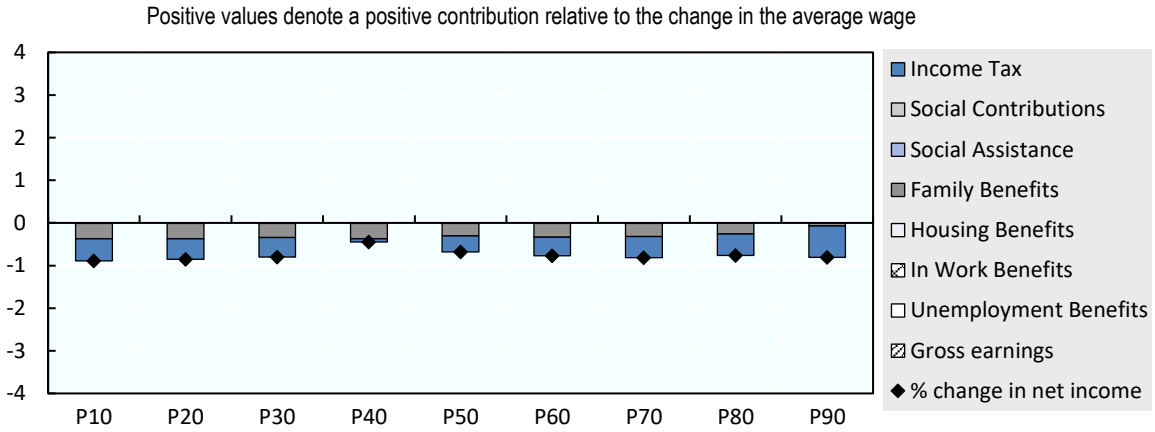
A.15 Italy

1. Please click on the following links to open policy evaluation scoreboards for Italy for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work incomes

2. There was a small reduction in in-work net incomes for most working families in Italy between 2016 and 2018. This was the result of two different effects: first, fiscal drag, which affected mainly incomes at the bottom of the earnings distribution,[40] and secondly, the increased progressivity in the regional surcharge tax, which increased tax liabilities for higher earners (blue bars, Figure A.15.1).[41] The relatively lower reduction of the net earnings of those working at the 40th percentile of the full-time earnings distribution is due to increase in the income thresholds of the so-called "fiscal bonus".

Figure A.15.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

3. Net incomes for workless families changed considerably between 2016 and 2018. In January 2018 a new guaranteed minimum income scheme, called REI (*Reddito di inclusione*, see Box A.15.1) replaced the following programmes:

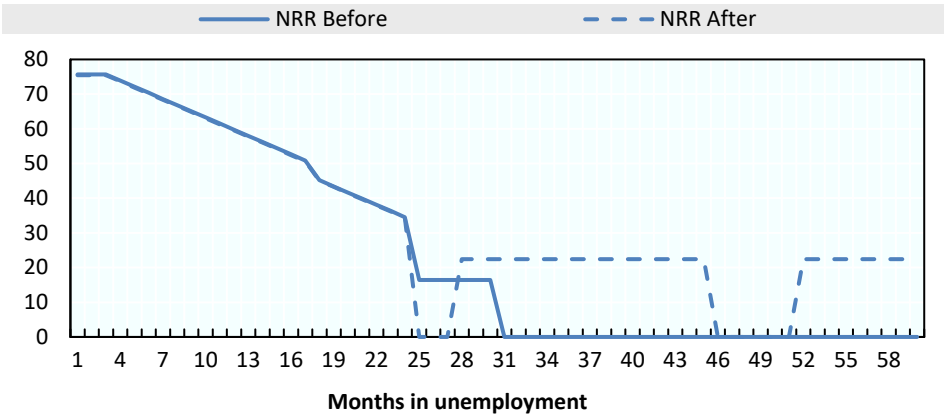
[40] Tax credit and benefit amounts as well as any related income thresholds are not adjusted automatically to earnings growth in Italy.

[41] The reference region for this regional surcharge tax in the OECD tax-benefit model is *Lazio*. The reform of the regional surcharge tax in Lazio took place in 2018.

- "SIA" (*Sostegno per l'Inclusion Attiva*, see Box Box A.15.1), a nation-wide anti-poverty programme that was rolled out in September 2016.
- "ASDI" (*Assegno Sociale di DIsoccupazione*), an unemployment assistance programme implemented in 2015 as part of the broader reform of unemployment benefit programmes included in the *Jobs Act* reform package.

4. The REI increases Net Replacement Rates (NRRs) at long employment durations (Figure A.15.2). NRRs fall dramatically after 24 months of unemployment when the unemployment insurance benefit (*Nuova ASsicurazione Per l'Impiego* or NASPI) is exhausted. In 2016, NRRs then remained constant at a lower level for the following six months, when the unemployment assistance benefit ("ASDI") was received, and then drop to zero.[42] In 2018, the new GMI benefit (REI) replaced the ASDI benefit. As former NASPI recipients can claim the REI only after a waiting period of three months, NRRs are zero between months 25 and 27 of the unemployment spell in 2018 but then increase for the next 18 months, which is the maximum duration of REI. There is then a waiting period of 6 months before the REI can be claimed again. NRRs are therefore zero between months 46 and 52 of the unemployment spell and then increase again to their previous level.

Figure A.15.2. Net replacement rate across the unemployment spell



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations based on the OECD tax-benefit model.

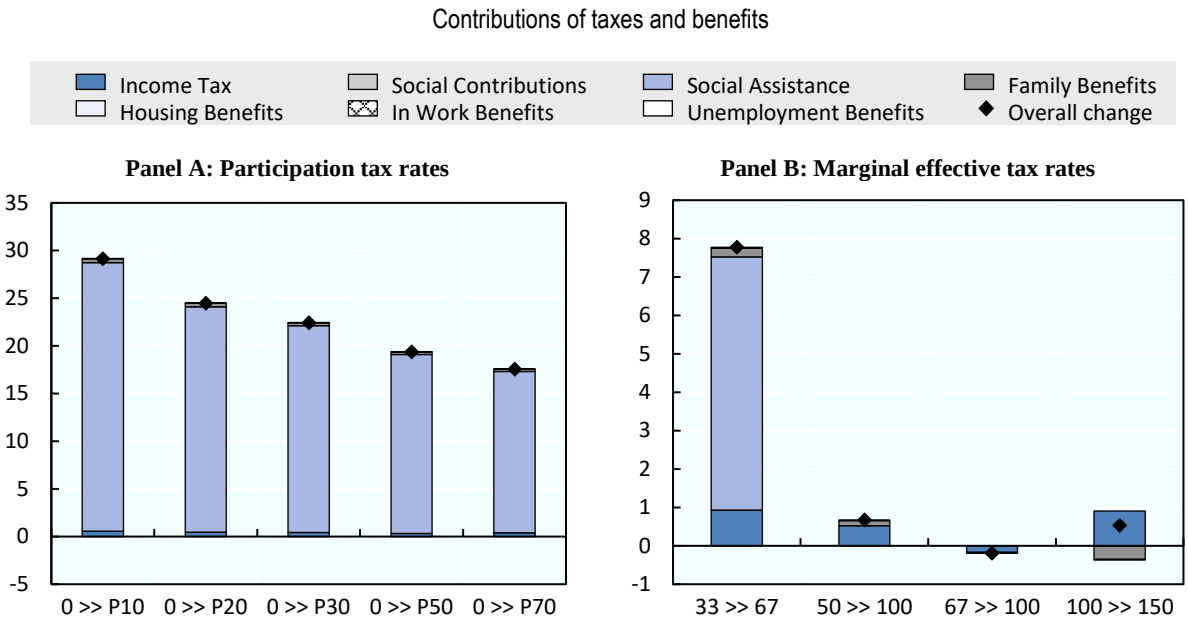
Changes in selected indicators

5. The introduction of the REI increased Participation Tax Rates (PTRs, Figure A.15.3, Panel A) as this benefit is reduced on entering work. PTRs increased between 17 and 30 ppts, depending on the earnings level at which the person takes up employment, although they remained comparatively low at no more than 40% for the examples examined in the Scoreboard. The introduction of REI may also weaken the financial incentives to increase working hours for those working part-time. For instance, employees working 33%

[42] A social assistance benefit, called the SIA, was introduced in late 2016, after the reference date for the TaxBEN model, which was 1 July 2016. The SIA was then replaced by the REI in 2018. See the Italy policy evaluation scoreboard for 2017-2018 to analyse the effect of the replacement of both the SIA and ASDI benefits with the new GMI benefit (REI).

of a full-time work at median earnings are still eligible for this benefit, and see it reduced to zero if they work more (Figure A.15.3, Panel B).

Figure A.15.3. Changes in work incentives



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Box A.15.1. The new GMI benefit "Reddito di inclusione"

On January 1st 2018 Italy introduced a new national guaranteed minimum income scheme called "*Reddito di Inclusione*" (REI). January 1st 2018 Italy introduced a new national guaranteed minimum income scheme called "*Reddito di Inclusione*" (REI). This benefit replaced the previous programme known as "*Sostegno per l'Inclusione Attiva*" (SIA), which had been in place since September 2016. REI is a non-contributory benefit, means-tested and not taxable. The remaining of this box describes the main elements characterizing the new benefit.

Eligibility conditions. Eligibility is based on the following three types of requirements:

- Family requirements: At least one household member must have one of the following characteristics: be under 18 years of age, disabled, pregnant, unemployed or over the age of 55. (From July 2018, these requirements no longer apply, but the reference date for the TaxBEN model for 2018 is 1 January, so these are the conditions that apply in the model).
- Economic requirements: a) 'ISEE' indicator below EUR 6000 (see the Italy policy description for details on this indicator); b) Income component of ISEE below EUR 3000; c) Nonfinancial assets of ISEE below EUR 20000 and financial assets below EUR 10000.
- 'Other' requirements, e.g. EU citizenship or residency in the country for at least two years, participation in activation measures and work availability.

Benefit amount. Entitlements are calculated as follows: REI = 0.75*(Guaranteed Minimum Income

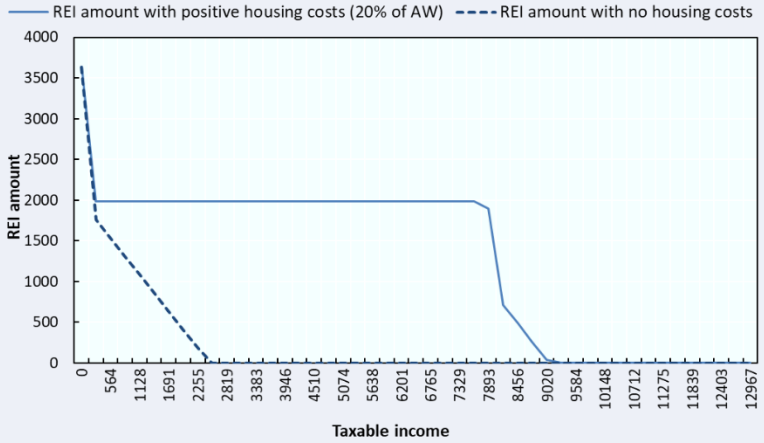
amount for a single person * Equivalence Scale – Reference Household Income), where:

- GMI amount for a single person: EUR 3 000 per year.
- Equivalence Scale: the number of household members (N) to the power of 0.65.
- Reference household income: nearly all possible household income components with the exclusion of means-tested non-taxable income components, which are deducted directly from the benefit amount.

Benefit duration. 18 months, renewable for another 12 months after a waiting period of 6 months.

Interaction with other components of the tax-benefit system. REI cannot be received alongside unemployment benefits (NASPI). Former NASPI recipients can claim the REI only after a waiting period of 3 months.

Figure A.15.4. Amount of REI



Note: For a one-earner couple with two children aged two years old. Housing costs affect the amount of the ISEE indicator used to calculate the REI amount. Results with housing costs assume a constant rent of EUR 6 229 per year (20% of the average wage).

A.16 Latvia

1. Please click on the following links to open policy evaluation scoreboards for Latvia for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. A number of changes were made to the income tax system in Latvia between 2016 and 2018. There was a substantial change to the structure of tax rates in 2018 (Box A.16.1), as Latvia switched from a flat tax of 23% to a progressive tax with three rates: 20%, 23%, and 31.4%. In practice, most employees fall in the first tax bracket; only those earning from the 90th percentile of the full-time earnings distribution fall into the second tax bracket (Figure A.16.1). Thus, the reform of the tax schedule led to a tax reduction for most employees. Despite this reform, Latvia remains close to a flat-rate income tax system, with higher rates only for a relatively small group of those with very high incomes.

3. The maximum amount of the income tax personal allowance also gradually increased between 2016 and 2018, but the withdrawal became much sharper (Figure A.16.2). The tax allowance thus increased for low earners but fell for those in the upper-middle of the full-time earnings distribution.

4. Finally, the tax allowance for dependants increased in 2018, but the increase was less than the growth in average earnings. This tended to increase income tax liabilities for lone parents and single-earner couples with children.

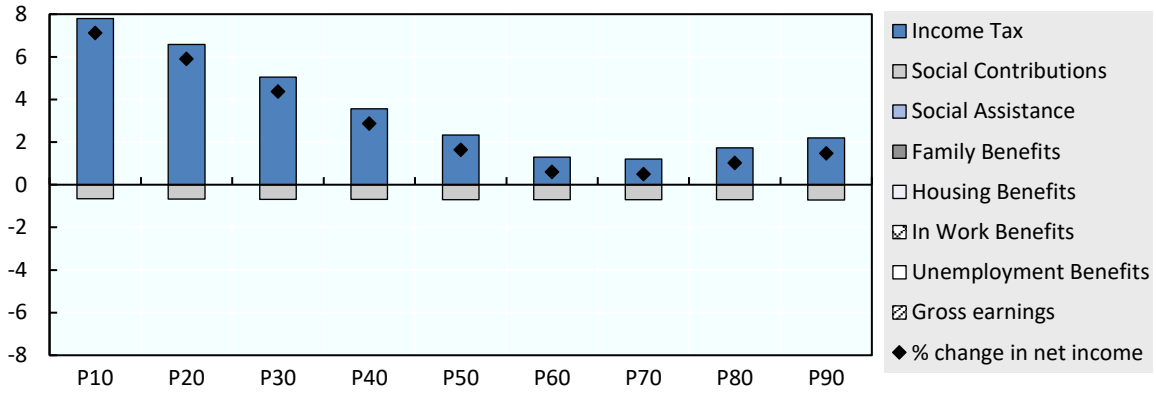
5. Overall, then, the effect of tax changes was to reduce income tax liabilities for those without children (Figure A.16.1, blue bars), but not for lone parents and single-earner couples with children. For these groups, reductions in tax rates and increases in the personal allowance were more or less offset by reductions in the value of the tax allowance for dependents relative to the average wage.

6. Other tax-benefit changes affected the net incomes of working families too. In 2018, social security contributions paid by employees increased as a new health contribution of 0.5% was introduced (Figure A.16.1, grey bars), reducing the gains from lower income taxes. For families with children considered in the scoreboard, family benefit amounts were frozen in nominal terms between 1 July 2016 and 1 January 2018, and so net incomes of those families, who did not benefit from the changes to income tax, decreased.[43]

[43] Other changes to family benefits occurred that did not affect the families examined in the scoreboard. First, a higher rate of family benefits was introduced for the fourth and subsequent children in 2017. This increased the incomes of larger families, but not the two-child families examined in the scoreboard. A supplement to family benefit for families with two children or more was introduced in March 2018, after the reference date for the TaxBEN model for 2018, which is 1 January.

Figure A.16.1. Percent change in net income components across the earnings distribution

Positive values denote a positive contribution relative to the change in the average wage



Note: For a single person without children aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Box A.16.1. Tax reform in Latvia

In 2018, Latvia implemented a major structural reform of the income tax, switching from a flat tax of 23% to a **progressive tax** with three tax rates:

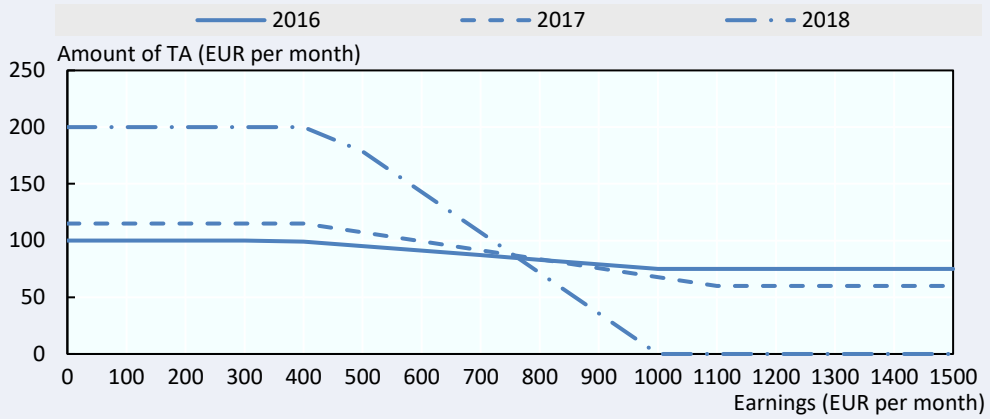
- 20% - for income up to EUR 20 004 per year;
- 23% - for income exceeding EUR 20 004 but below EUR 55 000 per year;
- 31.4% - for income exceeding EUR 55 000 per year.

Most employees pay their tax in the first tax bracket: the income threshold for the second bracket is set very high at approximately 170% of the average wage (slightly below the 90th percentile of the full-time earnings distribution).

At the same time, a part of the **solidarity tax** paid by employees can now be used to offset income tax payments in the 3rd income bracket. The solidarity tax is paid by employees with income above EUR 55 000 per year instead of social security contributions and amounting to the same proportion of income (11% in 2018). Thus, the overall tax rate at very high earnings levels did not increase.

Between 2016 and 2018, the maximum monthly amount of the **basic tax allowance** ("non-taxable minimum") increased from EUR 100 to EUR 200. The minimum allowance reduced from EUR 75 to zero. The income threshold below which the full allowance can be claimed increased from EUR 380 to EUR 440 and the reduction rate became steeper. Thus, the tax allowance increased for those earning less than EUR 800 per month (approximately the medium earnings of the full-time earnings distribution), while for earnings above this level it went down (Figure A.16.2).

Figure A.16.2. Basic tax allowance (TA) by earnings



In 2018, the **tax allowance for dependants** increased by 14%. Since 1 July 2018, this allowance is also applicable to an unemployed spouse who is taking care of children below 3 years old or taking care of three or more children (under certain conditions). This policy change will be implemented in the model in 2019 because the reference date for policy in the model is 1 January 2018.

It should be noted that in the new progressive tax framework, tax allowances reduce the width of the lower tax bracket, and then the higher tax brackets only if they are greater than the width of the first tax bracket. Therefore, the tax allowance for dependants reduces income tax for the same absolute amount for taxpayers in each tax bracket.

Changes in out-of-work-incomes

7. Non-contributory benefits in Latvia are not subject to an annual uprating mechanism. Thus, most families out of work experienced decreases in their incomes relative to the average wage, which grew by 17% between 2016 and 2018. The guaranteed minimum income was increased by 6% in 2018 and thus did not keep pace with average earnings growth.[44] Payments to lone parents from the Maintenance Guarantee Fund increased by 7%, while universal family state benefit amounts did not change in cash terms. Only those who only receive unemployment insurance benefits, which are set as a proportion of the previous wage, when not working saw their incomes keep up with growth in average earnings.

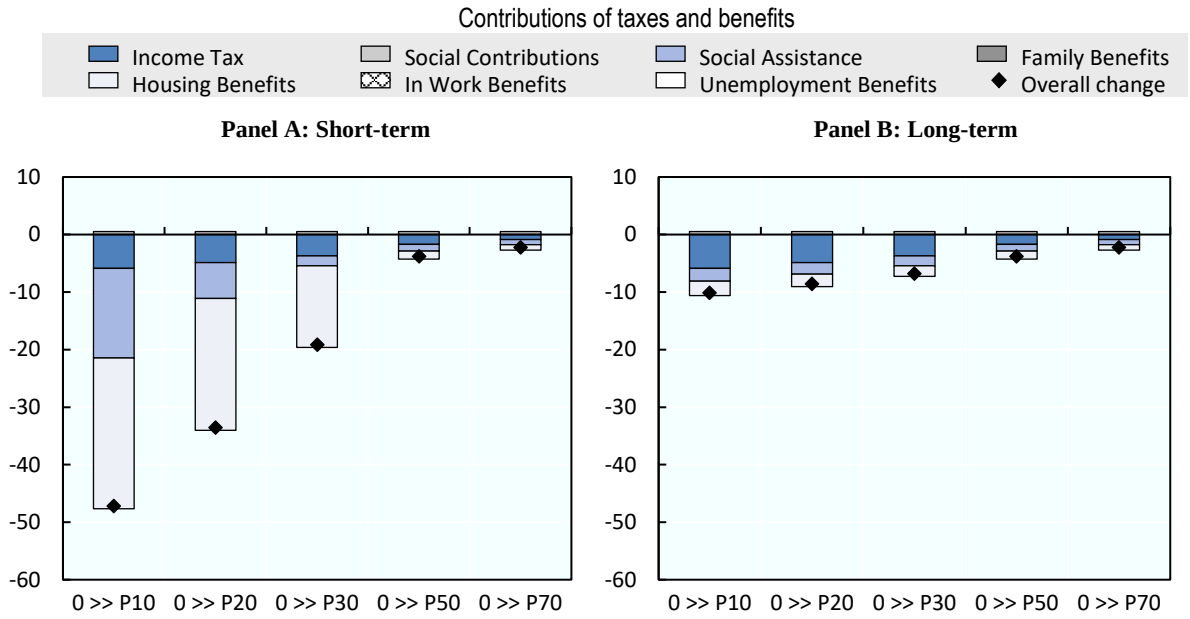
Changes in selected indicators

8. The reform of the personal income tax allowance strengthened incentives to take up employment, especially at low earnings levels (Figure A.16.3). Income tax changes reduced PTRs by up to 6ppts. However, this was not the case for lone parents and one-earner couples with children who did not gain from the tax reform.

[44] This increase in the guaranteed minimum income is not reflected in the model because the reference city for the calculations is Riga, where the benefit is more generous and remained unchanged between 2016 and 2018.

9. The introduction of temporary earnings disregards in the income test for social assistance and housing benefit in 2017 increased the boost in net income immediately on entering work (Figure A.16.3, Panel A). Net employment income up to the amount of the net monthly minimum wage is disregarded from the means test in the first 3 months after starting a new job, so benefit entitlements no longer fall so sharply on entering work. However, in the long run, the benefit means test still applies so PTRs do not fall as dramatically when considering the long-run impact of entering work on net incomes.

Figure A.16.3. Changes in participation tax rates



Note: For a single person without children aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

A.17 Lithuania

1. Please click on the following links to open policy evaluation scoreboards for Lithuania for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Between 2016 and 2018 in Lithuania, wages at the top of the earnings distribution grew faster than the average and wages at the bottom more slowly. However, these changes were relatively small compared to the impact of tax-benefit changes. Policy reforms increased the net incomes of working families in Lithuania relative to average earnings levels, and the effect was stronger for those with lower earnings. Net incomes thus increased more quickly for those with lower earnings.

3. Over this period, the full amount of basic tax allowance (BTEA) almost doubled. For those without children, this substantially reduced income tax liabilities, especially at lower earnings levels.

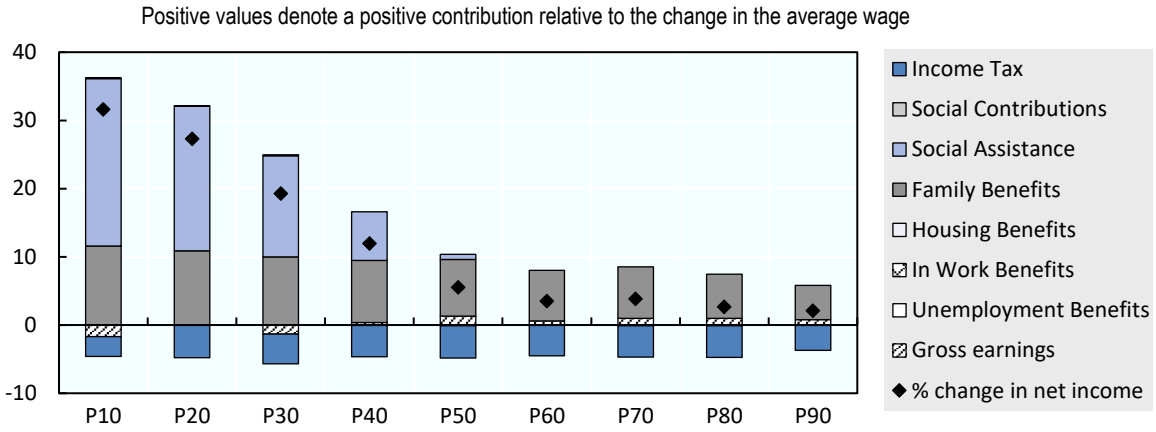
4. For families with children, however, this effect was more than offset by the abolition of the child tax allowance (ATEA) in 2018 (Figure A.17.1, blue bars). Income tax liabilities increased for these families. However, the tax allowance was replaced with a universal child benefit. The amount of this benefit was set equal to the maximum tax increase resulting from abolishing the child tax allowance (Figure A.17.1, grey bars). Thus, the overall effect of tax and benefit reforms was to increase net incomes. [45,46]

5. The maximum amount of social benefit was raised by 20%. In addition, earnings disregards of 15-35% (depending on the family type) were introduced in 2018, and child benefit was excluded from the means test. These reforms substantially increased social assistance entitlements for low-income couples with children (Figure A.17.1, light blue bars).

[45] For lone parents, child maintenance benefit was increased by 20%. This added to the increase in family benefits for this group.

[46] For other family types not examined in the scoreboard, the increase in family benefits was even larger. In addition, in 2017 eligibility to child benefit for families with 1 or 2 children was extended to children aged 7-18 years old. In 2018, children aged 19-21 became eligible to child benefit if they study under the general curriculum. In 2017, the income test in families with 3 or more children was abolished, benefiting large families with high incomes.

Figure A.17.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

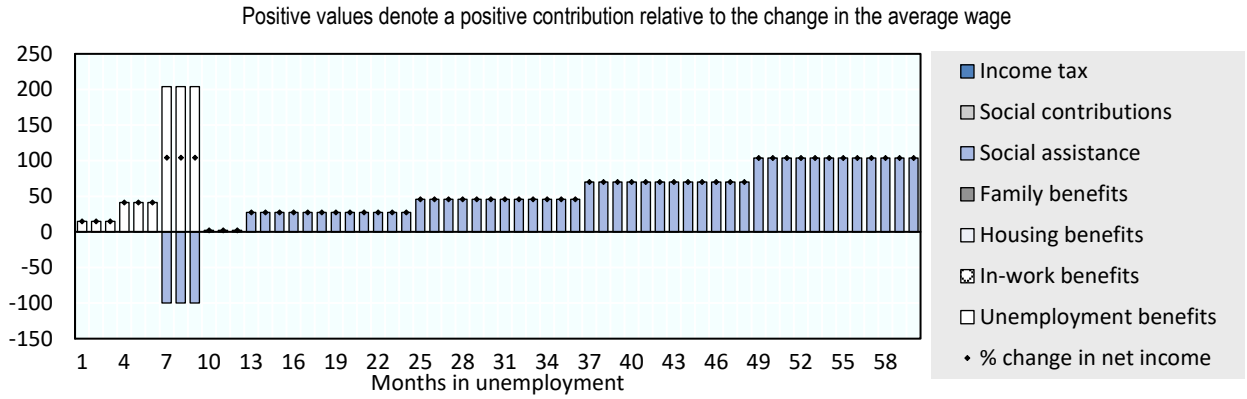
Changes in out-of-work-incomes

6. Non-working families also saw a substantial increase in their net income in 2016-2018 relative to the average wage growth. A reform of unemployment benefit made the benefit more generous, particularly at slightly longer unemployment durations (Figure A.17.2, white bars, for full details of the reform, see Box A.17.1) as the duration of the benefit was extended to 9 months irrespective of the claimant's past contribution record. This effect is partially offset by reduction in means-tested social assistance as unemployment benefits are included in the income measure used in the means test.

7. Finally, since 2017 social assistance no longer decreases with time if certain conditions are met,[47] increasing benefit amounts, particularly at very long unemployment durations (Figure A.17.2, light blue bars).

[47] These conditions are that the benefit is not reduced if the labour exchange did not offer a job or an opportunity to participate in active labour market policy measures to the benefit recipient or if the recipient participated in useful social activity organized by the municipality. The TaxBEN model assumes that a person participates in such activity.

Figure A.17.2. Percent change in net income components across the unemployment spell



Note: For a single person without children aged 40 with a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Box A.17.1. Reforms in unemployment social insurance benefit in Lithuania

Between 2016 and 2018, Lithuania implemented several changes in unemployment social insurance benefit, making it more generous, extending the duration for those with a short contribution record, and relaxing contribution eligibility requirements. These reforms were introduced in several stages:

In January 2017:

- The maximum amount of unemployment benefit was raised by 7%.

In July 2017:

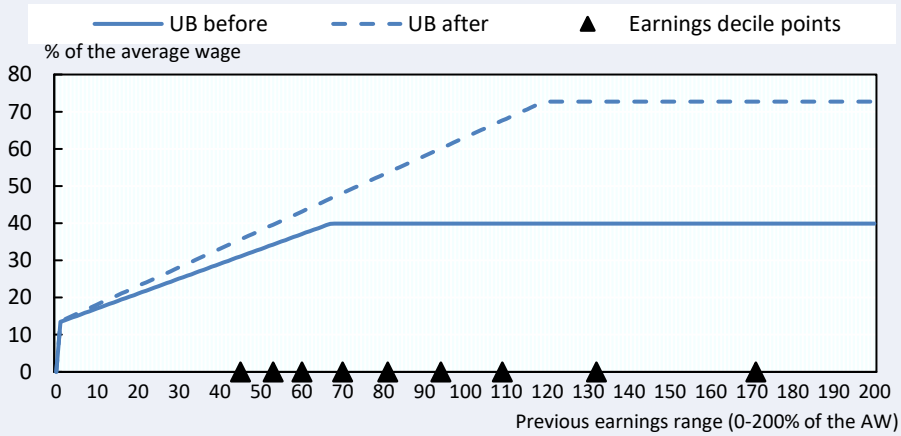
- The maximum amount increased by 85%: it is now anchored to 75% of the average monthly wage in the national economy (instead of 70% of insured income, the income threshold used for state social insurance benefit calculations).
- The minimum benefit amount was increased by 12%.
- The variable part of the benefit became more generous: it is now between 30% and 50% of previous earnings (instead of 20-40%).
- The maximum duration was extended to 9 months regardless of contribution record. Previously, only those with a contribution record of at least 35 years could receive unemployment benefit for 9 months. Those with 30-35 years of experience were eligible to 8 months, with 25-30 years of experience to 7 months, and with less than 25 years of experience to 6 months.
- Contribution record eligibility requirements were softened: it is now possible to qualify with 12 months of contributions in the last 30 months (rather than18 months in the last 36 months).

In January 2018:

- The minimum and the maximum amounts were again increased: by 5% and 8% respectively.

Figure A.17.3 shows how the reforms affected unemployment benefit at different levels of previous earnings. The minimum amount of the benefit remained stable relative to the average wage due to generous uprating, and the maximum amount increased substantially. The maximum amount is now received only by those with previous earnings of at least 120% of average wage, rather than 70% previously. The variable part of the benefit, which increases with the previous earnings, also became more generous (making the slope of the line in Figure A.17.3 steeper).

Figure A.17.3. Unemployment benefits (UB) before and after the reform by previous earnings range



Note: For a single person without children aged 40. The jobseeker has a "long" and continuous contribution history (22 years). Previous earnings of the jobseeker are equal to the P10-value of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

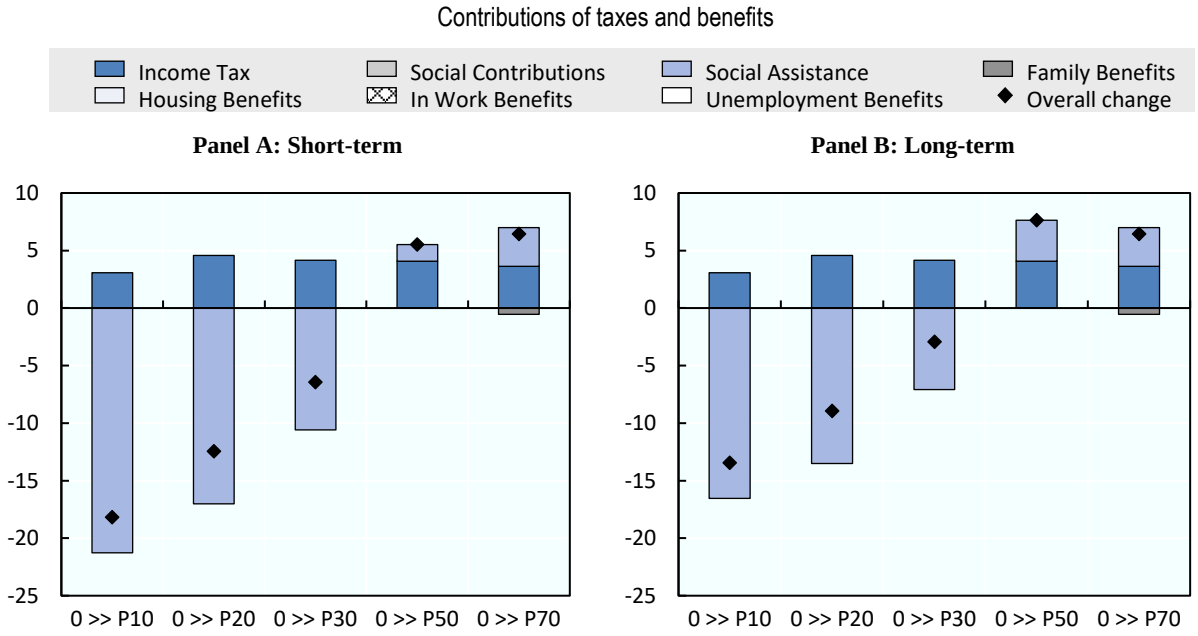
8. The results of the reforms on work incentives are mixed. Long-term PTRs (that is, considering the long-run impact of entering work on net income, ignoring any transitional payments received on entering work) fell for families without children because of the considerable reduction in taxes discussed above. A lower proportion of earnings are lost to income tax and so work incentives are stronger. Work incentives weakened for lone parents, however, because of a more generous social assistance available out of work and an increase in taxes once in work. In addition, since child maintenance benefit for lone parents is included in the means test for social assistance, newly introduced earnings disregards did not play a role in improving work incentives for this family type.[48] However, larger earnings disregards in social assistance did strengthen work incentives for those in couples with children whose partner does not work at low earnings levels as they increase social assistance entitlements in work: less social assistance is now lost on entering work.

9. The effect on PTRs in the short run is slightly different due to the so-called 'additionally paid social assistance benefit' received when a claimant enters work. The benefit is equal to 50% of the amount of social benefit previously received and is paid for

[48] A similar outcome is observed for two-earner couples, but in this case due to earnings of the second spouse.

the first 6 months of employment. This in-work benefit strengthens work incentives as it cushions the adverse effect of social assistance withdrawal: the amount of benefit received does not fall as dramatically immediately on entering work.

Figure A.17.4. Changes in participation tax rates



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

A.18 Luxembourg

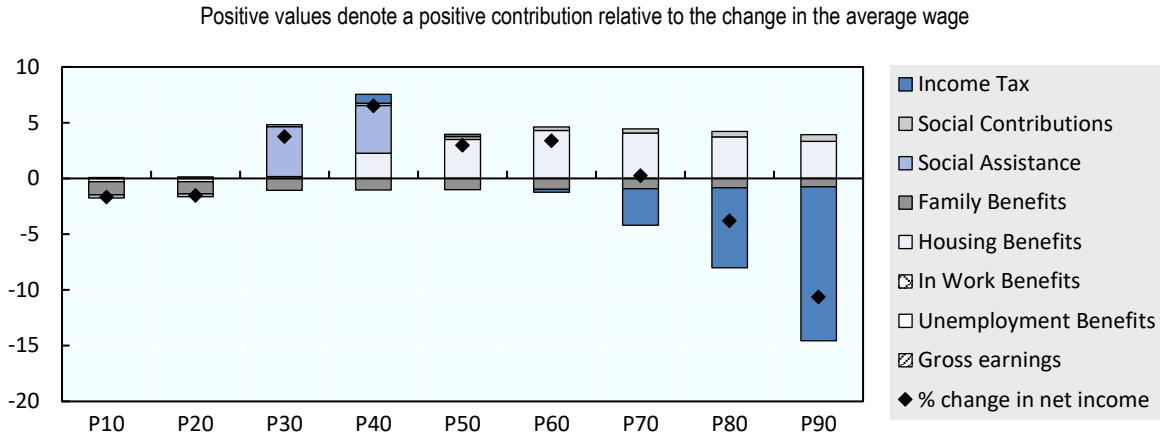
1. Please click on the following links to open policy evaluation scoreboards for Luxembourg for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. The incomes of working families in Luxembourg were affected by a number of changes to income tax between 2016 and 2018. The income tax rates were reduced by 2ppts in the lower tax bands and 4ppts in the higher tax bands, and new tax bands were created for high earnings. Also, the existing tax credit of EUR 300/year for employees now increases gradually over low income ranges until it reaches its maximum of EUR 600 per year for taxpayers earning between EUR 11 265/year and EUR 40 000/year. It then declines gradually and phases out for taxpayers earning more than EUR 80 000/year. The same mechanism was introduced for the tax credit for single parents with children. Tax credits thus increased for lower-income families and decreased for those with high incomes. Overall, tax liabilities fell for almost all family types. The sole exception were high-income lone parents, who lost out both from the changes to tax credits and from a change in the way taxable income is calculated for taxpayers with a dependent child allowance. Until 2017, adjusted taxable income was calculated by reducing taxable income by half of any amount above EUR 45 060, with the marginal tax rate capped at 40%. Since 2017, the cap now varies from 39% to 42% according to earnings. For lone parents with high earnings, income tax therefore increases (Figure A.17.1, blue bars).

3. The maximum income threshold to qualify for housing benefits was increased by 40% between 2016 and 2018. As a result some families became eligible to housing benefits (Figure A.18.1, off-white bars). In addition, rent must now only exceed 25% of net income rather than 33%, which increased the amount received by those entitled to less than the maximum level. These two changes more than offset the nominal freeze in the maximum rate for working families. By contrast, levels of family benefits fell relative to average earnings as rates were frozen in nominal terms.

Figure A.18.1. Percent change in net income components across the earnings distribution

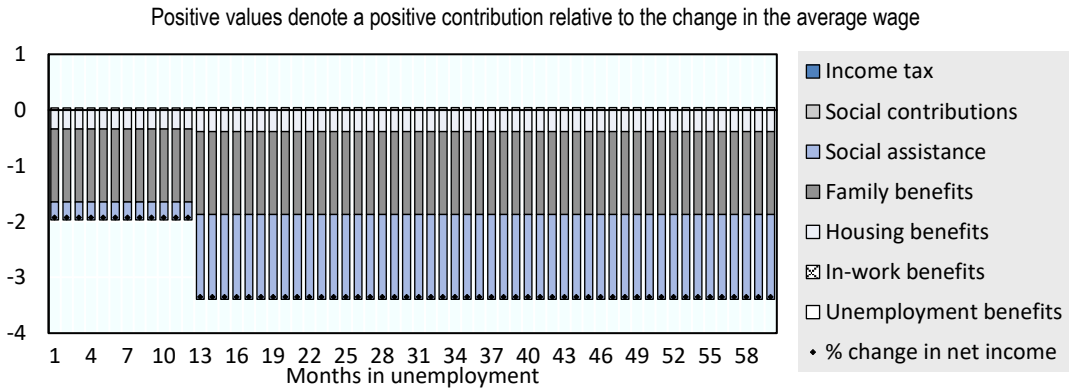


Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

4. Net incomes fell for workless families relative to average earnings levels as social assistance rates did not change in cash terms (Figure A.18.2, light blue bars). Furthermore, unlike in-work families, they saw their housing benefits fall as they were affected by the freeze of the in benefit rates without benefiting from the increase of income limits and from the reduction in the minimum rent to income ratio (off-white bars). Workless families with children also saw their family benefits fall relative to the average wage because of the freeze of rates in nominal terms (grey bars).

Figure A.18.2. Percent change in net income components across the unemployment spell



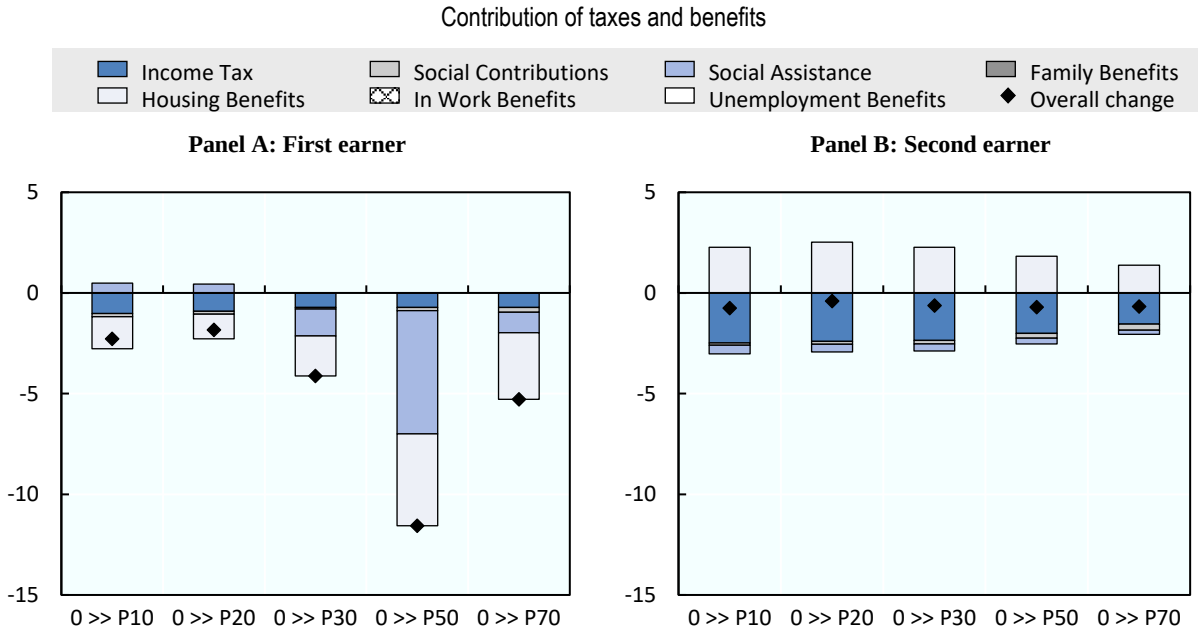
Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40, has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

5. For those without a working partner (i.e. single people and those whose partner does not work), changes to housing benefits often strengthened work incentives by

increasing entitlements in work and reducing them out of work. Reductions in social assistance entitlements out of work and lower income tax liabilities also strengthen the incentive to work for this group (Figure A.18.3, light blue and dark blue bars). However, by increasing housing benefit entitlement for single-earner couples, these changes weakened the incentive for the second member of the couple to enter work as they now have more housing benefit to lose if they do so.

Figure A.18.3. Changes in participation tax rates by earnings level



Note: For a couple with two children aged 6 and 4. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

A.19 Malta

1. Please click on the following links to open policy evaluation scoreboards for Malta for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

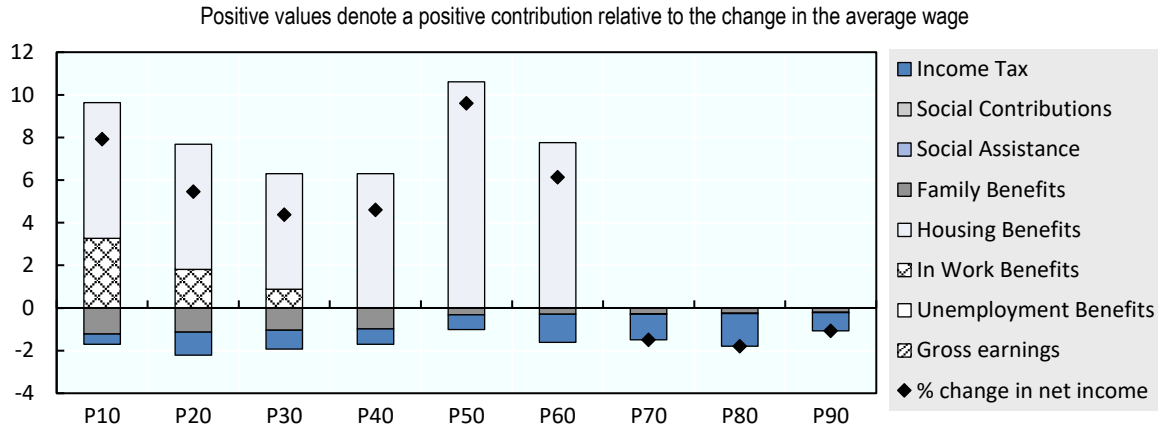
2. The most dramatic tax-benefit reform in Malta between 2016 and 2018 was a big expansion of housing benefits. The benefit rate was doubled, and the income thresholds at which eligibility is reduced and then withdrawn were increased relative to the average wage. This increased the incomes of lower income working families (in the scoreboard, single person households earning up to the 20th percentile of the full-time earnings distribution, and lone parent and single-earner couple households earning up to the 60th percentile).

3. The incomes of single-earner couples with children with relatively low levels of earnings increased further because of big increases in the level of in-work benefits and the income levels at which these are phased out. The maximum amount of in-work benefit available for dual-earner couples was also increased, but benefits did not increase for the two-earner couple families examined in the scorecard. This is because the maximum earnings level at which this benefit can be received is very low for dual-earner couples: for example, a family where both partners had earnings at the 10th percentile of the full-time earnings distribution would not qualify. For lone parents, however, entitlement to in-work benefits fell. Benefit rates did not increase as quickly as average earnings levels over this period for this group.

4. Family benefits did not increase as quickly as average earnings, however, reducing net incomes relative to the average wage. Furthermore, income tax thresholds did not increase in nominal terms between 2016 and 2018, leading to ‘bracket creep’ effects that increased income tax liabilities.

5. Overall, net incomes increased quite considerably for working families who benefited from the increases to housing benefit: incomes increased by nearly 10% in some cases. For those who did not gain from increased housing benefit, however, net incomes fell relative to average earnings levels, but the reduction was relatively modest at less than 2%.

Figure A.19.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

6. Workless families also benefited from the increase in maximum housing benefit amounts. However, other benefits received by workless families, including social assistance, family benefits and unemployment benefits, increased less quickly than average earnings, offsetting this increase in net income somewhat. Overall, incomes increased by between 4% and 10%.[49]

Changes in selected indicators

7. Housing benefit increased by different amounts at different earnings levels and so the overall impact of reforms on work incentives is far from uniform. For those who are not entitled to housing benefit when working in 2018, increasing housing benefit raises income out of work relative to income in work and so weakens work incentives. PTRs increased for second earners in couples, high earners (from around the 70th percentile of the full-time earnings distribution) who do not have a partner in paid work, and low to middle earning single people without children (from around the 30th percentile of the full-time earnings distribution). These increases in PTRs were reasonably large at up to 10ppts, although initial PTRs were relatively low for these groups.

8. For others, however, the increase in the housing benefit in work is greater than that out of work because of the increase in the income threshold at which housing benefits are withdrawn (generally, before 2018, these families were not entitled to housing benefit when working, but were when out of work). This occurs at around median earnings for lone parents and those whose partner is not in paid work, and for low-earning single people without children (around the 10th percentile of the full-time earnings distribution). For these individuals, PTRs fall.

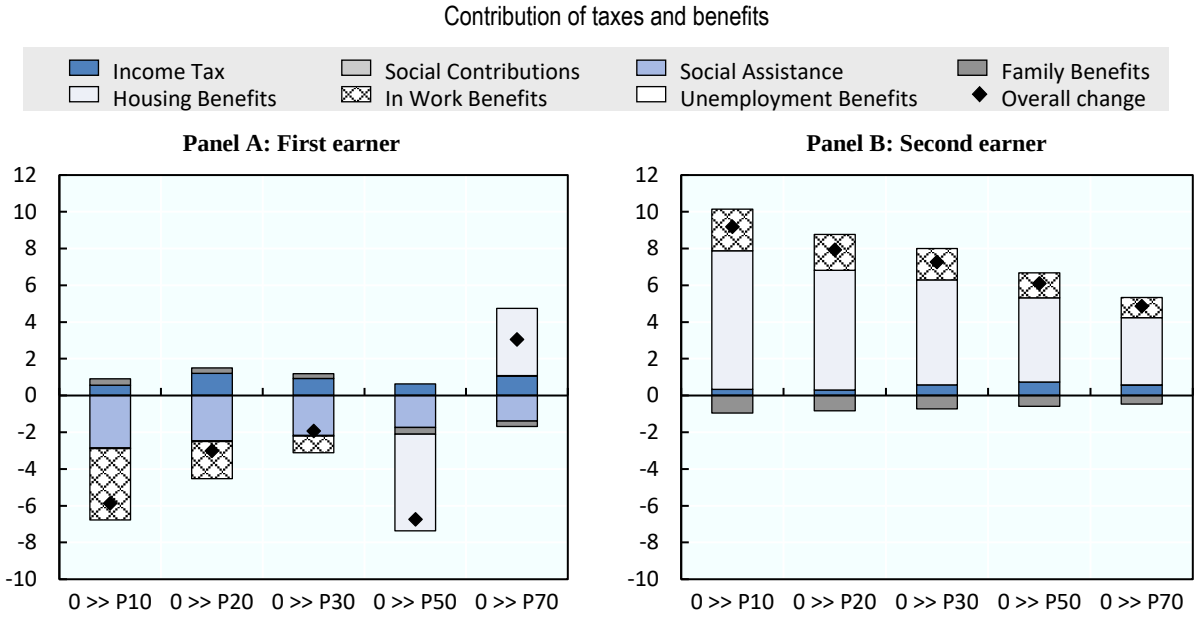
9. Finally, for some individuals, changes to housing benefit did not affect PTRs at all as the increase in housing benefit was the same both in and out of work. This was the case

[49] Note that all the families examined in the scoreboard are renters. This increase in net incomes did not occur for owner-occupiers, who do not receive housing benefit.

for those in low-income families with children, who already received the maximum amount of housing benefit both in and out of work in 2016. Other changes did affect the PTRs of these individuals, however. For those in couples with children whose partner is not in paid work, PTRs fell because of higher in-work benefits and lower social assistance entitlements when not working. However, for low-earning lone parents, PTRs increased because in-work benefit entitlements fell relative to the average wage.

10. These other changes also affect the PTRs of other groups, and not always in the same way. For example, increases in in-work benefits for single-earner couples weaken the incentive for the second earner in a couple to move into work in the case where there is no entitlement to in-work benefits when both partners work (which is generally the case, see above).

Figure A.19.2. Changes in participation tax rates by earnings level



Note: For a couple with two children aged 6 and 4. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

11. The changes to housing benefit also affected METRs differently over different earnings ranges. Since as a general rule these changes shifted upwards the point at which housing benefit is withdrawn and the METR is thus very high, they tended to reduce METRs at lower earnings ranges, and increase them at slightly higher ranges.

A.20 The Netherlands

1. Please click on the following links to open policy evaluation scoreboards for the Netherlands for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

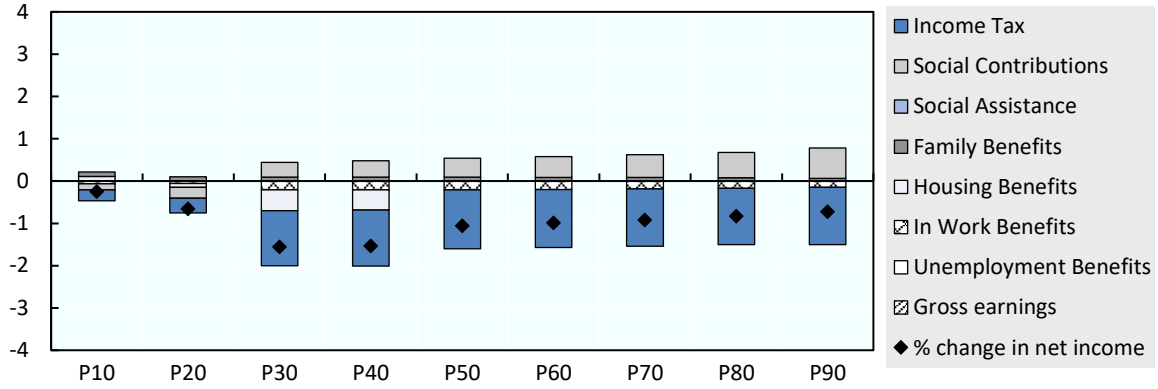
2. Legislative policy changes in the Netherlands between 2016 and 2018 included the uprating of tax and benefit rates and thresholds by less than average earnings growth. As a result, most working families as analysed in the scoreboard saw an increase in income tax liabilities as a result of 'fiscal drag': tax brackets did not increase as quickly as earnings. Furthermore, tax rates at lower to middle income levels increased slightly. The increases in the general tax credit, the work tax credit and the Income Dependant Combination Credit (which is classified as an in-work benefit in the OECD tax-benefit model), were small, too, less than the growth in the average wage (blue and checked bars in Figure A.20.1).

3. Housing benefit thresholds did not increase in line with the average wage and thus decreased net incomes, particularly in the phase-out region (around the 30th and 40th percentile of the full-time earnings distribution for a single-earner couple with two children; Figure A.20.1, off-white bars; see also Figure A.4 in the scoreboard).

4. Although the general child benefit increased by less than average earnings in 2017 and 2018, the additional child allowance substantially increased in 2017. Overall, family benefit entitlements increased slightly relative to average earnings levels (dark-grey bars), but this was not sufficient to prevent net incomes falling overall.

Figure A.20.1. Percent change in net income components across the earnings distribution

Positive values denote a positive contribution relative to the change in the average wage



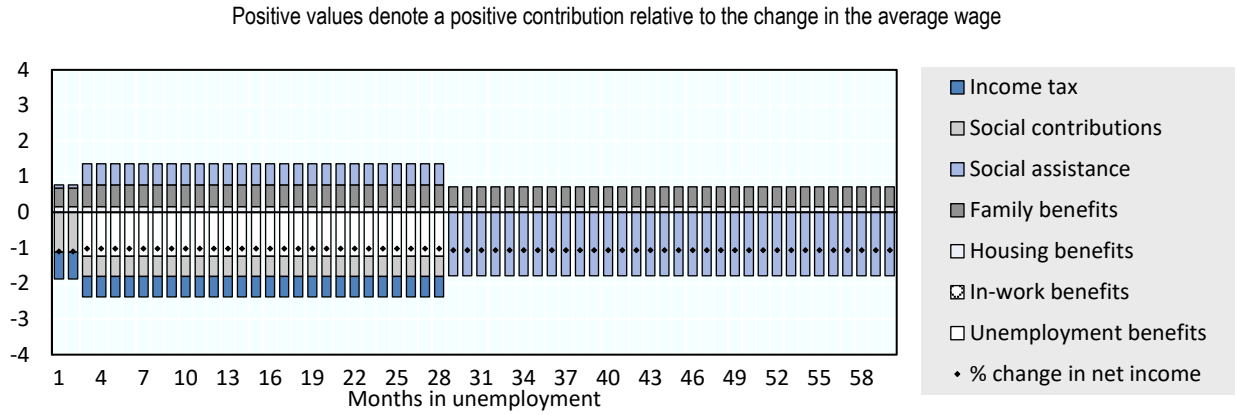
Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

5. The overall reduction in net incomes in work relative to the average wage is further attenuated by changes in social security contributions. The contributions to health insurance and old age pension were frozen in nominal terms or increased only marginally and so fell relative to the average wage. This more than offset a reduction in the Health Care Benefit, which reduces employees' health insurance contributions. This increased net incomes between the 30th and 90th percentiles of the full-time earnings distribution (Figure A.20.1, light-grey bars). By contrast, social contributions increased at the 10th and 20th percentiles of the full-time earnings distribution. This is because in the Netherlands tax credits are deducted partly from the income tax liability and partly from the contributions that are made to the general social security schemes, with the higher share usually attributed to social security contributions. As tax credits were not uprated in line with the average wage, social security contributions increased.

Changes in out-of-work-incomes

6. Most non-working families saw small reductions in their net income between 2016 and 2018 because of benefit erosion and fiscal drag. The unemployment benefit under the Supplementary Benefits Act is based on the minimum wage, which did not increase as quickly as the average wage, resulting in lower net incomes relative to the average wage for eligible low-income families in the first 28 months of unemployment (Figure A.20.2, white bars). As unemployment benefits are taxable in the Netherlands, the non-uprating of tax and social contributions parameters further reduced net incomes (blue and light-grey bars). This negative impact was partly compensated by relatively higher social assistance top-ups and higher family benefits for families with children (light-blue and dark-grey bars): lower unemployment benefits and higher taxes increase entitlement to social assistance as it is assessed on net incomes after taxes and other benefits. After 28 months of unemployment, unemployment benefits expire. Lower social assistance benefits following the non-uprating of benefit rates reduced net incomes at these longer unemployment durations (light blue bars).

Figure A.20.2. Percent change in net income components across the unemployment spell



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

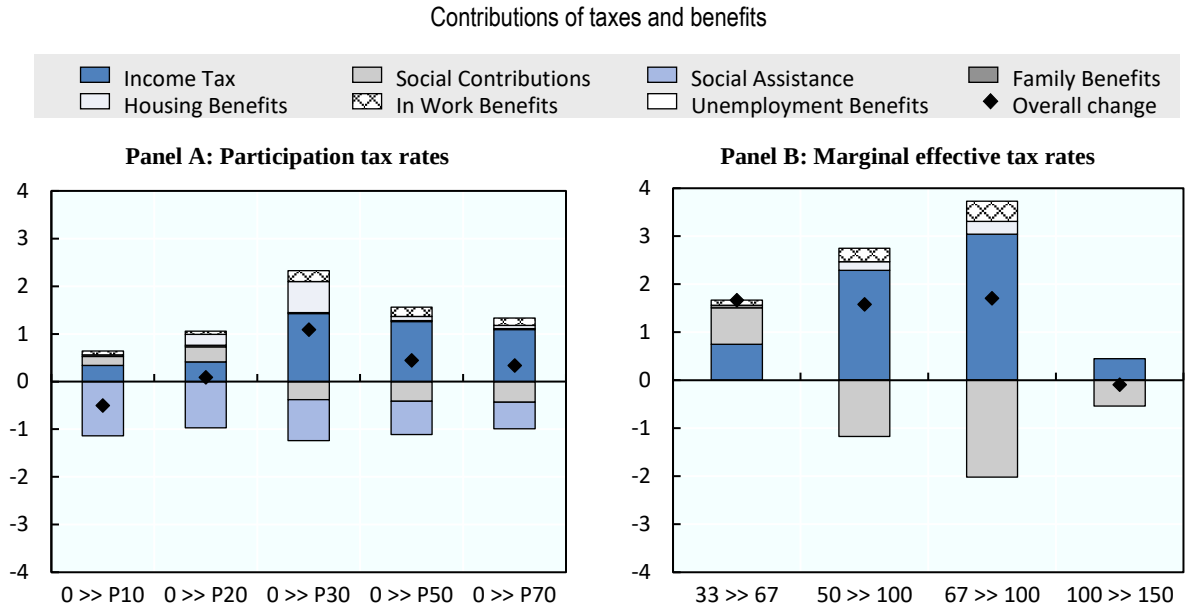
Changes in selected indicators

7. In line with the changes in net incomes in and out of work, work incentives generally weakened slightly due to bracket creep effects increasing tax liabilities in work, though this was counterbalanced by the erosion of out of work benefit levels: frozen social assistance benefits decreased PTRs at all earnings levels (Figure A.20.3, Panel A, light-blue bars). When moving into work, relatively higher tax liabilities and the lower Income Dependent Combination Credit increase PTRs (Figure A.20.3, Panel A, blue and checked bars), reinforced by an accelerated phase-out of housing benefits (this is especially important at the 30th percentile of the full-time earnings distribution, off-white bars). However, lower social contributions now have to be paid above the 30th percentile of the full-time earnings distribution, slightly offsetting the increase in PTRs. The opposite is true at the 10th and 20th percentiles, though due to non-uprated tax credits (light grey bars).

8. Incentives to increase working hours are weakened through the same mechanisms that impact on the incentives to take up work, especially when moving from part-time to full-time work at median earnings: METRs increased by up to 2 percentage points. When moving beyond median full-time earnings, however, families benefit from the small increase in the top tax rate, leaving overall METRs largely unchanged (Figure A.20.3, Panel B and Figure C.3 in the scoreboard).

9. Policy changes had a similar impact also on the effective tax rates on labour, which increased between 2016 and 2018 for all family types and earnings percentiles considered in the scoreboard (Panel E). The increase is reinforced by an increase in the employer social security contributions.

Figure A.20.3. Changes in work incentives



Note: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.21 Poland

1. Please click on the following links to open policy evaluation scoreboards for Poland for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

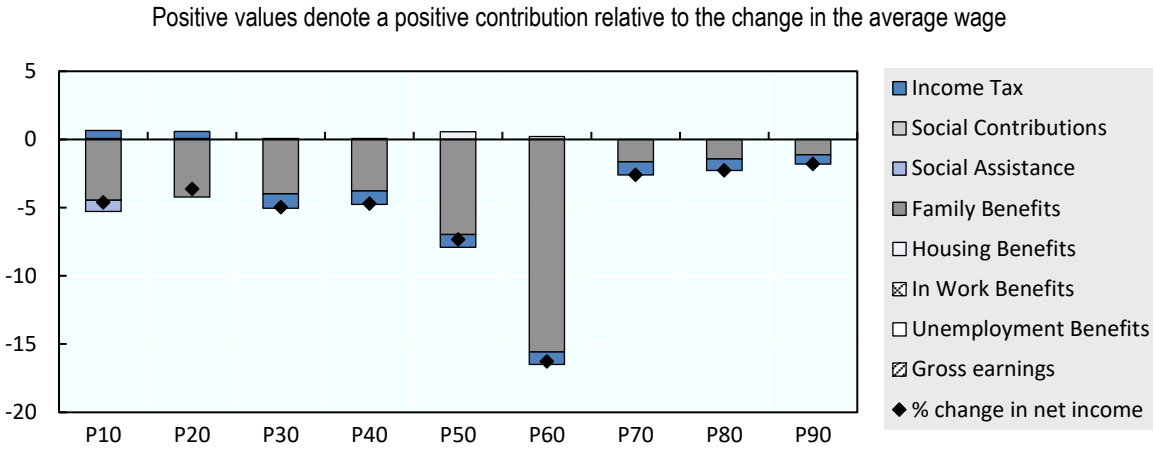
Changes in in-work-incomes

2. Between 2016 and 2018, policy reforms reduced the net incomes of most working families relative to average earnings levels. Only low-income families without children (e.g. one-earner couples) saw an increase in net incomes.

3. One of the major reforms explaining these trends is a reform of the basic tax credit. In 2017, the tax credit became income-dependent. Although the full amount of the tax credit more than doubled, the full amount is available only to very low-income families (in 2017 the threshold was 22% of the average wage). Thus, only single part-time workers and low-income families subject to joint taxation saw their tax liabilities reduce (Figure A.21.1, blue bars). Above this threshold, the amount of the tax credit remained the same as before. Taxes for other family types therefore increased because tax brackets, tax allowance, and this typical amount of the tax credit did not increase in line with average earnings growth. At very high earnings, the tax credit decreases and gradually reaches zero.

4. Family benefits entitlements fell relative to average earnings because family allowances, supplements and maximum benefits for lone parents were increased by less the growth in the average wage. The drop in income was especially large for one-earner couples and lone parents in the middle of the income distribution, as incomes are now above the eligibility threshold for 500+ family benefit, so the benefit for the first child is fully withdrawn (Figure A.21.1).

Figure A.21.1. Percent change in net income components across the earnings distribution



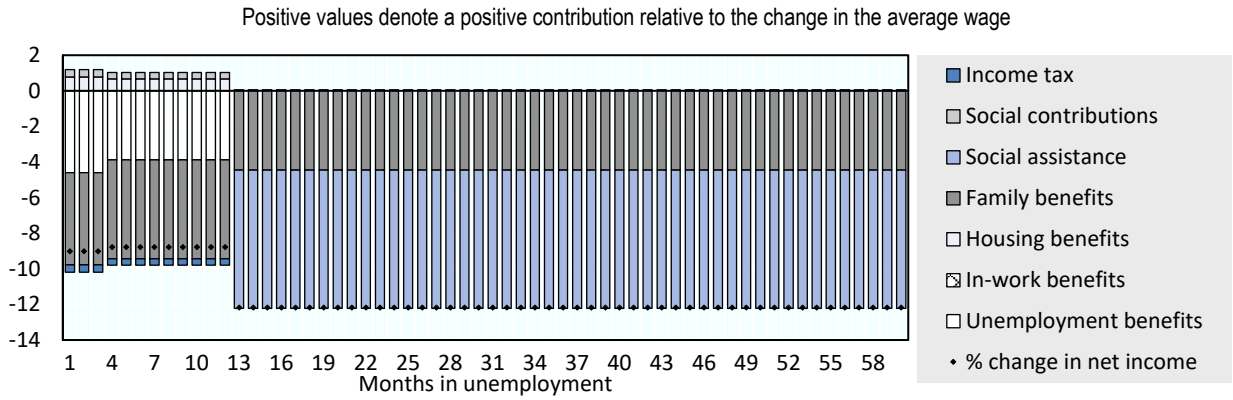
Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

5. Social assistance amounts did not increase in cash terms between 2016 and 2018, and thus, relative to average wage, they decreased. The eligibility income threshold for housing benefit increased in line with the average wage growth, but the maximum amount did not.

Changes in out-of-work-incomes

6. Incomes of families out of work also fell as policy parameters were not uprated in line with average earnings growth. Besides decreases in social assistance and family benefits, unemployment benefit, which is a flat rate benefit in Poland, also decreased for the same reasons (Figure A.21.2, white bars), lowering benefit entitlements during the first 12 months of an unemployment spell.

Figure A.21.2. Percent change in net income components across the unemployment spell



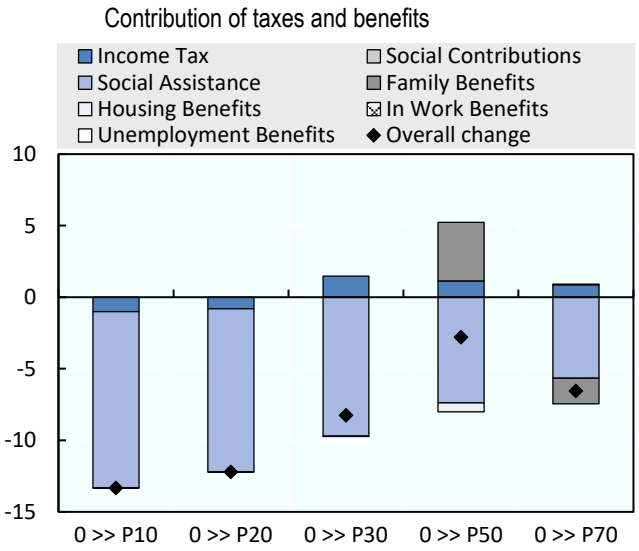
Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

7. NRRs decreased as the reduction in out-of-work incomes was larger than the reduction in in-work incomes. However, the magnitude of the change was different for different family types as they were affected by different policy changes.

8. PTRs fell for most people because of the reduction in social assistance and means-tested family benefits out of work relative to earnings. There is less benefit to lose on entering work, so work incentives are stronger. (Tax increases worked in the opposite direction, but the effect was smaller). For two-earner couples without children PTRs scarcely changed, as this family type usually does not receive benefits when not working.

Figure A.21.3. Changes in participation tax rates



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.22 Portugal

1. Please click on the following links to open policy evaluation scoreboards for Portugal for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

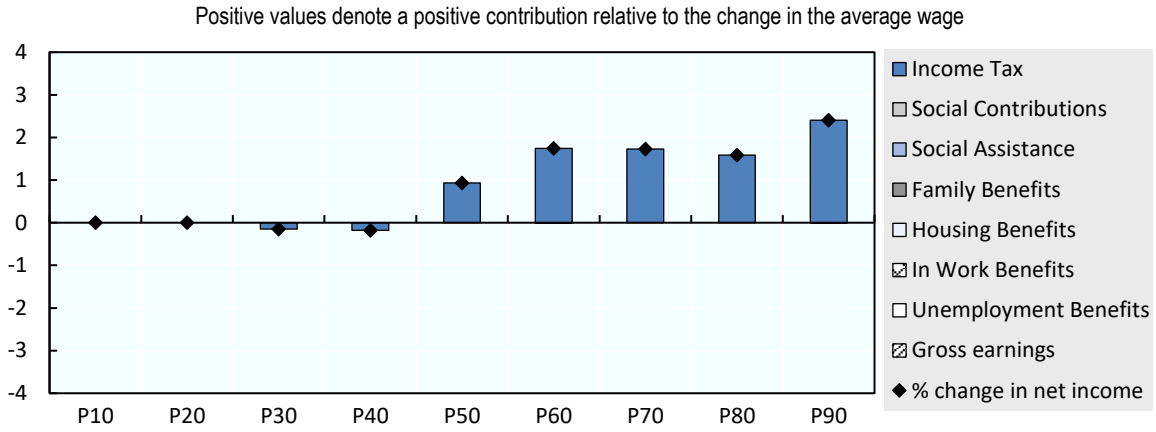
Changes in in-work-incomes

2. The incomes of working families in Portugal were affected by a number of changes to income tax. These increased tax liabilities for those with low incomes, but reduced them more significantly for higher earners. Most tax credits and allowances were unchanged in nominal terms over this period – the sole exception was a 0.8% increase in the child tax credit, which still represents a fall relative to average earnings levels. Tax brackets were also only increased very slightly (between 0.8% and 1.3%), again representing a fall relative to the average wage. However, the surtax was significantly reduced (in 2017) and then abolished (in 2018), and in 2018 two new tax brackets were introduced: a 23% bracket to replace part of the 28.5% bracket, and a 35% bracket to replace part of the 37% bracket. These last two changes only benefited higher earners (that is, those at or above median earnings): lower earners did not pay the surtax in the first place, and only pay income tax in lowest (14.5%) bracket.

3. The overall impact of these changes was to reduce net incomes for families with lower earnings levels slightly (by less than 0.5% in all cases examined in the scoreboard) but to increase them by up to 2.5% for those with higher earnings (Figure A.22.1).

4. Benefit changes had minimal effects on the incomes of the working families shown in the scoreboard. Family benefit amounts were increased by 0.5% in 2017 and by 1.3% in 2018 for children aged over 3, roughly in line the growth in the average wage over this period. However, family benefits were increased more substantially for families with children under three. Since the scoreboard examines the case of families with two children aged six and four, the impact of this reform is not shown, but it had a positive impact on the net incomes of families with younger children.

Figure A.22.1. Percent change in net income components across the earnings distribution

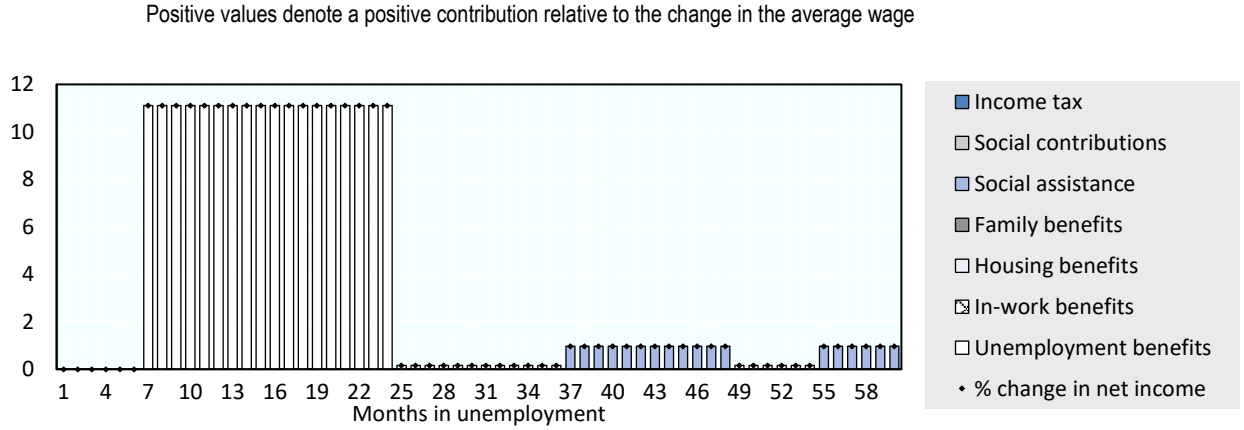


Note: For a single person without children aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

5. Changes to both unemployment and social assistance benefits increased the incomes of workless families between 2016 and 2018. The 10% reduction in unemployment insurance benefit amounts after 6 months was abolished in 2018. This reform increased NRRs between the 7th and 24th month of the unemployment spell for the case examined in the scoreboard of a 40 year old with a long and continuous previous employment record. Also, social assistance benefit amounts increased a little relative to the average wage, increasing incomes at longer unemployment durations and for those who do not qualify for unemployment benefits.

Figure A.22.2. Percent change in net income components across the unemployment spell

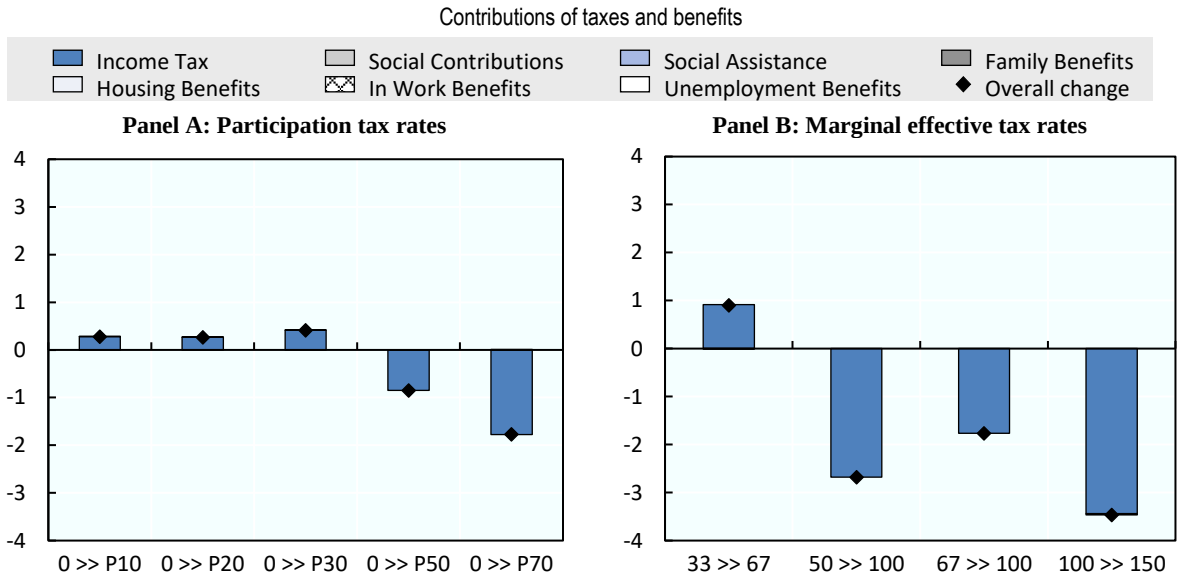


Note: For a single person without children aged 40 with a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

6. Income tax changes were the key factor in determining whether reforms strengthened or weakened work incentives over this period: those who saw their tax liabilities rise had higher PTRs, whereas those with reduced tax liabilities had lower PTRs following the changes. Increases in social assistance when not working also tended to increase PTRs, but were in general not sufficient to offset the impact of lower income taxes for those without children earning at or above the median of the full-time earnings distribution. These income tax changes also led to lower METRs at higher earnings ranges, but sometimes higher METRs at lower earnings ranges (Figure A.22.3).

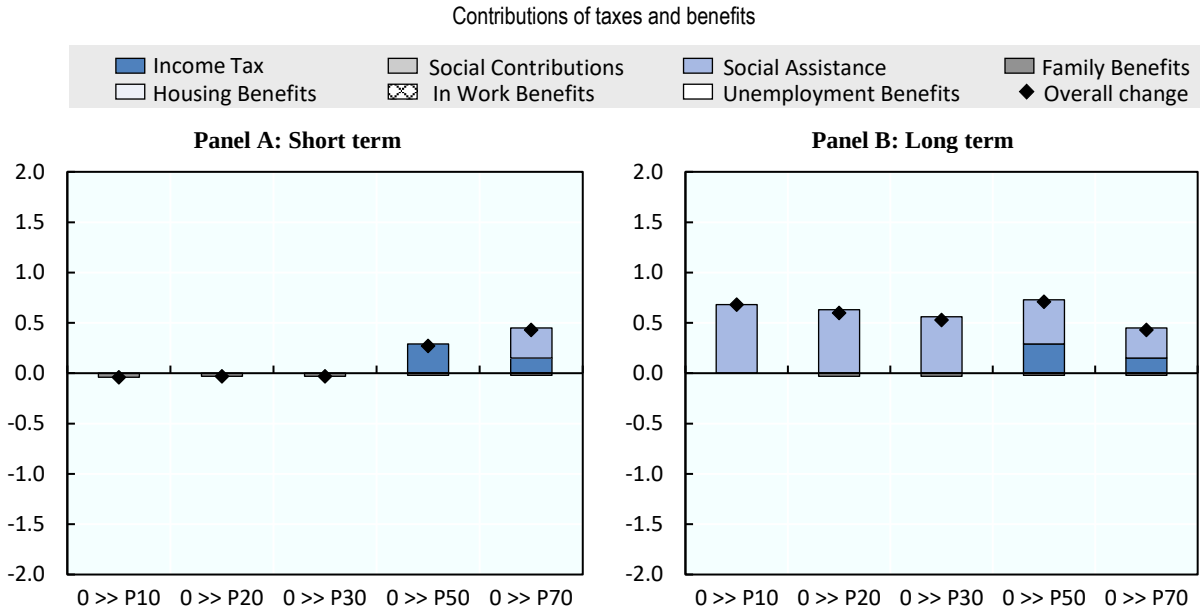
Figure A.22.3. Changes in work incentives



Note: For an individual in a couple with two children aged 6 and 4 whose partner earns 67% of the average wage. Adults are aged 40. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

7. For those who move into work from social assistance benefits, there is a lower benefit withdrawal rate for the first year. As a result, some of those who move into work from social assistance continue to receive it for the first year but then lose entitlement thereafter. For such individuals, the increase in social assistance rates increased benefit entitlements both in work and out of work, and so did not affect 'short term' PTRs (that is, when only the immediate effect on incomes of moving into work is considered). These individuals still eventually lose entitlement to social assistance in work, however, and so the increase in the social assistance benefits they receive when not working still increases PTRs in the long run. Examples of this situation include a single earner in a couple with two children earning up to median full time earnings (Figure A.22.4).

Figure A.22.4. Changes in participation tax rates



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

A.23 Romania

1. Please click on the following links to open policy evaluation scoreboards for Romania for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Changes to social security contributions, income taxes and family benefits affected the incomes of working families in Romania between 2016 and 2018. In 2018, the contributions to the social security fund and to the health insurance contribution paid by the employer were transferred to the employee. As a result, employee's social security contributions increased from 16.5% to 35% of earnings. This reduced incomes substantially relative to the average wage for all family types and at all earnings levels shown in Figure A.23.1 (light-grey bars).[50]

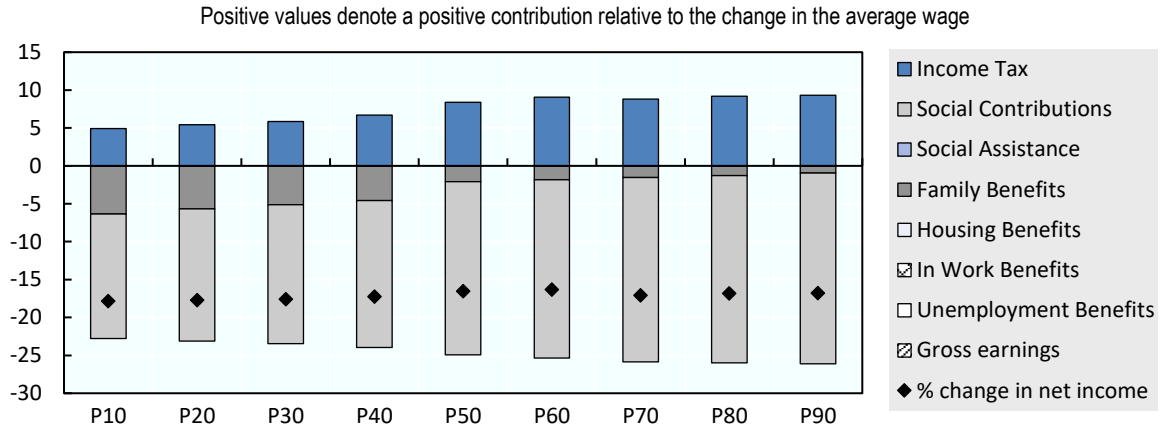
3. The reduction in net incomes due to higher social security contributions was partly compensated by a decrease in tax liabilities (Figure A.23.1, blue bars). First, social security contributions can be deducted from taxable income, so tax liabilities fell as social security contributions rose. Second, the flat tax rate fell by 6 percentage points in 2018, and the basic tax allowance increased by 70%. The threshold at which the basic tax allowance starts to be withdrawn increased as well, and it is now withdrawn less quickly above the threshold. Tax allowances thus increased for low and middle earners. However, those earning more than the 70th percentile of the full-time earnings distribution did not benefit from the higher tax allowance, as it is fully withdrawn at this level.

4. Family benefit rates were frozen in nominal terms during a period of fast earnings growth (see Annex B) and thus fell relative to average earnings (Figure A.23.1, dark-grey bars).[51]

[50] The scoreboard assumes that the economic incidence of a tax is the same as its formal incidence, so employee social security contributions reduce the net income of employees and employer social security contributions raise labour costs for employers. In reality, since employee and employer social security contributions are essentially the same tax – they both create a wedge between the cost of labour to employers and the amount of net earnings received by the employee – they should have the same incidence, at least in the long-run. Transferring contributions from the employer to the employee, as Romania did over this period, should not therefore affect families' net incomes in the long-run as wages would be expected to rise to compensate. Employers would be willing to pay higher wages when employer social security contributions were lower, and employees would demand higher wages if their social security contributions were higher.

[51] The threshold at which the means-tested portion of family benefits is withdrawn was also frozen in nominal terms, with the effect that a small number of families saw very substantial drops in their income as they no longer qualify for this component. For example, for a single-earner couple with two children, this occurs between the 40th and 50th percentile of the full-time earnings distribution (Figure A.3 in the scoreboard).

Figure A.23.1. Percent change in net income components across the earnings distribution

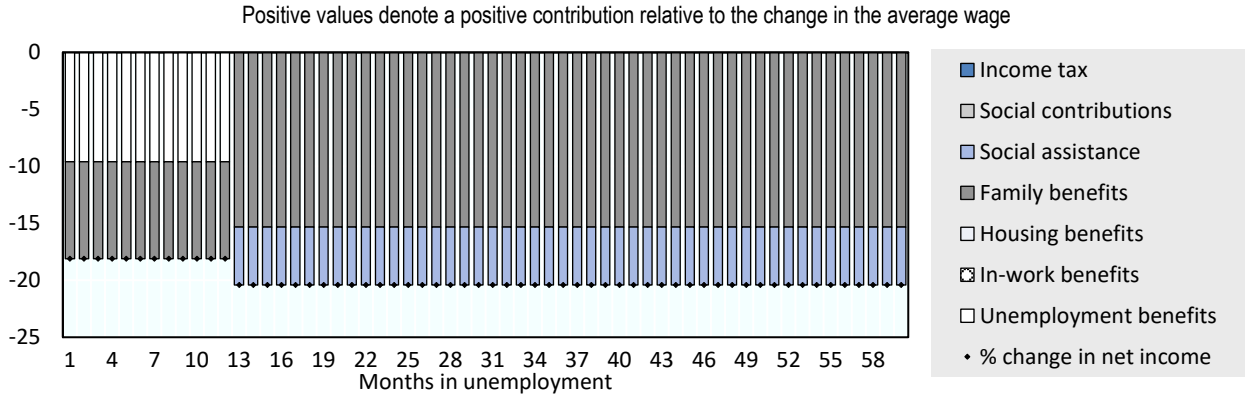


Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

5. Other benefits including social assistance (Figure A.23.2, light blue bars) and basic unemployment benefits (white bars) were also frozen in nominal terms in Romania in 2017 and 2018. Workless families thus saw their benefit entitlements fall relative to the average wage.[52]

Figure A.23.2. Percent change in net income components across the unemployment spell



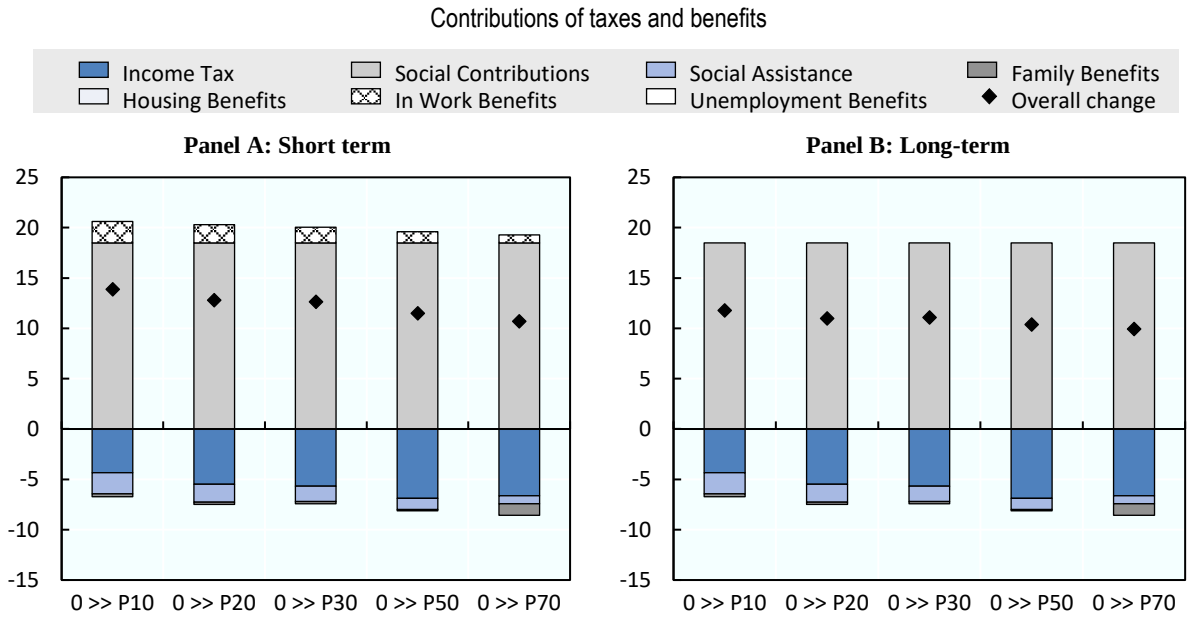
Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

[52] As net incomes in and out of work decreased alike relative to the average wage, NRRs were hardly affected for all family types (see Figures D.1 and D.2 in the scoreboard).

Changes in selected indicators

6. Increases in social security contributions in work raised PTRs for all family types examined in the scoreboard (Figure A.23.3, light-grey bars).[53] Reduced tax liabilities in work (blue bars) and decreased social assistance levels when out of work (light-blue bars) partly offset this effect. Reductions in PTRs are slightly smaller when considering the immediate transition from benefits into work rather than the long-run change in net income after transitional payments have expired (compare Panels A and B of Figure A.23.3). This is because individuals keep receiving whatever social assistance they were entitled to for the first three months on entering work (checked bars). The reduction in social assistance levels relative to the average wage thus does not reduce PTRs in the short term as it reduces in-work and out-of-work benefits by the same amount (note that the checked and light-blue bars in Figure A.23.3 are the same size: the social assistance benefit run-on is classified as an in-work benefit in the OECD tax-benefit model).

Figure A.23.3. Changes in participation tax rates



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

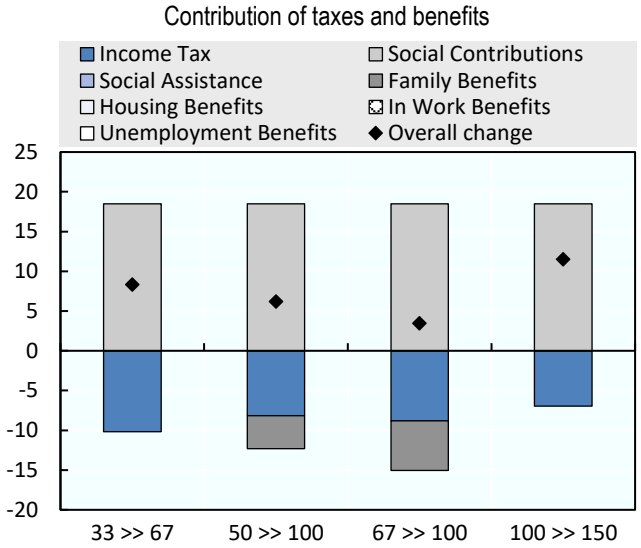
7. Incentives to increase working hours weakened also as a higher proportion of any additional earnings are lost to increased social security contributions (Figure A.23.4, light-

[53] Though note that the overall effective tax rate on labour was almost unchanged (see below) as employer social security contributions fell as employee contributions rose. If, following the discussion above, this shift from employer to employee led to an increase in wages in the long-run as economic theory would predict, this change would not reduce the gain from working, nor increase PTRs.

grey bars).[54] As for PTRs, the changes to the income tax system reduced METRs at all earnings levels. However, changes to the income tax allowance slightly offset this, strengthening incentives to increase hours especially at lower earnings levels. At higher earnings levels, the tax allowance is still fully withdrawn, though the decreased flat tax rate still makes working additional hours more attractive (blue bars).

8. The reduction in the means-tested component of family benefits relative to the average wage reduces the disincentive to increase earnings: increasing working hours from part-time to full-time work becomes more attractive as less family benefit is lost and therefore METRs fell slightly (Figure A.23.4, dark-grey bars).

Figure A.23.4. Changes in marginal effective tax rates by earnings range



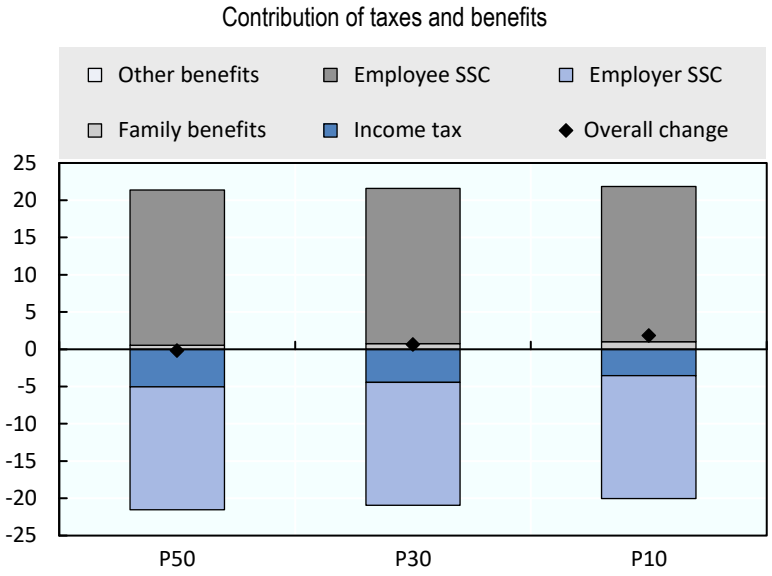
Note: For a lone parent aged 40 with two children aged 6 and 4. The notation "33 >> 67" in the horizontal axis refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

9. For all family types shown in the scoreboard, the effective tax rates on labour changed only marginally. This is because the reduction in employer social security contributions was almost equal to the increase in employee's contributions, though slightly larger.[55] The reduced income tax liabilities essentially compensated for this difference, leaving overall effective tax rates on labour largely unchanged (Figure A.23.5).

[54] Though, again note that if wages rose following the switch from employer to employee social security contributions as economic theory would predict, the gain from working additional hours would be unaffected.

[55] As mentioned above, the contributions to the social security fund and to the health insurance paid by the employer were transferred to the employee while both rates slightly fell also.

Figure A.23.5. Changes in effective tax rates on labour by earnings level



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P50 values in the horizontal axis refer to the deciles points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.24 Slovak Republic

1. Please click on the following links to open policy evaluation scoreboards for the Slovak Republic for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. The minimum wage increased quite substantially relative to average earnings levels in the Slovak Republic between 2016 and 2018 (a nominal increase of 18.5% compared to growth in the average wage of 9%).[56] However, not all of this increase in gross earnings for low earners translated into an increase in net income: some was lost through higher income taxes and social security contributions, or through lower entitlement to means-tested benefits.

3. Changes to tax and benefit policies also affected net incomes. In particular, there was significant 'fiscal drag' in the Slovak Republic between 2016 and 2018. Income tax allowances, credits and thresholds, the threshold for receiving the health insurance contribution allowance, and alimony replacement benefit and child allowance rates all increased by less than growth in average earnings (Figure A.25.1, blue bars). Moreover, nominal social assistance benefit rates (including the housing component, which is counted as a housing benefit in the TaxBEN model) did not change at all. These all reduced net incomes relative to average earnings levels.

4. The threshold at which alimony replacement benefit is withdrawn also did not increase as quickly as average earnings over this period.[57] As a result, a lone parent with two children earning at the 70th percentile of the full-time earnings distribution no longer qualifies and thus their net income fell very substantially (more than 20%). Although the range of earnings levels where lone parents are affected by this change is relatively small,[58] this result highlights the fact that fewer lone parents will be entitled to this benefit over time if the income threshold is not indexed in line with growth in average earnings.

5. With the exception of this case, changes in net incomes relative to the average wage are not large, generally less than 5% and often less than 1% for families without children who are not affected by changes to family benefits and child tax credits (which are counted as an in-work benefit in the TaxBEN model). Losses from tax-benefit policies were also

[56] Detailed data on the distribution of earnings in 2018 is not yet available. In this report, it is assumed that each percentile of the full-time earnings distribution grew in line with the average wage since the last available data point (which in the Slovak Republic is 2017). However, the 10th percentile of the full-time earnings distribution is increased to the level of the 2018 minimum wage in cases (such as the Slovak Republic) where it would otherwise be less than this level.

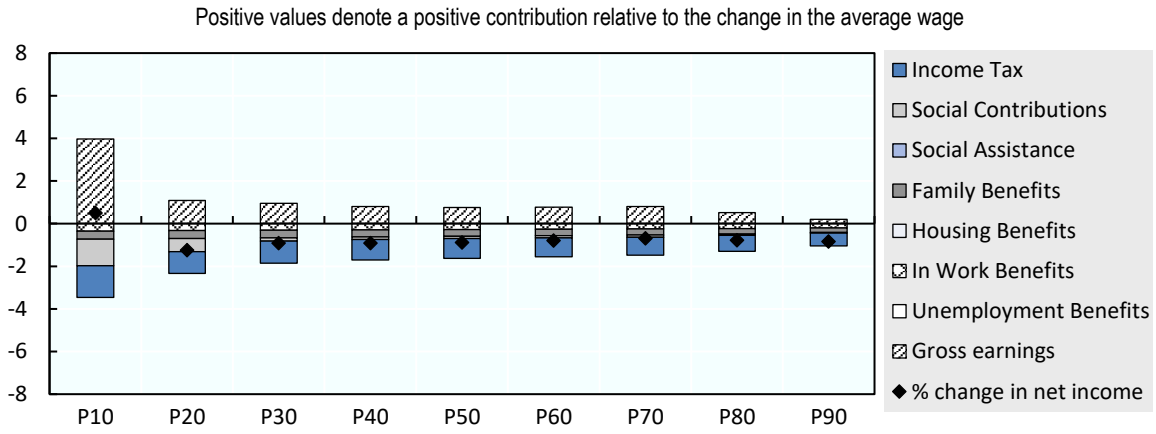
[57] Alimony replacement benefit is paid to lone parents who do not receive the alimony they are due from their former partner for three months in a row. As the TaxBEN model assumes that alimony and other payments due from non-resident family members are not forthcoming, all lone parents receive this benefit in the model if they meet the income criterion.

[58] In the case of the family considered in the scoreboard, it occurs between 98% and 106% of the average wage.

generally larger at lower earnings levels where workers were affected by the reduction in the value of the health insurance contribution allowance, though of course those with very low levels of earnings also benefited from the increase in the minimum wage (Figure A.24.1).

6. A change that did not affect any of the families examined in the scoreboard was a significant increase in the maximum assessment base for social security contributions, and its abolition for health insurance contributions. This increased social security contributions only for very high earners (those earning more than 4 times the average wage).

Figure A.24.1. Percent change in net income components across the earnings distribution



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse earns 67% of the average wage. For the other spouse, earnings range between the 10th (P10) and the 90th (P90) percentiles of the full-time earnings distribution along the horizontal axis.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

7. The non-indexation of social assistance and housing benefits and the under-indexation of alimony replacement benefit relative to growth in average earnings reduced the level of benefits for workless families, too. Levels of unemployment benefits remained the same relative to earnings, however, so income levels during the first six months of an unemployment spell fell by less. An exception to this was at the highest earnings levels (from around 180% of the average wage, which is well above the 90th percentile of the full-time earnings distribution) where the maximum level of unemployment benefits becomes relevant. In this case, benefit levels fell slightly relative to the average wage as the maximum unemployment benefit amount did not increase as quickly as average earnings levels.

Changes in selected indicators

8. Reductions in the amount of benefits received out of work were the key factor affecting the incentive to enter work. This more than offset the impact of higher income tax and social security contributions in work in most of the cases considered in the scoreboard.

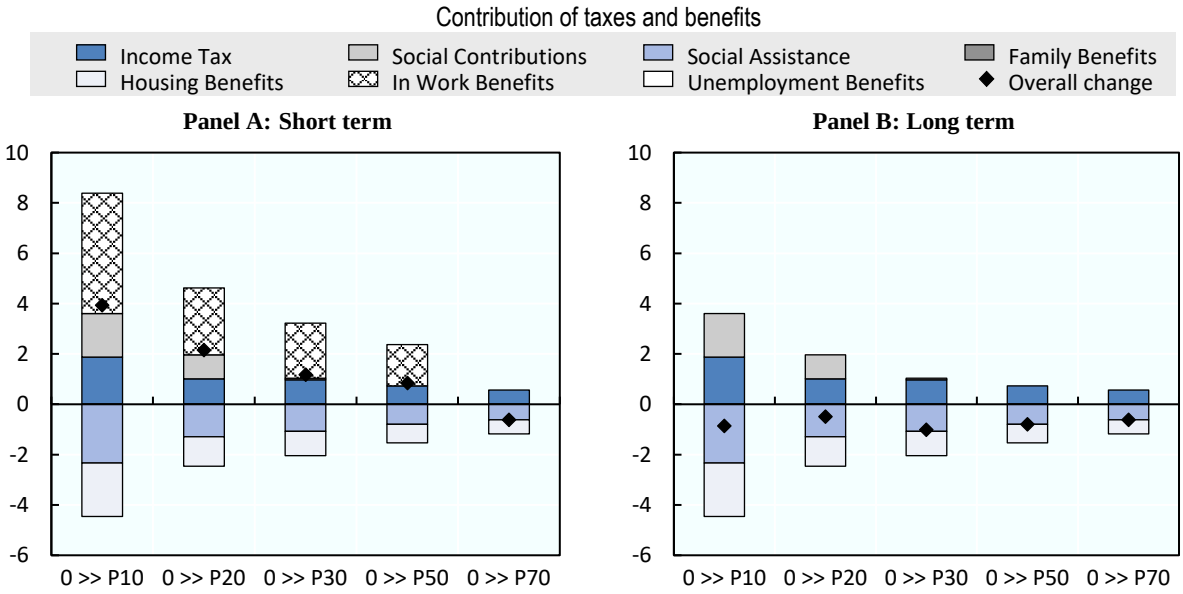
9. Lone parents, who receive no or only very small amounts of social assistance benefits when not working and instead receive alimony replacement benefit, were an exception to this rule, however. Since this benefit is withdrawn only at relatively high

income levels (now at an earnings level just under the 70th percentile of the full-time earnings distribution, see discussion above), the reduction in benefit amounts relative to earnings reduces net incomes both in and out of work and thus leaves PTRs unaffected. In this case, higher income taxes and social security contributions and lower child tax credits in work increased PTRs.

10. Those with a partner in paid work were also an exception to this rule. Since they do not receive social assistance or other benefits when not working, their incentives are unaffected by changes in the level of social assistance benefits. Instead, higher income taxes and social security contributions in work increased PTRs for this group.

11. For all families with only one earner examined in the scoreboard, short-run PTRs, that is, examining the situation immediately after an individual makes the transition from economic inactivity to employment, increased by more or fell by less than long-run PTRs, which ignore transitional payments received on moving into work (Figure A.24.2). This is because in the short-run case individuals receive the "special allowance" when they move into work, and this benefit was not uprated between 2016 and 2018, reducing the value of this bonus from moving into work as a share of average earnings.

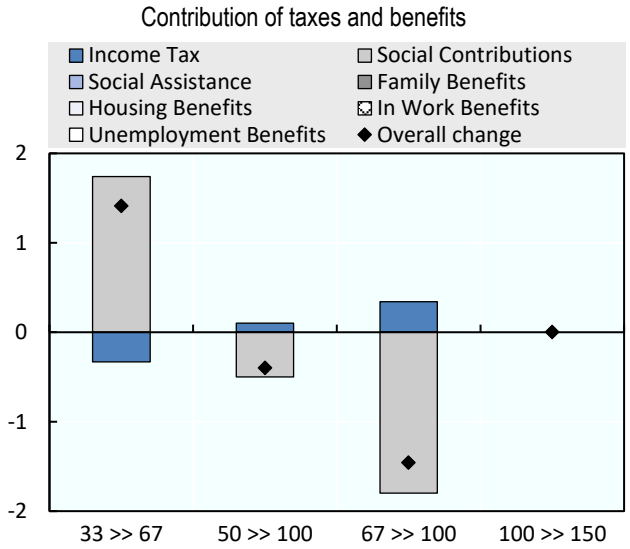
Figure A.24.2. Changes in participation tax rates by earnings levels



Note: For a single person without children aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

12. The freeze in the Health Insurance Contribution allowance had small but different effects on METRs over different income ranges (Figure A.24.3, light grey bars). At low earnings ranges, METRs increase as the fall in the allowance relative to the average wage means that less can be earned before health insurance contributions have to be paid. At higher earnings ranges, however, since the allowance is withdrawn as earnings rise, METRs fall as workers have less to lose if they increase their earnings.

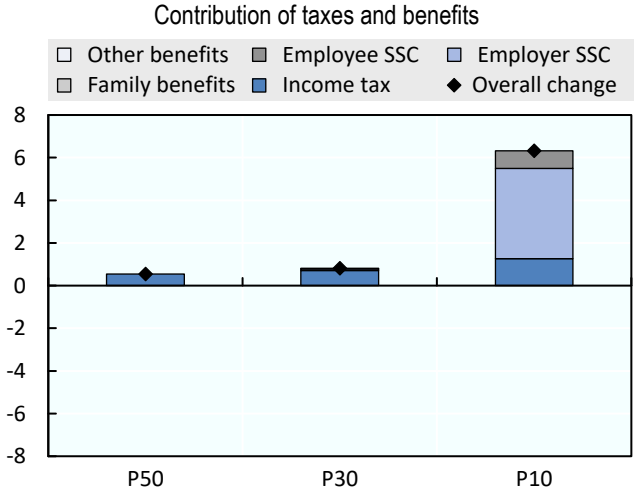
Figure A.24.3. Changes in marginal effective tax rates by earnings levels



Note: For an individual in a couple without children whose partner earns 67% of the average wage. Adults are aged 40. The notation "33 >> 67" in the horizontal axis refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

13. Increases in taxes and social security contributions and lower benefit entitlements when in work increase the effective tax rate on labour for all family types and earnings levels (Figure A.24.4). The increase was particularly large at the 10th percentile of the full-time earnings distribution for all family types as the health insurance contribution allowance was abolished for employer contributions (light blue bars). At higher earnings levels, the increase in the effective tax rate on labour was smaller at less than 5ppts in all cases.

Figure A.24.4. Changes in effective tax rates on labour by earnings level



Note: For a single person without children aged 40. The P10-P50 values in the horizontal axis refer to the decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

A.25 Slovenia

1. Please click on the following links to open policy evaluation scoreboards for Slovenia for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

2. Policy changes in Slovenia tended to reduce the incomes of working families: for all family types and earnings levels in the scoreboard, the impact of policy changes is negative. Several different policy areas contributed to this. First, social assistance benefit rates fell relative to the average wage, which in turn led to housing benefits being withdrawn from a lower income level (Figure A.26.2, light blue and off-white bars).[59] Maximum amounts of housing benefits were also frozen in nominal terms. Family benefit levels were unchanged in nominal terms and income brackets did not grow as quickly as average earnings. An effect of this was that some families fell into a higher income bracket and saw their family benefit entitlements fall more substantially as a result. (On the scorecard, examples of this include the lone parent earning at the 60th percentile of the full time earnings distribution, the single- earner couple at the 80th percentile, see Figure A.25.1, grey bars, and the two-earner couple with children at the 20th and 80th percentiles). Finally, income tax thresholds and allowances did not grow as quickly as average earnings, increasing income tax liabilities for those with sufficiently high incomes to pay income tax (blue bars).

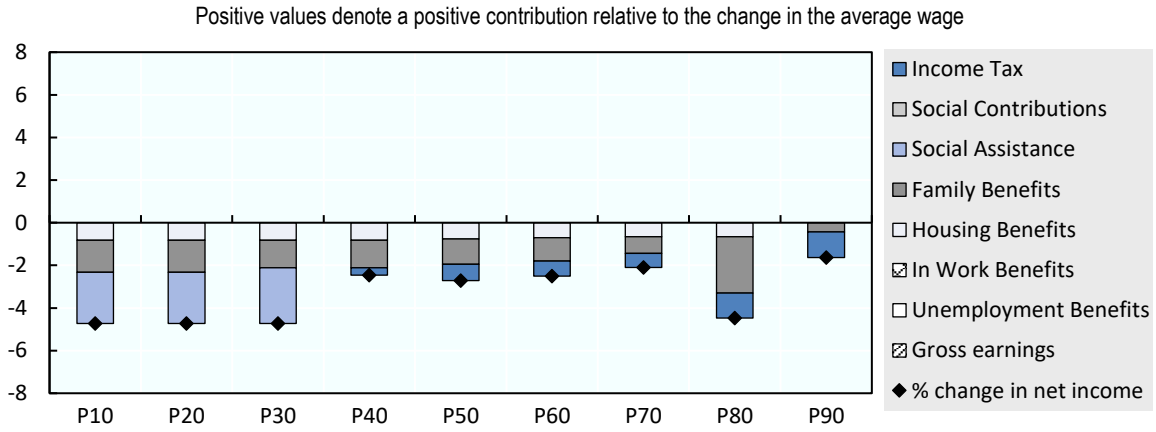
3. Overall, the largest percentage reductions in incomes were generally for families with lower levels of earnings: incomes fell between 4% and 5% at these income levels. Those families who moved into a higher income bracket in the family benefit system also saw their incomes reduced by similar amounts.

4. For some families with higher income levels than those considered in the scoreboard, some reforms were introduced during this period that increased their incomes. First, the third income tax bracket was split in two with a 41% bracket replaced by two; a 34% bracket and then a 39% one. Secondly, two new brackets were added to the family benefit system for higher-income families (previously, families with these income levels would not have been entitled to family benefits at all).

5. There was also a small structural change to the general income tax allowance in 2018: the higher allowance for those with low incomes is now withdrawn smoothly rather than being withdrawn in two steps. This withdrawal occurs between the 20th and 40th percentiles of the full-time earnings distribution, but the reform does not significantly affect net incomes.

[59] The income threshold at which housing benefits start to be withdrawn is linked to the level of social assistance benefits.

Figure A.25.1. Percent change in net income components across the earnings distribution



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

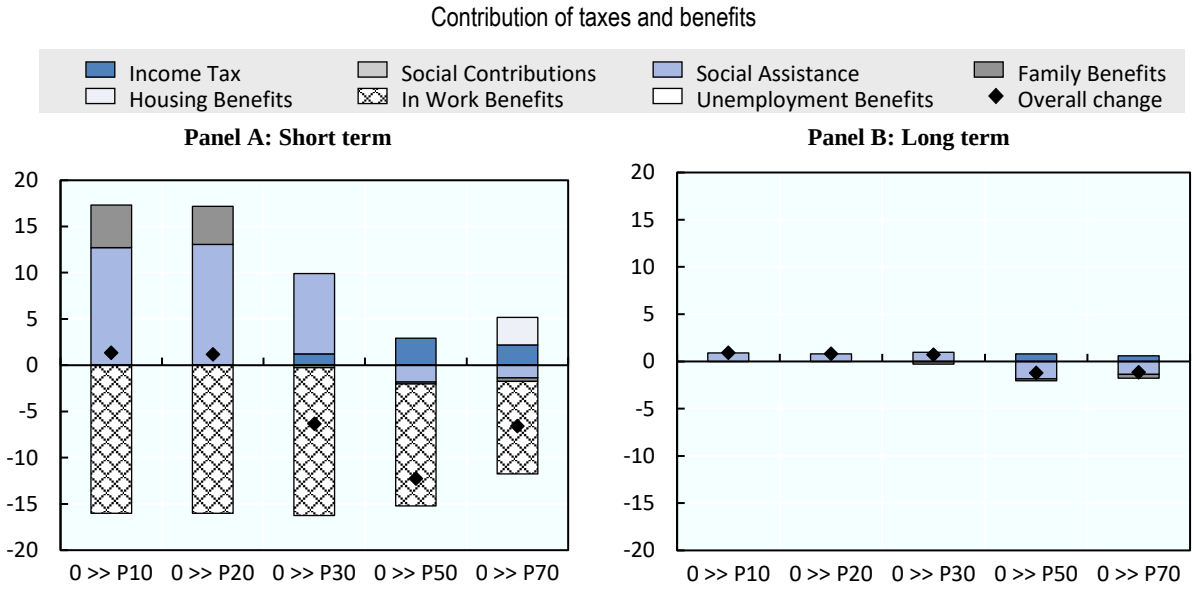
6. Reductions in the level of social assistance benefits relative to the average wage and the freeze in maximum levels of housing benefits also affected the incomes of workless families. Furthermore, the maximum level of unemployment benefits was frozen in nominal terms, reducing the amount received by those with previous earnings above the 30th percentile of the full-time earnings distribution.

Changes in selected indicators

7. A new provision in the unemployment benefit system significantly reduced short-term PTRs, that is, when calculated considering the immediate impact of entering work on net incomes. Since January 2018, unemployment benefit recipients with no more than upper secondary education can continue to receive 20% of their previous unemployment benefit entitlement for 12 months or until their unemployment benefit entitlement would have expired.[60] As a result, incomes on immediately re-entering work are significantly higher (though note that for low earners, this additional benefit entitlement simply reduces entitlement to social assistance when in work, see Figure A.25.2, white and light blue bars). When considering the impact on incomes in the longer term, the story is different, however. On the whole, reductions in benefits received when not working are greater than the reduction in in-work benefits, leading to a reduction in PTRs. However, for some groups, principally those who receive social assistance when in work (e.g. a single earner in a couple with children earning up to the 30th percentile of the full-time earnings distribution, see Figure A.25.2), the opposite is the case. This is because in Slovenia the maximum amount of social assistance (i.e. before the means test is applied) is higher for a working adult than a non-working one. Reducing all social assistance amounts by the same proportion thus reduces benefits more for those in work in cash terms.

[60] Note that no post-secondary education is assumed in the TaxBEN model.

Figure A.25.2. Changes in participation tax rates



Note: For couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. Short-term PTRs in Panel A refer to the 2nd month of employment.
Source: Secretariat calculations using the OECD tax-benefit model.

8. The minimum base for employer social security contributions, which obliges employers to pay contributions on this minimum base even if actual earnings are below this level, increased faster than average earnings in 2018. This increased the effective tax rate on labour for low earners (up to the 10th percentile of the full-time earnings distribution).

A.26 Spain

1. Please click on the following links to open policy evaluation scoreboards for Spain for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).[61]

Changes in in-work-incomes

2. As benefits are withdrawn at very low earnings levels in Spain, only income tax changes had an impact on the net incomes of working families. Since most tax allowances, thresholds and credits were frozen in nominal terms over this period, 'fiscal drag' reduced the net incomes of many working families relative to average earnings levels. However, as earnings growth was relatively slow over this period (1.6% over two years), the reduction in net income was small, at most 0.6%.

3. For some low-income families, however, an increase in the work-related expenses allowance reduced income tax liabilities and increased net incomes by up to 2.5%. This can be observed in the scoreboard up to the 20th percentile of the full-time earnings distribution for all family types except lone parents and single-earner couples with children (Figure A.26.1, blue bars), and for the lone parent at the 20th percentile only. Low-earning couples with children do not pay income tax anyway as they have sufficient tax allowances to cover their tax liability. For the lone parent featured in the scoreboard at the 10th percentile of the full-time earnings distribution, no income tax is due but they receive a refundable tax credit. This tax credit did not increase in cash terms between 2016 and 2018 and hence fell relative to average earnings levels. The work-related expenses allowance is withdrawn at higher earnings levels, so better off families did not benefit from this change.

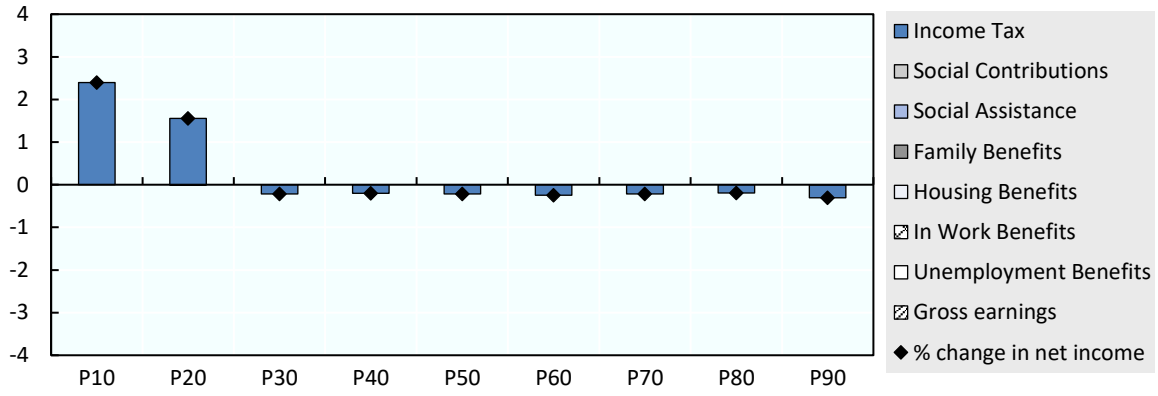
4. At more extreme levels of the earnings distribution (below the 10th percentile and above the 90th percentile), other reforms had an impact on net incomes. The minimum and maximum levels of social security contributions were both increased: the minimum amount quite substantially in both 2017 and 2018 and the maximum amount by 3% in 2017 (around twice the rate of average earnings growth over the whole period).

5. Other policy changes affected other family types not examined in the scoreboard. In particular, a new higher level of the refundable child tax credit mentioned earlier for lone parents with 3 or more children and couples with 4 or more children. Income tax liabilities fell for these families.

[61] Note that certain aspects of the tax-benefit system are determined at the regional level in Spain, notably the social assistance system, and there are also regional income taxes. In these cases, the TaxBEN model simulates the rules applying in Madrid.

Figure A.26.1. Percent change in net income components across the earnings distribution

Positive values denote a positive contribution relative to the change in the average wage



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

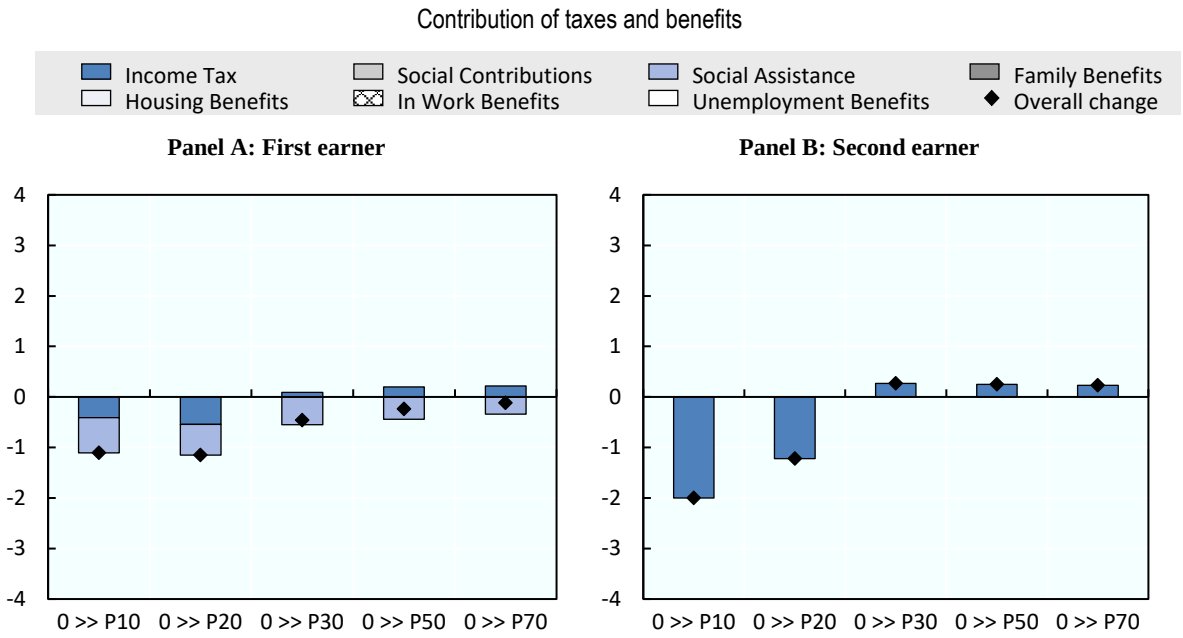
6. Social assistance and family benefit rates were frozen in nominal terms over this period and so the incomes of workless families receiving these benefits fell slightly relative to average earnings levels.

7. For those receiving unemployment benefits, the maximum and minimum levels of unemployment insurance benefits (received during the first two years of an unemployment spell for the case examined in the scoreboard of a 40 year old with a long and continuous employment record) were increased by 1% in 2017, slightly less than the growth in the average wage. These are binding in some cases examined in the scoreboard. For those without children, the maximum level is binding for the first six months of the unemployment spell when previous earnings were at the 50th percentile of the full-time earnings distribution, and for those with children during the subsequent 18 months of the unemployment spell when previous earnings were at the 10th percentile. In these cases, net incomes fell slightly relative to average earnings levels. The level of unemployment assistance benefits (received after the expiry of unemployment insurance benefits) also increased by only 1%, so benefit levels fell relative to the average wage also at longer unemployment durations.

Changes in selected indicators

8. The incentive to work at all (as opposed to not working) generally strengthened in Spain between 2016 and 2018. Reductions in social assistance and family benefit amounts relative to the average wage when not working and, for many low earners, lower income tax liabilities in work because of the higher work-related expenses allowance were the two key factors responsible for reducing PTRs, which fell by up to 3 percentage points (ppts). The exceptions to this rule were middle- and high-earners with a working partner, who do not receive benefits when not working and for whom tax liabilities in work increased. But as these increases in income taxes were small, PTRs only increased very slightly: the largest increase observed in the scoreboard is less than ⅓ppt.

Figure A.26.2. Changes in participation tax rates



Note: For a couple without children. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

9. METRs reduced at very low earnings ranges but increased at higher ones. Lower METRs at very low earnings arise for two reasons. First, the increase in the work-related expenses allowance increases the point at which income tax starts to be paid. Second, reductions in maximum social assistance and family benefit levels for very low earners mean that less benefit is lost if they increase their earnings. However, although income tax liabilities fell at very low levels of earnings, freezes in other allowances and thresholds led to them increasing more quickly thereafter. METRs thus increased at higher earnings ranges.

A.27 Sweden

1. Please click on the following links to open policy evaluation scoreboards for Sweden for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

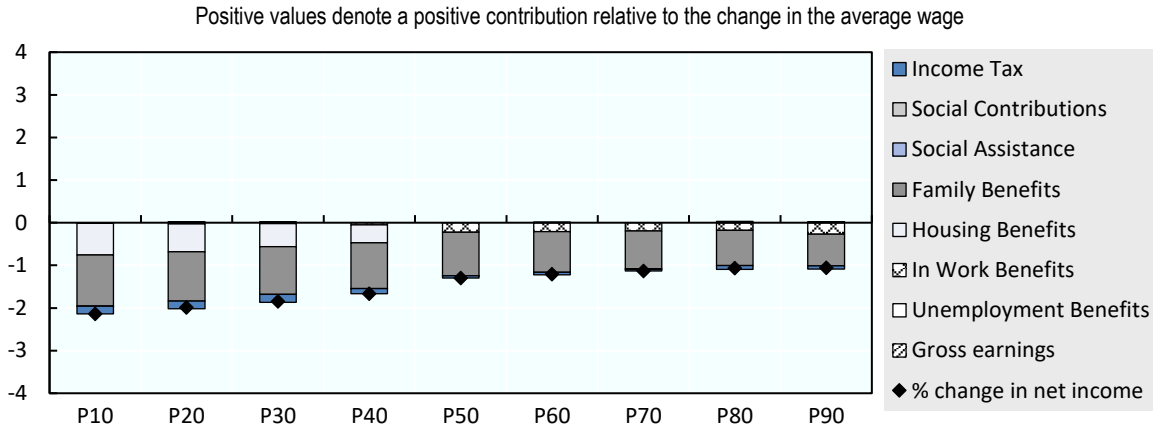
2. Policy changes generally reduced the incomes of working families in Sweden between 2016 and 2018. Income tax allowances did not increase as quickly as average earnings over this period, and the maximum amount of the Earned Income Tax Credit was similarly increased by less than average earnings growth. The first of these was more important for lower earners, the second for higher earners (Figure A.27.1, blue and checked bars). Benefit changes also tended to reduce incomes. First, child allowance and alimony advance payment[62,63] rates did not increase in nominal terms over this period and hence fell relative to average earnings levels (grey bars). Maximum housing benefit amounts were also frozen in nominal terms, but the income thresholds at which the benefit starts to be withdrawn were also increased more quickly than average earnings growth in 2017 for families with children. The net effect of these two changes was to slightly reduce housing benefit entitlements for working families with children (off-white bars).

3. Overall, the impact of policy changes on net household incomes was relatively small, particularly for families without children. The largest impacts – a reduction in net income of just over 2% – occurred for low-earning lone parents who are entitled to larger amounts of benefits in work (Figure A.27.1).

[62] The OECD tax-benefit model assumes that lone parents do not receive any maintenance payments. In practice, those who do receive maintenance from a former spouse will not be entitled to this benefit.

[63] However, in 2018 a higher rate of alimony advance payment was introduced for children aged 15 and over. For families with older children than those examined in the scoreboard, this would have increased net incomes.

Figure A.27.1. Percent change in net income components across the earnings distribution



Note: For a lone parent family with two children aged 6 and 4. The adult is aged 40. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

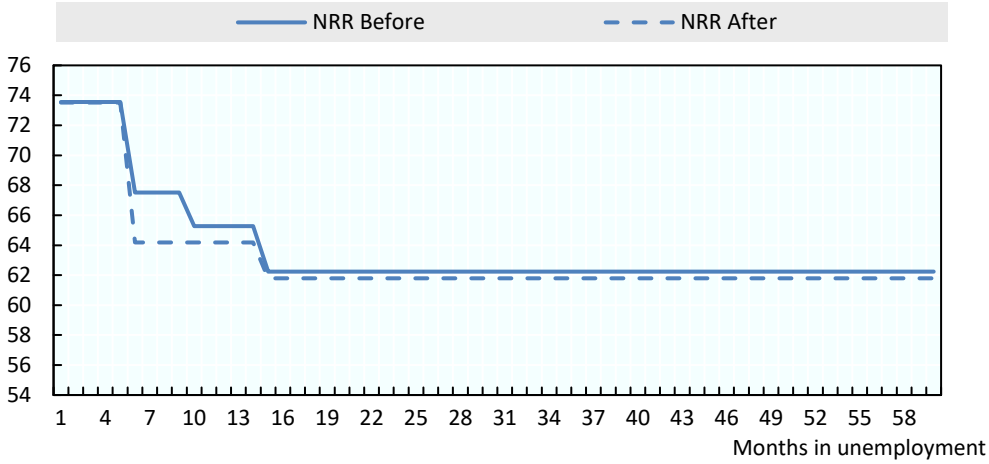
Changes in out-of-work-incomes

4. Maximum unemployment benefit amounts that are binding in most (though not all) cases were frozen in nominal terms over the 2016-2018 period. As a result, the net incomes of unemployment benefit recipients fell relative to the average wage. The same was true for those receiving social assistance, though to a lesser extent as social assistance benefit levels increased in cash terms, albeit by less than the growth in average earnings.[64] Therefore, reductions in net income were generally larger (up to 6%) than for those receiving social assistance benefits (where the maximum loss was around 2.5%):

5. As the maximum unemployment benefit level was frozen in nominal terms during this period, this maximum became binding from a lower level of previous earnings. An interesting example of this can be found in the scoreboard in the case of a single person without children with previous earnings at the 10th percentile of the full-time earnings distribution (Figure A.27.2). After 9 months of unemployment, the maximum benefit amount was previously not binding as the benefit amount falls from 80% to 70% of previous earnings but the maximum benefit amount does not change. In 2016, the maximum benefit amount was not binding after 9 months of unemployment for someone with previous earnings at the 10th percentile of the full-time earnings, but following earnings growth between 2016 and 2018 the maximum amount was still binding after 9 months for such an individual. As a result, there is no longer a fall in benefits at this point. Continuing the recent policy of not indexing the maximum benefit amount will over time lead to unemployment insurance benefits effectively becoming flat rate and to NRRs gradually falling.

[64] The scoreboard considers the case of a family with two children aged 6 and 4. Social assistance amounts for older children were increased more quickly, so net incomes fell by less for families with older children.

Figure A.27.2. Net replacement rate over the unemployment spell



Note: For a single person without children aged 40 with a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

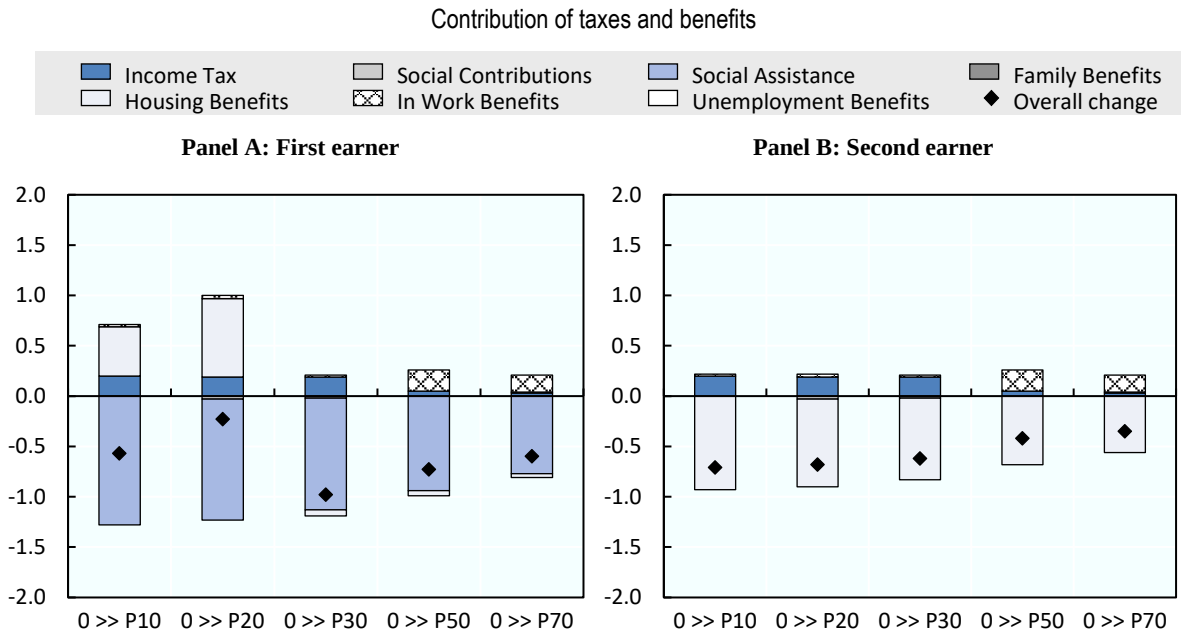
Changes in selected indicators

6. Policy changes between 2016 and 2018 generally strengthened work incentives, but only very slightly: PTRs never fell by more than 1 percentage point. Lower levels of social assistance when out of work relative to wages more than offset the impact of higher taxes and lower EITC entitlements in work.

7. Lone parents are an exception to this rule. For this group, social assistance benefits are less important as they receive the alimony replacement benefit when out of work. Instead, changes to housing benefits are the most important. Sweden offers support for housing costs both through a specific housing benefit, and through social assistance: for those with low incomes whose housing benefit does not cover their rent, social assistance tops it up to that level. As maximum housing benefit amounts fell relative to rents (which in the scoreboard are kept fixed at 20% of the average wage), the social assistance top-up increased over this period. Since social assistance is withdrawn more quickly than are housing benefits on entering work, this change weakened work incentives for lone parents at lower earnings levels.

8. These changes to housing benefits tended to increase PTRs for the first earner in a couple too (though this was more than offset by other changes as outlined above). However, in the case of a couple with children, by reducing the amount of housing benefit when one partner works, these changes also strengthened the incentive for the second earner in a couple to work: there is less housing benefit to lose when the second earner enters work (Figure A.27.3, off-white bars). (For couples without children, there is no entitlement to housing benefit when one partner works, so changes to housing benefit have no impact on the PTR of the second earner. In this case, PTRs increases because of the increases in income tax liabilities in work and reductions in the EITC).

Figure A.27.3. Changes in participation tax rates



Note: For a couple with two children aged 6 and 4. Adults are aged 40. The P10-P70 values in the horizontal axis refer to the decile points of the full-time earnings distribution. In Panel A, the other spouse is economically inactive. In Panel B, the other spouse earns 67% of the average wage.
Source: Secretariat calculations using the OECD tax-benefit model.

A.28 United Kingdom

1. Please click on the following links to open policy evaluation scoreboards for the United Kingdom for the following periods: 2016–2017, 2017–2018 and 2016–2018. The fiche describes the changes observed throughout the entire period (2016–2018).

Changes in in-work-incomes

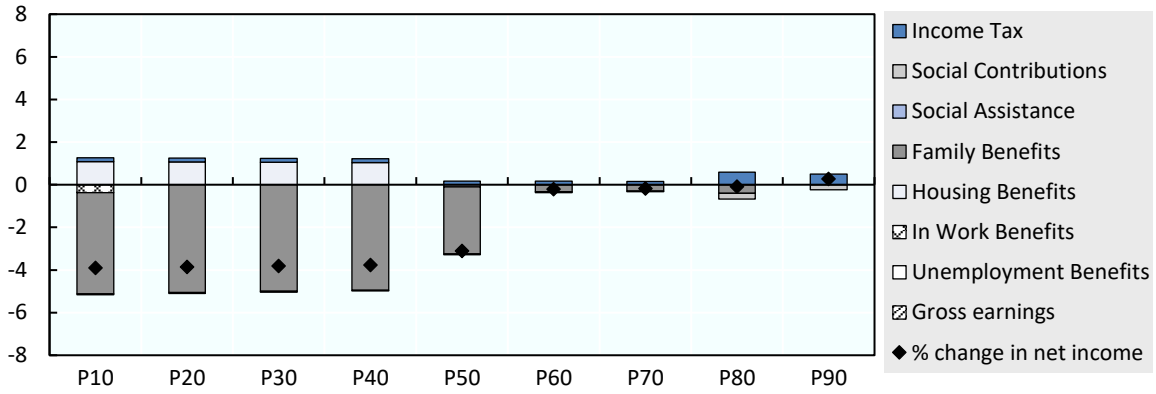
2. For those without children in the UK, the key tax-benefit reforms that affected net incomes in work were increases in income tax thresholds, which were particularly large in 2017. Increases in incomes were larger for higher earners who also benefited from an increase in the threshold at which the higher 40% tax rate is applied (from the 80th percentile of the full-time earnings distribution upwards, see Figure A.28.1, blue bars). At the same time, the threshold at which social security contributions start to be paid was not increased in line with earnings growth, and the level at which the social security contribution rate for employees falls from 12% to 2% was raised in line with the increase in the threshold for paying the 40% income tax rate. These changes slightly offset these reductions in income tax liabilties. Overall, the combined effect of these changes was small, increasing net incomes by less than ⅓%.

3. Families with children gained from these tax changes too, but for the most part these gains were more than offset by reductions in the generosity of benefits. The 'family element' of the Child Tax Credit was abolished for new claimants in 2017 (the case considered by the TaxBEN model), and other benefit rates were frozen in nominal terms over the whole period. Overall, this led to significant reductions in net income of up to 4% for low-income working families with children (Figure A.28.1, grey bars).[65]

[65] Note that although maximum housing benefit amounts and income disregards were frozen in nominal terms over this period, some families with children who lost out from the reductions in Child Tax Credit saw this offset by increases in housing benefit entitlement. This arises because Child Tax Credit is taken into account in the means test for housing benefit, so a reduction in Child Tax Credit entitlement leads to an increase in housing benefit entitlement.

Figure A.28.1. Percent change in net income components across the earnings distribution

Positive values denote a positive contribution relative to the change in the average wage



Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The P10-P90 values in the horizontal axis refer to the nine decile points of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in out-of-work-incomes

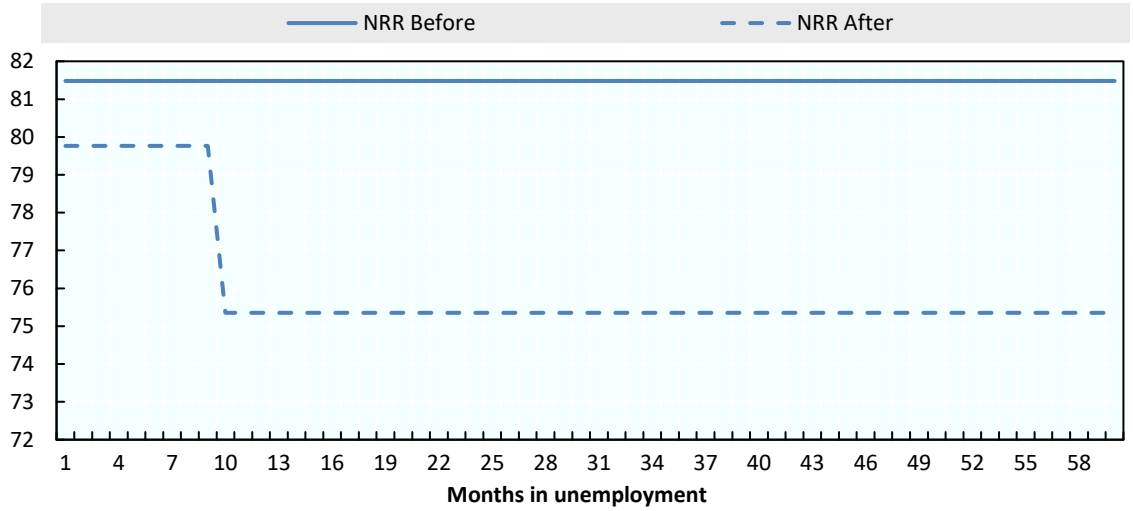
4. The abolition of the family element of Child Tax Credit for new claimants and nominal freezes in other benefit rates affected the incomes of non-working families too. For families with children, the abolition of the family element of Child Tax Credit was the most important factor in reducing out-of-work incomes, whereas for those without children freezes in the maximum levels of housing benefit and unemployment benefits were the key factors. (Note that although the maximum level of housing benefits were also frozen for families with children, the maximum level remained above the rent amount assumed in the TaxBEN model of 20% of the average wage for all family types). For all workless families, tax-benefit changes reduced incomes by between 5% and 6%.

5. The UK also has a 'benefit cap' for workless families, that is, a limit on the total amount of benefits that can be claimed. This only starts to be applied after 9 months of unemployment. The benefit cap was reduced substantially in 2017 and is now below the level of benefits received by the workless couple with two children examined in the scoreboard. As a result, the net replacement rate for this family now falls from around 80% to around 75% in the case where previous earnings were at the 10th percentile of the full-time earnings distribution (Figure A.28.2). Generally, this policy change reduced the incomes of large families, and those living in areas where rents and hence housing benefit entitlements are relatively high. (Note that the benefit cap is applied through housing benefit: housing benefit entitlements are reduced to lower overall benefit entitlements to the appropriate maximum level, see Figure D.3 in the scoreboard).

6. Another reform that affected the incomes of some families (both working and non-working) but not those highlighted in the scoreboard was the decision to limit the per-child element of the Child Tax Credit to two children (i.e. families no longer receive additional benefit amounts for the third and subsequent children). Affected families with more than two children saw their incomes significantly reduced by this change.

Figure A.28.2. Net replacement rate over the unemployment spell

Family with two children aged 6 and 4, previous earnings at 10th percentile of full-time earnings distribution



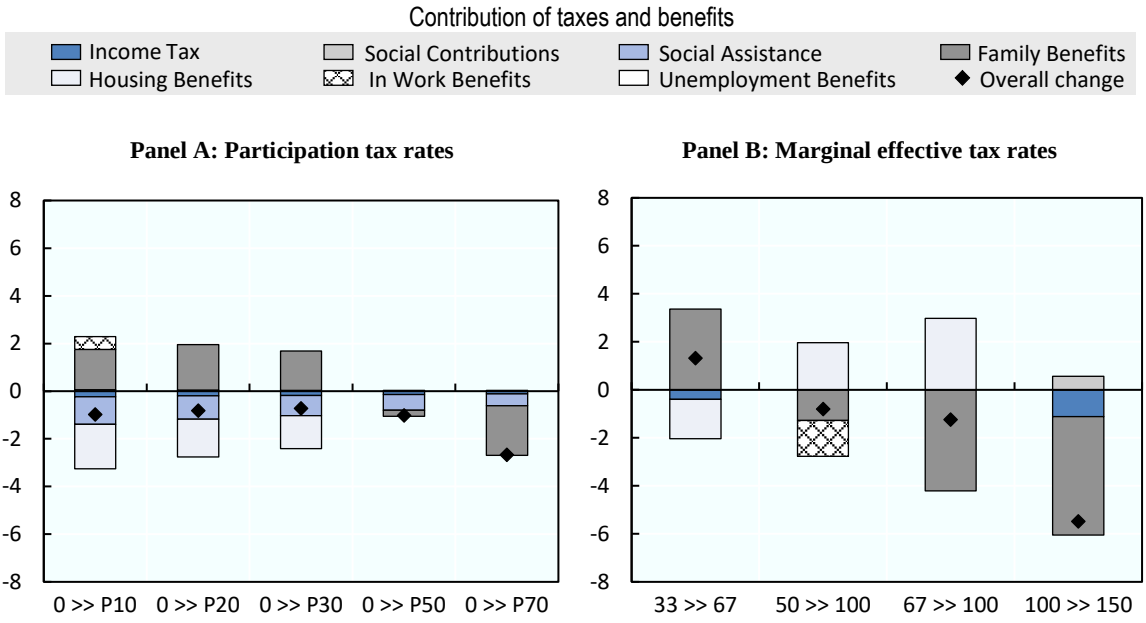
Note: For a couple with two children aged 6 and 4. Adults are aged 40. One spouse is economically inactive. The other spouse is unemployed and has a "long" and continuous contribution history and previous earnings at the 10th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Changes in selected indicators

7. The combination of lower benefit entitlements when not working and lower income taxes when working strengthens work incentives across the board: PTRs fall by up to 4 percentage points. Effects are smaller for those who continue to receive benefits while in work as they also see these benefit entitlements reduced – nominal freezes in the threshold at which tax credits start to be withdrawn tended to increase PTRs for some low earners even as PTRs fell overall. The reduction in the tax credit withdrawal threshold also increased METRs at some low earnings levels (Figure A.28.3). Reductions in PTRs were also smaller for those who do not receive benefits when not working such as those in families without children with a working partner.

8. Since most working families without children gain from the reforms, and those with children lose out, these reforms reduce the effective tax rate on labour for those without children but increase it for those with children. Changes to employer social security contributions also tend to increase the effective tax rate on labour: the threshold at which these start to be paid did not increase as quickly as average earnings during the 2016-18 period.

Figure A.28.3. Changes in work incentives



Note: For a lone parent aged 40 with two children aged 6 and 4. The P10-P70 values in the horizontal axis of Panel A refer to the decile points of the full-time earnings distribution. The notation "33 >> 67" in the horizontal axis of Panel B refers to an increase in working hours from 33% to 67% of full-time work (40 hours) with earnings at the 50th percentile of the full-time earnings distribution.
Source: Secretariat calculations using the OECD tax-benefit model.

Annex B. Average wages and median disposable household income

Table B.1. Average wages and median disposable household income

Nominal values and percent changes, 2016-2018

		Average wage (national currency)			Percentage change	Median disposable income (national currency)			Percentage change
Country	*ISO3*	*2016*	*2017*	*2018*	*16/18*	*2016*	*2017*	*2018*	*16/18*
Austria	AUT	45073	45798	47143	5%	26311	26898	27475	4%
Belgium	BEL	46528	47527	48426	4%	25615	26185	26668	4%
Bulgaria	BGR	11699	12871	13851	18%	6982	7065	7193	3%
Cyprus	CYP	22494	22707	23024	2%	15913	16020	16139	1%
Czech Republic	CZE	332424	354819	375464	13%	243220	249180	254050	4%
Germany	DEU	48300	49100	50484	5%	22138	22514	22895	3%
Denmark	DNK	406600	412018	423940	4%	237974	240704	242134	2%
Spain	ESP	26449	26545	26880	2%	15193	15502	15755	4%
Estonia	EST	14033	14834	15729	12%	9829	10188	10472	7%
Finland	FIN	43783	43284	43914	0%	25837	26054	26361	2%
France	FRA	37924	38662	39474	4%	22037	22293	22716	3%
United Kingdom	GBR	37142	38233	39251	6%	18037	18522	19000	5%
Greece	GRC	20678	20841	20872	1%	8430	8526	8580	2%
Croatia	HRV	89304	92955	93969	5%	51594	52266	53001	3%
Hungary	HUN	3343284	3730608	4031277	21%	1707277	1747368	1792062	5%
Ireland	IRL	44720	45500	47011	5%	25126	25191	25487	1%
Iceland	ISL	8364000	9090276	9401306	12%	4283861	4359275	4522582	6%
Italy	ITA	30619	30755	31144	2%	18240	18482	18703	3%
Japan	JPN	5149844	5190090	5246705	2%	2439947	2451550	2481979	2%
Lithuania	LTU	9370	10216	10990	17%	6382	6619	6801	7%
Luxembourg	LUX	56448	58238	59750	6%	39507	40340	41065	4%
Latvia	LVA	10140	10980	11858	17%	7629	7850	8054	6%
Malta	MLT	21848	22431	23331	7%	15496	15692	15944	3%
Netherlands	NLD	50120	50771	52233	4%	26200	26539	26970	3%
Norway	NOR	566162	578851	598065	6%	393750	401068	408738	4%
Poland	POL	47708	50450	54319	14%	28648	29242	29898	4%
Portugal	PRT	17778	17978	18160	2%	9988	10143	10250	3%
Romania	ROU	33180	38364	41694	26%	14235	14391	14997	5%
Slovak Republic	SVK	10975	11419	11964	9%	8156	8269	8479	4%
Slovenia	SVN	18338	18839	19730	8%	13933	14150	14474	4%
Sweden	SWE	424963	435821	449562	6%	282770	287844	292580	3%
United States	USA	51945	52811	54396	5%	34514	35252	36203	5%

Note: Median disposable household income expressed in equivalized terms using the square root of household size.
Source: OECD tax-benefit model and the OECD Income Distribution Database (IDD).

Annex C. Methodology to calculate summary policy indices

To ease presentation and facilitate country-comparison, Chapter 1 uses country-specific "summary" indices calculated for three policy dimensions: 1) income adequacy for GMI recipients; 2) income adequacy for unemployment benefit recipients; 3) financial incentives to move into work for GMI recipients. Each index is a weighted average of a given policy indicator (e.g. Net Replacement Rates for the index of income adequacy for unemployment benefit recipients) calculated for selected family types and other individual circumstances, such as earnings levels or the months of unemployment. Formally, in a dataset with Q indicators $x_1, x_2, \ldots, x_Q$ for a set of countries and a given policy dimension, a summary index can be defined as $Y = \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_Q x_Q$, where the β_i coefficients range between zero and one and sum up to one.[66]

The country ranking based on such an index depends crucially on the weights that enter the sum of the individual indicators. These weights are calculated through Principal Component Factor Analysis (PCFA), a well-known data-reduction method whose aim is to distil "the essence" of the original dataset, assigning higher weights to those indicators sharing similar variations across countries.[67]

An index calculated using PCFA has a series of advantages for cross-country comparisons. First, from a pure data-reduction perspective, it makes sense to assign less weight to those indicators that do not contribute much to the explanation of the overall data structure (e.g. those with a comparatively high standard deviation). Second, the final index is calculated in a way that it preserves, and therefore explains, the maximum possible proportion of the original cross-country variance in the individual indicators. Finally, because of the linear structure of the summary index, it is relatively straightforward to retrieve the underlying indicators whenever a more granular analysis is necessary (the data attached to Chapter 1 provides the final index, the underlying indicators and the set of weights).

The large number of countries and indicators available using the OECD tax-benefit model makes this aggregation procedure particularly attractive.[68] Yet, there are also shortcomings when using a data-driven methodology. For instance, data revisions and updates, possibly

66 . These coefficients show the relative contribution of each indicator to the final index.

67 . PCFA is a statistical technique that reveals from a set of Q correlated indicators a (potentially) smaller number of unobserved variables ("factors") that, together, will explain most of the cross-countries (co-)variations of the individual indicators. Weights calculated through PCFA are essentially a function of the correlation coefficients between a certain estimated factor F_j and each indicator x_i. Hence, as factors in PCFA are estimated so as to account for the maximum amount of the cross-country variance in the original indicators, the indicators sharing common cross-country patterns will enter the final index Y with larger coefficients β, as they will be strongly correlated with a certain factor. Similarly, indicators with large cross-country variance will enter the summary index with smaller coefficients.

68 . FPCA provides best results when the underlying data have enough variation and the original indicators are highly correlated. To date, the OECD tax-benefit model covers 40 countries, which ensures that the underlying data have enough cross-country variation. Also, policy indicators calculated for different family and individual circumstances (e.g. net replacement rates for one-earner couples with and without children) are typically highly correlated.

implying additional observations (such as the inclusion of new countries or the revision of systems for already included countries), may change the set of weights that are used to calculate the summary index between different years. Results are likely to be sensitive also to the presence of outliers and data limitations may create difficulties in the statistical identification of the overall indices (OECD, 2008). These potential shortcomings are addressed during the empirical analysis by checking the robustness of the results through sensitivity analysis (see also Browne et al., 2017).[69]

Box C.1 provides a step-by-step implementation of the methodology to calculate the weights of the summary indices used in Chapter 1. Nicoletti et al. (2000) describe the method in detail and show how to apply it in the context of the OECD index of Product Market Regulation (PMR). OECD (2008) also provides a detailed description of the methodology and compares the results with other aggregation methods.

Box C.1. Aggregating policy indicators into summary indices

The calculations of the weights used to derive a certain country-specific index can be summarized in the following three steps:

1. **Principal-Component Factor Analysis of the original data**. In a dataset with *Q* indicators $x_i = x_1, x_2, \ldots, x_Q$, for a set of countries this step implies estimating the following model:

$$\begin{aligned} z_1 &= \alpha_{11}F_1 + \alpha_{12}F_2 + \cdots + \alpha_{1Q}F_Q + \varepsilon_{11} \\ &\vdots \qquad\qquad \vdots \\ z_Q &= \alpha_{Q1}F_1 + \alpha_{Q2}F_2 + \cdots + \alpha_{QQ}F_Q + \varepsilon_{QQ} \end{aligned} \qquad [1]$$

Where $z_1, z_2, \ldots, z_Q$, are the *standardized* original indicators, i.e. $z_i = \frac{x_i - \mu_{x_i}}{\sigma_{x_i}}$, with μ being the mean value and σ the standard deviation. The variables $F_j = F_1, F_2, \ldots, F_Q$ are the *Q* estimated unobserved factors; the α_{ij}'s are the estimated coefficients called "factor loadings", and the ε_{ij}'s are error terms assumed to be independently and identically distributed across countries and indicators. Although there are several approaches to deal with the model above, e.g. maximum likelihood factors, principal-factor methods, etc., one of the most common is the use of Principal Component Analysis (PCA) to estimate the factors (OECD, 2008) and to use them in the subsequent steps.

PCA estimates factors as "principal components", which are linear combinations of the original indicators, e.g. $F_1 = w_{11}x_1 + w_{12}x_2 + \cdots + w_{1Q}x_Q$, with weights w_{ji} chosen so that *i*) factors F_j are uncorrelated, *ii*) the sum of the squared weights of each factor is equal to one ($w_{11}^2 + w_{12}^2 + \cdots + w_{1Q}^2 = 1$), and *iii*) the first factor F_1 accounts for the maximum possible proportion of the cross-country variance of the original indicators x_i, the second factor F_2 accounts for the maximum of the *remaining* variance, and so on until the last factor F_Q absorbs *all* the remaining variance not accounted for by the preceding components. It can be proved that weights calculated under these three identification restrictions are the correlation coefficients between the estimated factors and the underlying indicators. For instance, $w_{ji} = \frac{cov(F_j, x_i)}{\sigma_{F_j}\sigma_{x_i}}$.

PCA calculates as many factors as the number of original indicators. However, depending on the degree of correlation between the x_i's, a smaller number of factors are often sufficient to preserve most of the information content of the original dataset.[a] For instance, it is possible that cross-country variations in certain indicators mainly reflect variation in only one estimated factor, which can be therefore used to reduce the dimensionality of the original data. The literature has proposed several techniques to

69 . Robustness checks are not included in the report but are available upon request.

identify the optimal number of factors. This report uses the so called maximum-variance criterion, i.e. it retains the first *N* factors that explain together at least 85% of the common cross-country variations in the original indicators.[b]

2. **Transformation of the factor loadings**. After the extraction of the first *N* factors from the original dataset, it is common practice in PCFA to perform a matrix transformation of the factor loadings so as to enhance the interpretability of the results. This transformation changes ("rotates") the coordinates (axis) of the *N* retained factors toward a direction that minimizes the number of large loadings on the same factor; it therefore produces a clearer pattern of loadings across the factors without affecting the explanatory power of the overall statistical model. This report uses the so-called "*varimax rotation*" – a technique that calculates a new set of orthogonal coordinates where the loadings of a certain factor have the maximum variation.[c]

3. **Calculation of the set of weights**. The final step is to calculate the coefficients β_i that enter the summary index Y. This step requires first to standardize the rotated squared loadings in terms of the overall variance in the original data explained by the retained factors (see footnote b). This means "scaling" each loading so that they will reflect the contribution to the overall variance that the *N* retained factors are able to account for. The next step is to choose for each indicator the standardized (factor-specific) loading that maximizes the contribution to the overall variance, i.e. $\beta_i = \max(\gamma_{i1}, \gamma_{i2}, \dots, \gamma_{iN})$, where the generic γ_{ij} is the standardized squared (rotated) loading referring to indicator *i* and factor *j*. Finally, the weights of the Q indicators are divided by their sum, so that that they sum up to one.

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a. The information content of the original dataset is defined in terms of the correlation matrix of the original indicators.

b. To see how to calculate the the cross-country variance in the original indicators explained by the first *N*<*Q* factors, consider that factors calculated with PCFA are orthogonal (i.e. uncorrelated) with unit variance (due to the standardization of the original indicators). This means that model [1] allows decomposing the variance of each indicator x_i as: $Var(x_i) = Var(\alpha_{i1}F_1 + \alpha_{i2}F_2 + \cdots + \alpha_{iQ}F_Q) = \alpha_{i1}^2 + \alpha_{i2}^2 + \cdots + \alpha_{iQ}^2 = 1$ Hence, the square of a generic factor loading (α_{ij}^2) is the fraction of the total variance in indicator x_i explained by factor F_j, whereas the sum of the squared loadings characterizing a given factor F_j gives the total variance of the *Q* indicators that F_j can account for. As a result, the sum of these total variances over the first *N* factors is the cross-country variance in the original data explained by the first *N* factors. An ancillary result of this note is that the higher the correlation between a given factor F_j and a certain indicator x_i (i.e. the coefficient w_{ij}) the higher the variance in indicator x_i explained by factor F_j (i.e. the coefficient α_{ij}).

c. This means that the loadings of a given factor will tend to polarize between the two extremes, i.e. near zero (no explained variance) and one (i.e. full explained variance). Note that different rotation methods imply different rotated loadings and this can affect the interpretation of the results. See OECD (2008) for a discussion on this point.

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