4 Graphical exposition of effective tax rates in 2023

The chapter presents graphical expositions of effective tax rates on labour income in 2023 for gross wage earnings ranging from 50% to 250% of the average wage. These are illustrated in separate graphs for four household types and for each OECD member country. The household types are single taxpayers without children; single parents with two children; one-earner married couples without children and one-earner married couples with two children. The graphs are divided into two sets showing the components of the average and marginal tax wedge as a percentage of total labour costs. The graphs also show the net personal average and marginal tax rates.

The graphs in this section show effective tax rates on labour income in 2023 for gross wage earnings between 50% and 250% of the average wage (AW). For each OECD member country, there are separate graphs for four household types: single taxpayers without children, single parents with two children, one-earner married couples without children and one-earner married couples with two children. The net personal average and marginal tax rates ([the change in] personal income taxes and employee social security contributions [SSCs] net of cash benefits as a percentage of [the change in] gross wage earnings) are included in the graphs that show the average and the marginal tax wedge, respectively.[1]

The graphs illustrate the relative importance of the different components of the tax wedge: central government income taxes, local government income taxes, employee SSCs, employer SSCs (including payroll taxes where applicable) and cash benefits as a percentage of total labour costs. It should be noted that a decreasing share in total labour costs implies that the value of tax payments less benefits is not increasing as rapidly as the corresponding total labour costs. It does not necessarily imply that the value of payments less benefits is decreasing in cash terms.

Low-income households are treated favourably by the tax and benefit systems of many OECD countries. Negative central government income taxes are observed in Belgium because of the non-wastable tax credits for low-income workers and for dependent children; in Canada[2] because of the non-wastable working income tax benefit; in Austria, the Czechia, Germany and the Slovak Republic because of non-wastable child tax credits; in Israel because of the non-wastable earned income tax credit (EITC) for families with children (since 2016, single parents have been eligible for the EITC for a wider income range); in Luxembourg because of a tax credit for social minimum wage earners introduced in 2019; in Poland because of a conditional refundable child tax credit since 2015; in Spain because of non-wastable tax credits for single parents; and in the United States because of the non-wastable EITC and the child tax credit. In Sweden, the charts show negative central government income taxes for the four household types due to an EITC; however, the tax credit is wastable in the sense that it cannot reduce the individual's total income tax payments to less than zero. The EITC is also deducted from the local government income tax.

In the majority OECD countries, the net personal average tax rate is negative for single parents or one-earner married couples at lower income levels, meaning that these household types do not pay income taxes or SSCs, or these payments are fully offset by cash benefits. For example, the net personal average tax rate becomes positive at more than 90% of the AW in Czechia (at 91% of the AW for the single parent) and in Poland (at 93% of the AW for the single parent and the one-earner married couple). In Austria, Czechia, Israel, the Slovak Republic, the United Kingdom and the United States, the negative net personal average tax rates result from the combined effect of refundable tax credits and cash benefit payments. In contrast, the net personal average tax rate for single parents was negative mainly due to refundable tax credits in Spain (up to 62% of the AW). There are large variations in cash benefit levels across OECD countries. They represent about a quarter or more of total labour costs for low-income single parents and/or one-earner married couples with two children in Australia, Canada, France, Ireland, Lithuania, New Zealand, Poland and the United Kingdom.

The marginal tax wedge is relatively flat across the earnings distribution in some countries because of flat SSC and personal income tax rates. The marginal tax wedge for single taxpayers without children on incomes between 50% to 250% of AW is flat in Czechia (44.7%) and Hungary (41.2%). In Colombia, the marginal tax wedge for the single worker and the one-earner married couple without children were equal to zero across the whole income range, as no personal income taxes were paid at these levels of earnings. For households with two children, the marginal tax rate was zero across the whole income range with the exception of a spike at 237% of the AW, which is caused by the loss of eligibility for the child-related cash transfer. Moreover, contributions to pension, health and employment risk insurances are considered to be non-tax compulsory payments (NTCPs)[3] and therefore are not counted as taxes in the *Taxing Wages* calculations. The marginal tax wedge is also relatively constant in Iceland and the Slovak Republic. In Iceland, the marginal tax wedge is 40.2% on earnings below 130% of the AW, 47.6% on earnings at 130% and then 47.7% on earnings from 131% of the AW to 250% of the AW. In the Slovak Republic, the marginal

tax wedge is 45.9% on earnings below 149% of the AW, 48.4% on earnings at 149% and then 49.1% on earnings from 150% of the AW to 250% of the AW.

SSCs are levied at flat rates in many OECD countries. Some countries have an earnings ceiling above which no additional SSCs have to be paid. The variations in the marginal SSCs are in general the same for the four family types, since the contribution rates or income ceilings do not vary depending on marital status or the number of dependent children.

Within the income range of 50% to 250% of the AW, the marginal employer SSC rates fall to zero as a result of income ceilings in Germany (at 146% of the AW), Luxembourg (at 196% of the AW), the Netherlands (at 115%) and Spain (at 179%). Marginal employee SSC rates fall to zero in Austria (at 144% of the AW), Germany (at 146%), the Netherlands (at 200%), Spain (at 179%) and Sweden (at 118%). In Canada, the marginal employee SSC rate falls to zero at 78% of the AW. However, a spike is observed at 84% of the AW. The Ontario Health premium, which is calculated on an income schedule, is a fixed payment that is adjusted when a taxpayer moves to a higher income bracket.

In addition, taxpayers may experience declining marginal employee and/or employer SSC rates as a percentage of total labour costs over some parts of the earnings range as their wage increases. This is observed in Austria, Belgium, Canada, France, Germany, Japan, Korea, Luxembourg, the Netherlands, Poland, Switzerland, the United Kingdom and the United States. Large decreases in marginal rates as a percentage of total labour costs were observed in Japan, where the marginal employee and employer SSC rates drop from 12.67% to 5.17% and from 13.50% to 6.07% respectively on earnings above 147% of the AW; in Luxembourg, where the marginal employee SSC rate drops from 10.94% to 1.40% on earnings above 194% of the AW; in Poland, where the employee and employer SSCs rate drop from 15.32% to 10.82% and from 14.06% to 3.61% respectively on earnings above 241% of the AW; in the United Kingdom, where the marginal employee SSC rate drops from 10.54% to 1.76% of earnings above 103% of the AW; and in the United States, where the marginal employer and employee SSC rates drop from 7.11% to 1.43% on earnings above 237% of the AW.

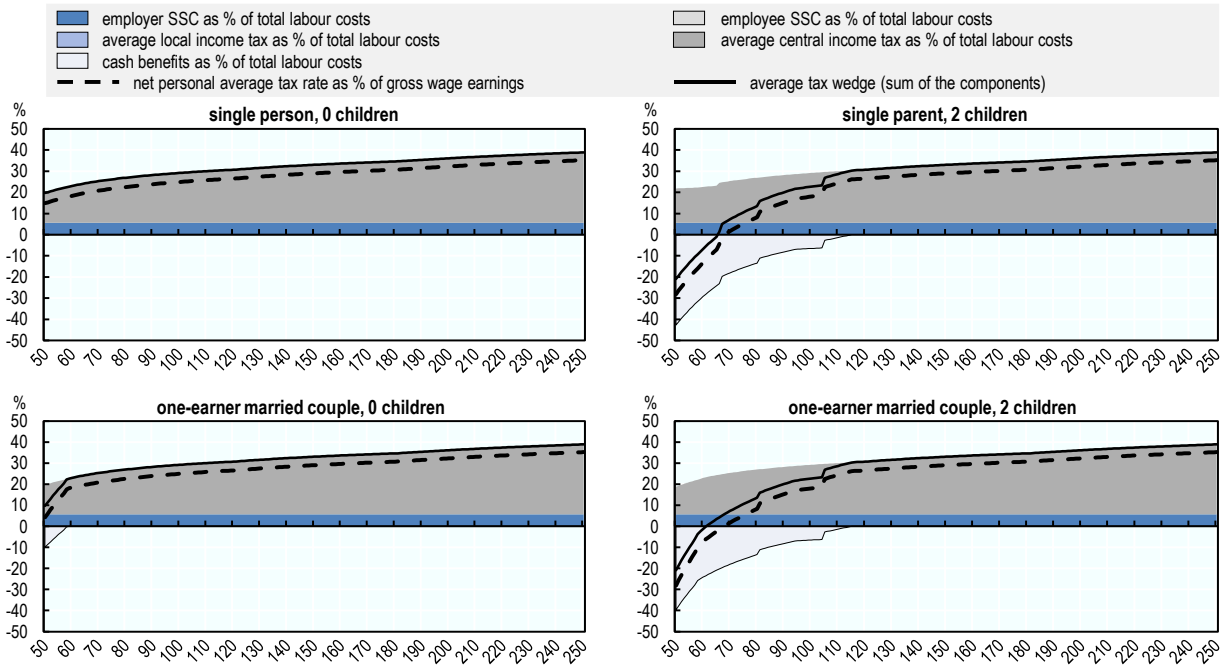
In Slovenia, the marginal employer SSCs are negative up to 53% of the AW. This is because the employer pays additional contributions on earnings that are below the social security minimum income threshold. This penalty decreases as earnings increase and is completely exhausted once the employee's earnings reach the social security minimum income threshold. The negative marginal employer SSC rates derive from the decreasing additional contributions.

Taxpayers face net personal marginal tax rates and wedges of about 70% or more in several of OECD countries at specific earnings levels. This is the case for taxpayers without children in Australia, Austria, Belgium, Chile, Estonia, France, Italy, Japan, Luxembourg, Mexico and Slovenia. They also apply to families with children in Australia, Austria, Belgium, Canada, Chile, Colombia, Czechia, Estonia, France, Greece, Ireland, Italy, Japan, Lithuania, Luxembourg, Mexico, New Zealand, Portugal, Slovenia, Spain and the United Kingdom. In many countries, these high marginal tax rates are partly the result of reductions in benefits, allowances or tax credits that are targeted at low-income taxpayers as earnings rise.

The zigzag movement in the marginal tax burdens observed in some of the graphs arises when the changes in taxes, SSCs and/or cash benefits for small rises in income vary over the income range in a non-continuous way. This is the case because of rounding rules in Germany, Luxembourg, Sweden and Switzerland; and the discrete characteristics of the PAYE (Pay As You Earn) tax credit, the spouse tax credit and the child transfers in Italy.

Australia 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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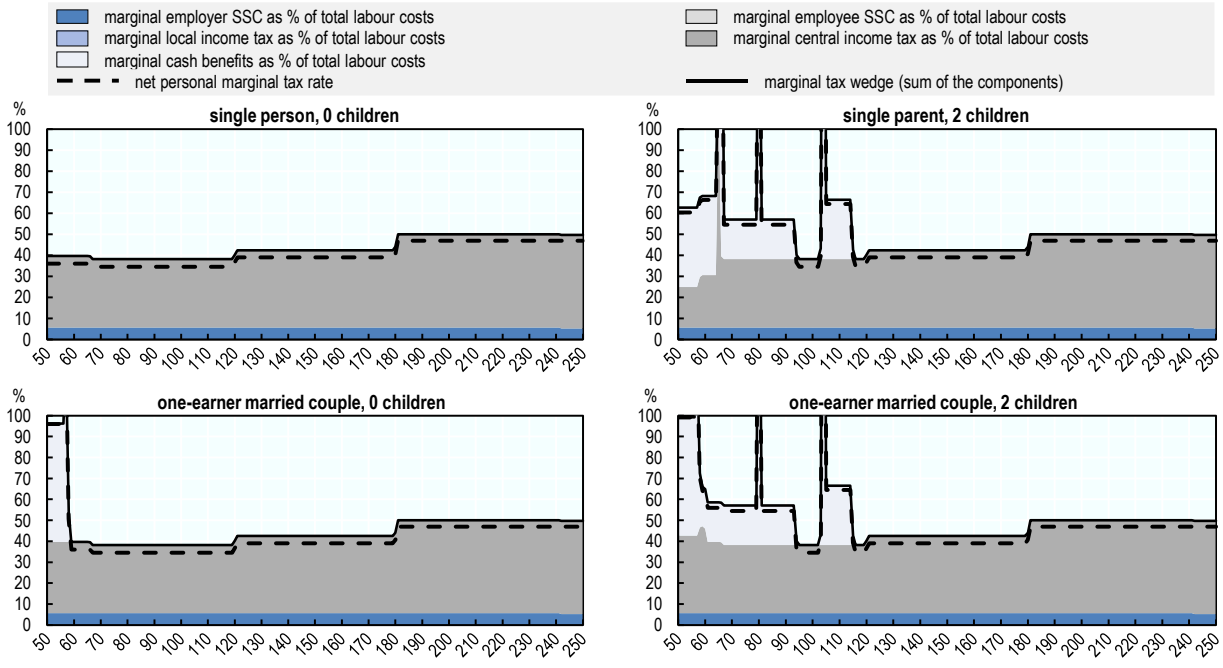
Australia 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Austria 2023: average tax wedge decomposition

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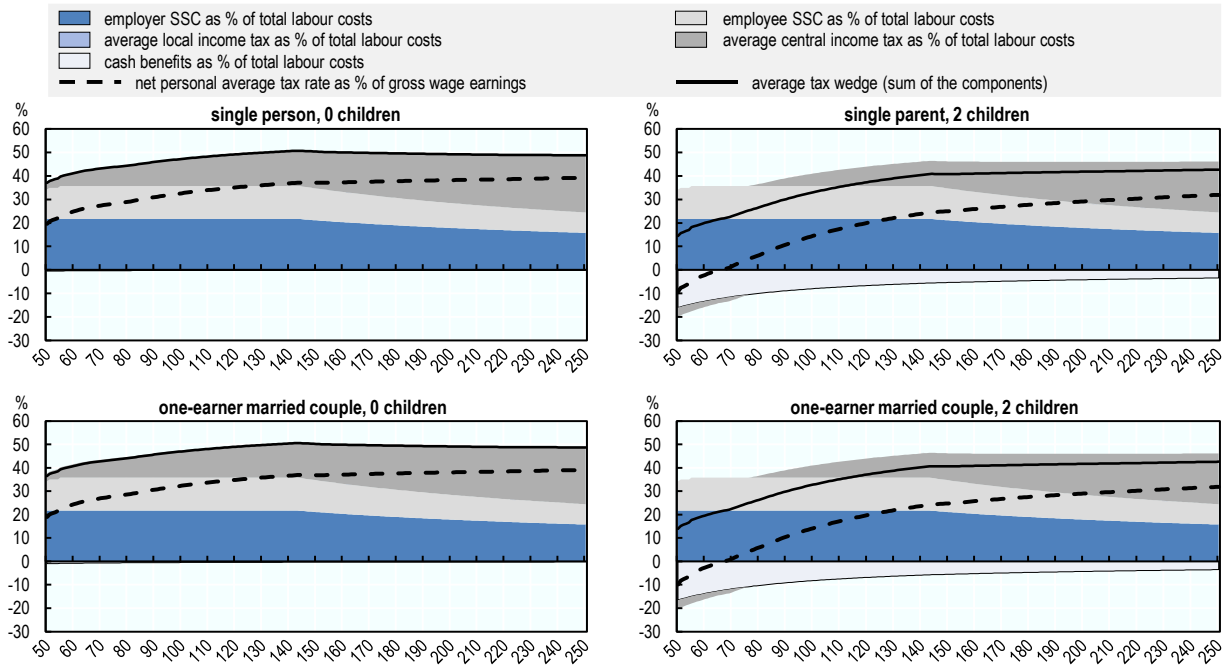

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Austria 2023: marginal tax wedge decomposition

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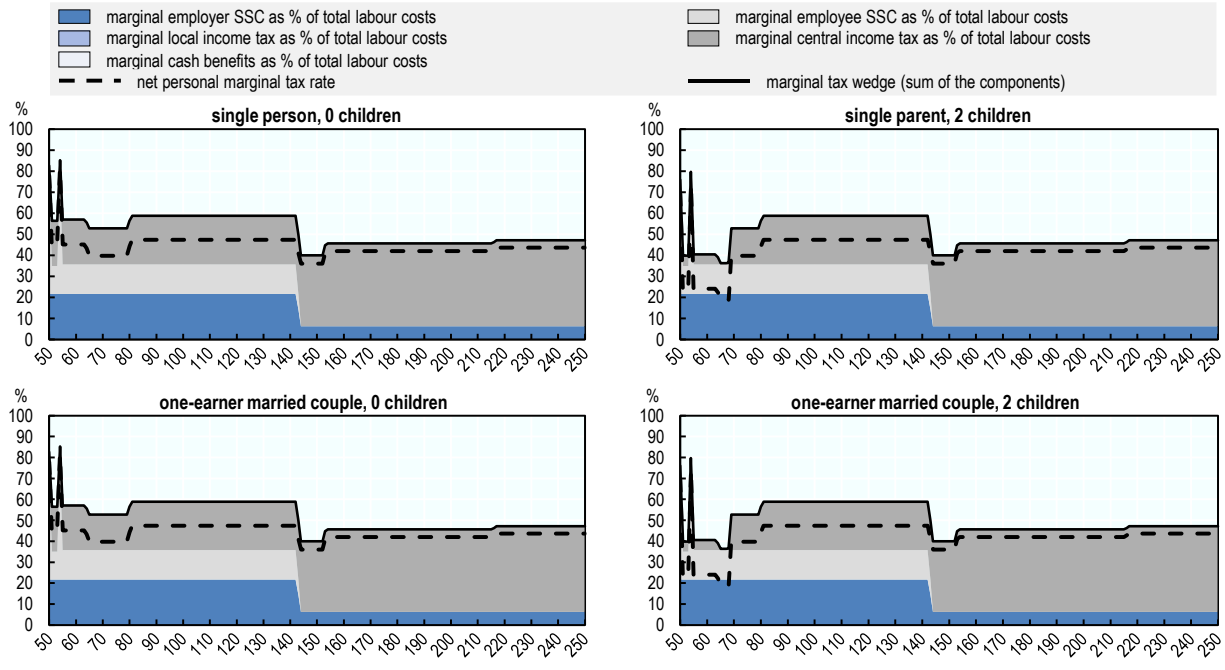

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Belgium 2023: average tax wedge decomposition

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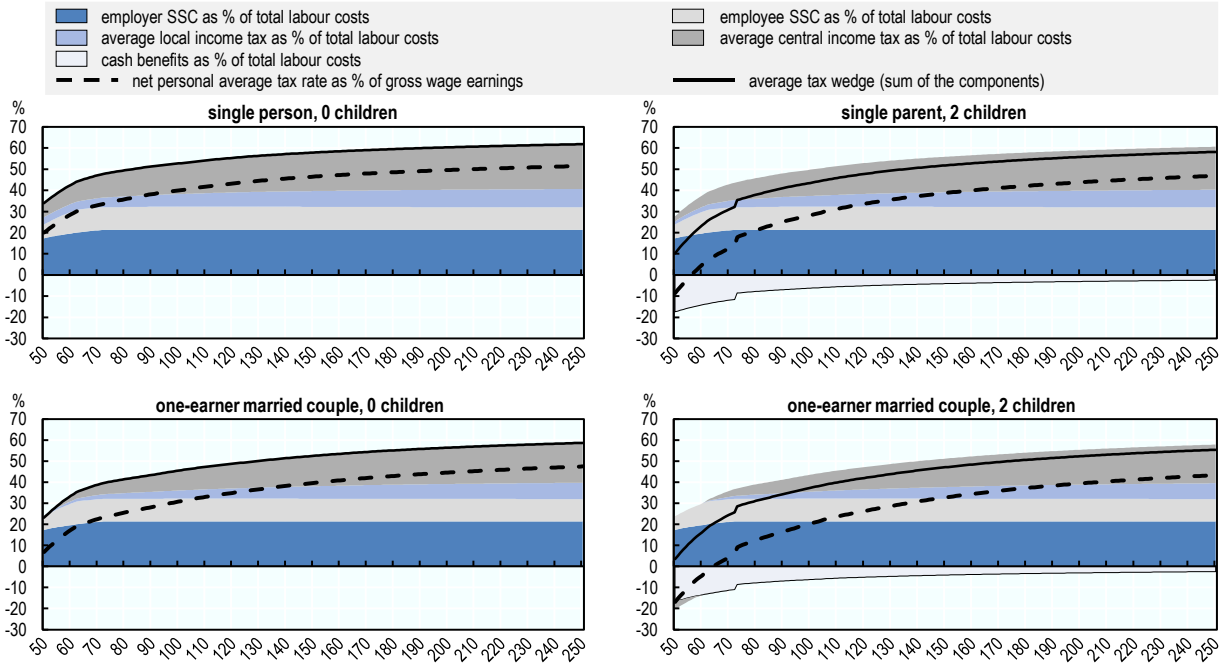

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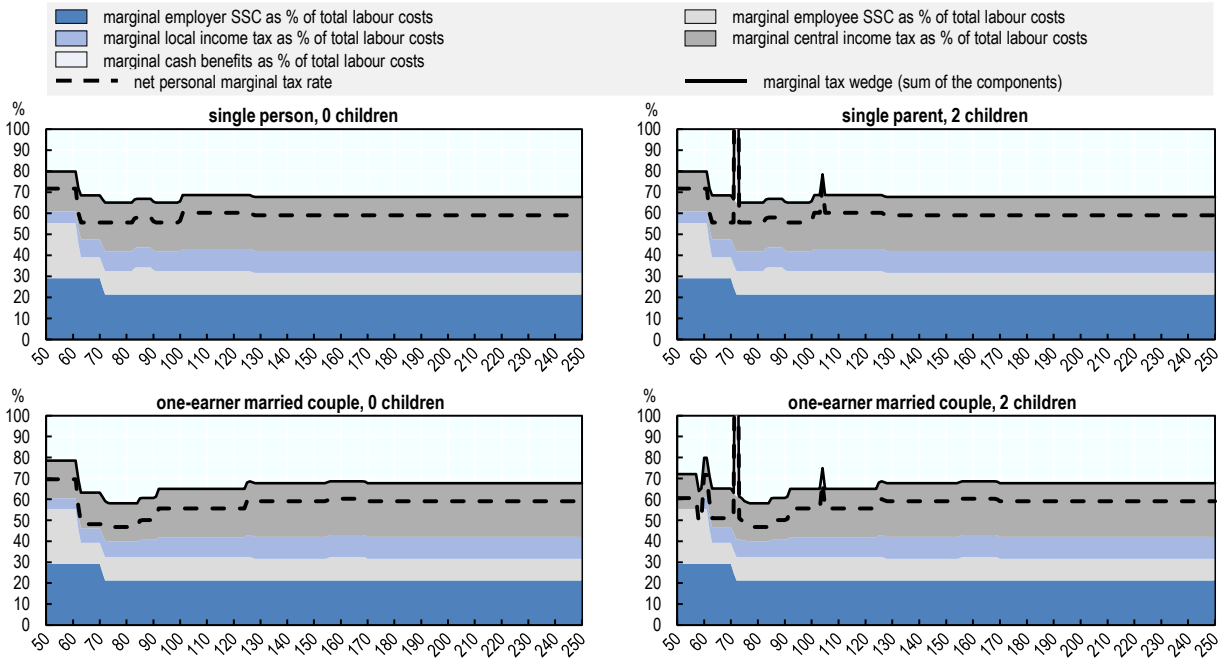
Belgium 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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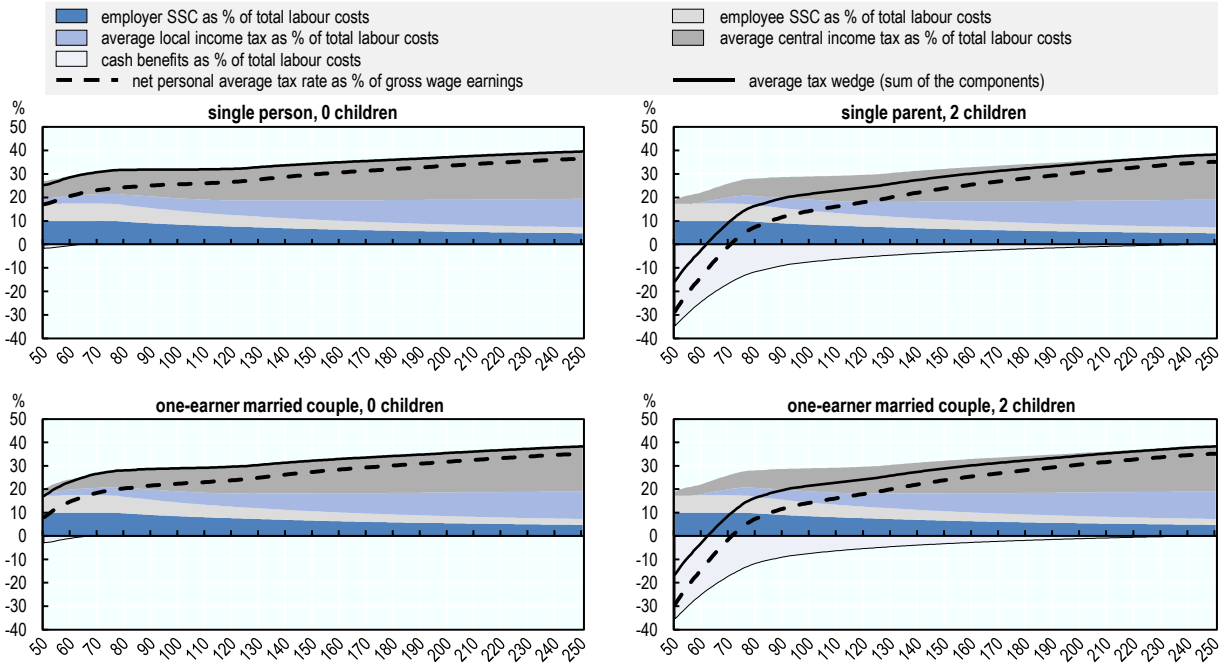
Canada 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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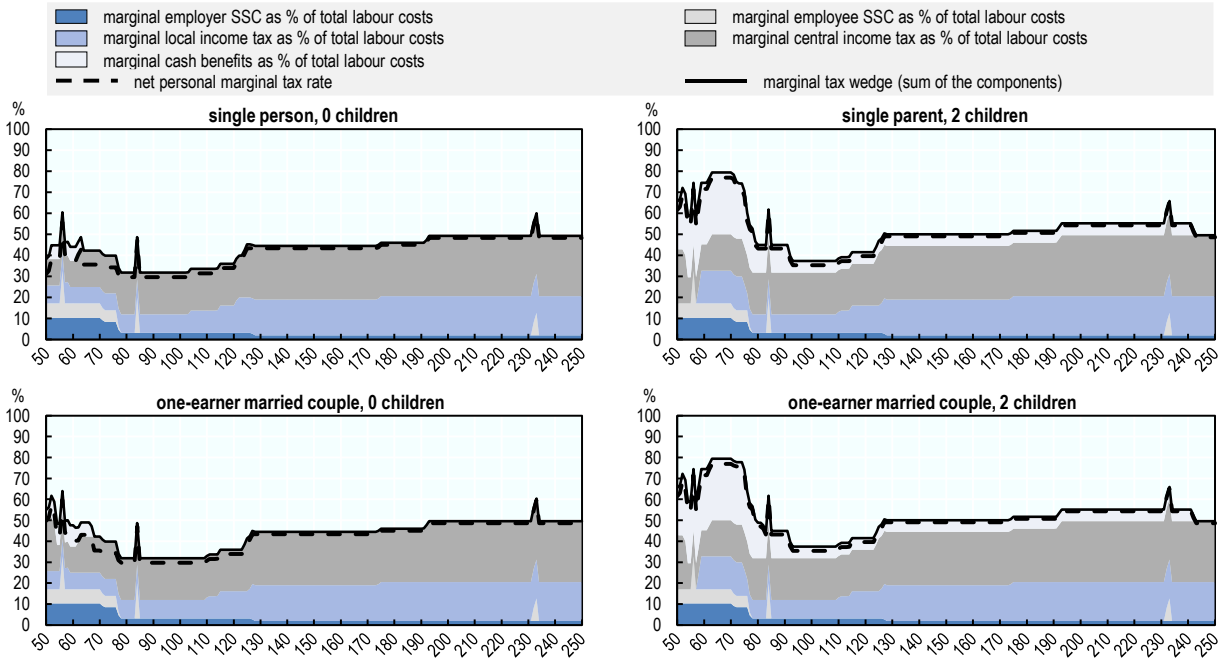
Canada 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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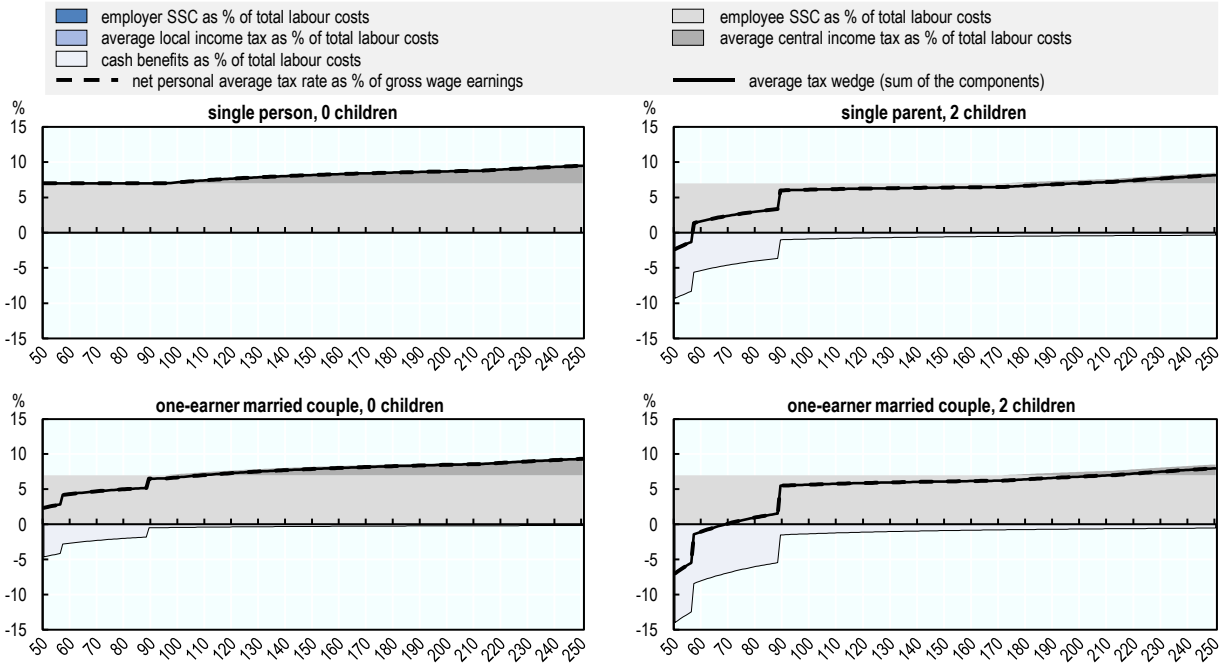
Chile 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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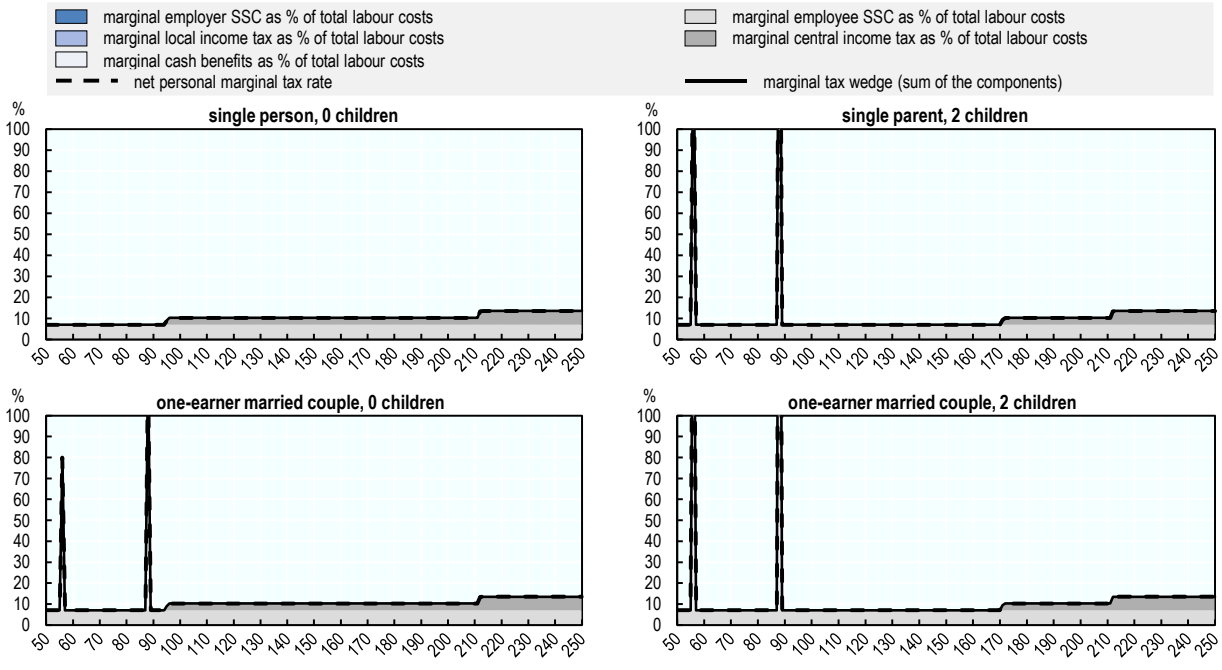
Chile 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Colombia 2023: average tax wedge decomposition

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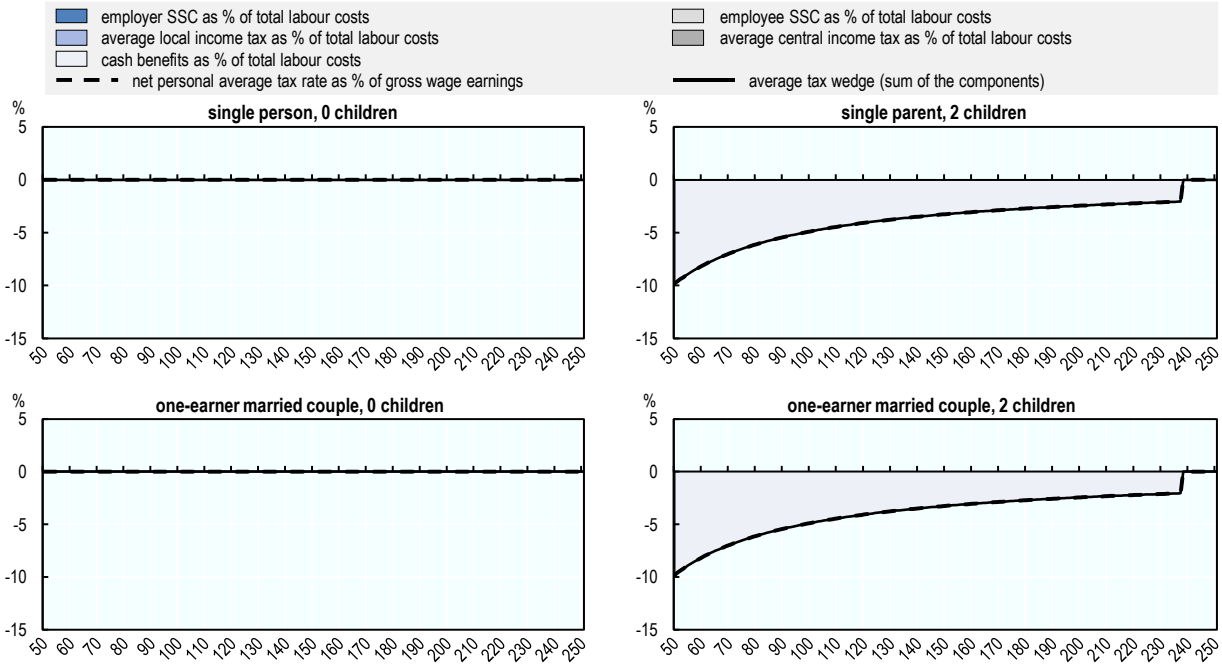

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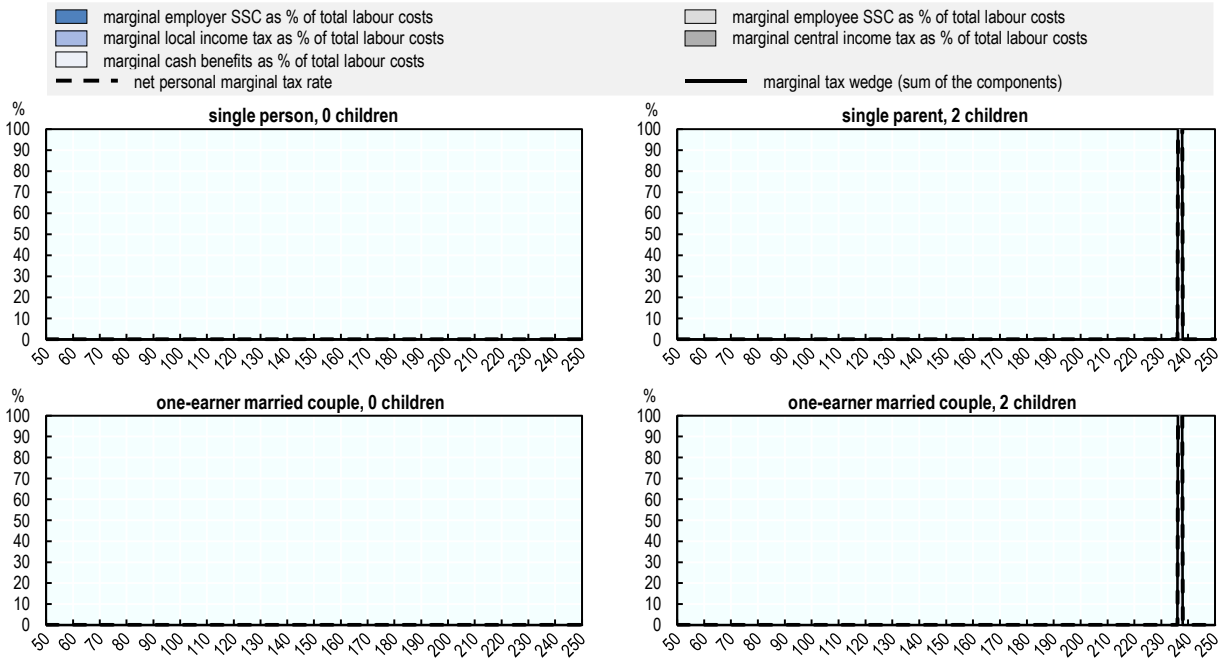
Colombia 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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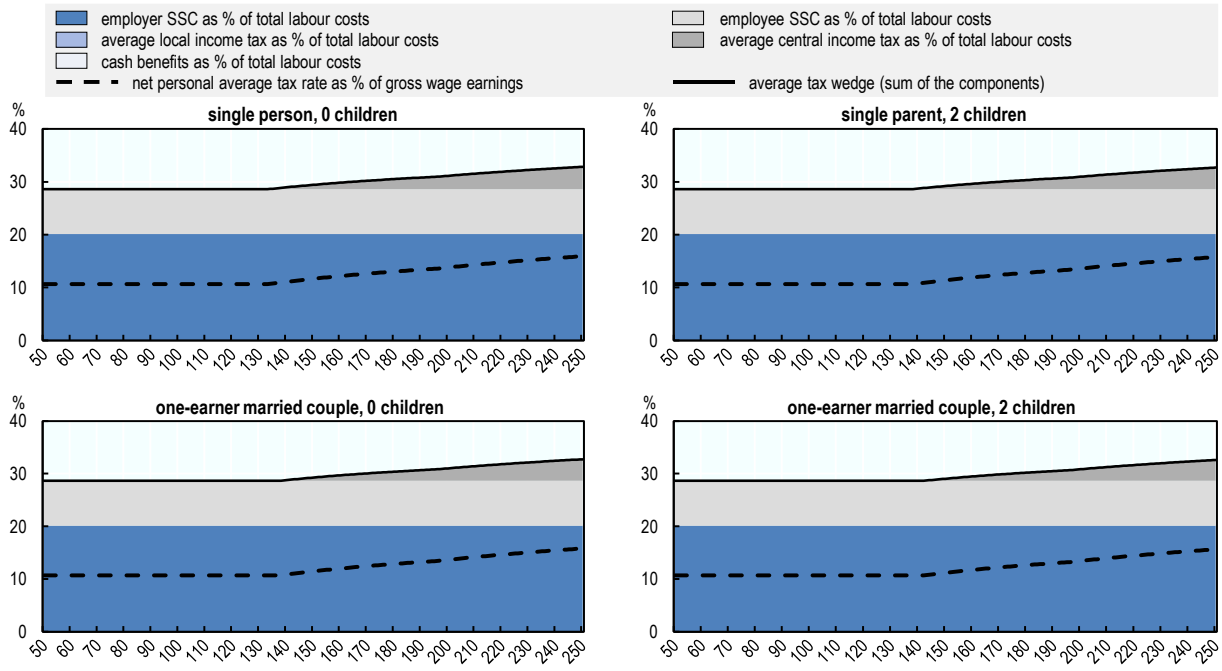
Costa Rica 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Costa Rica 2023: marginal tax wedge decomposition

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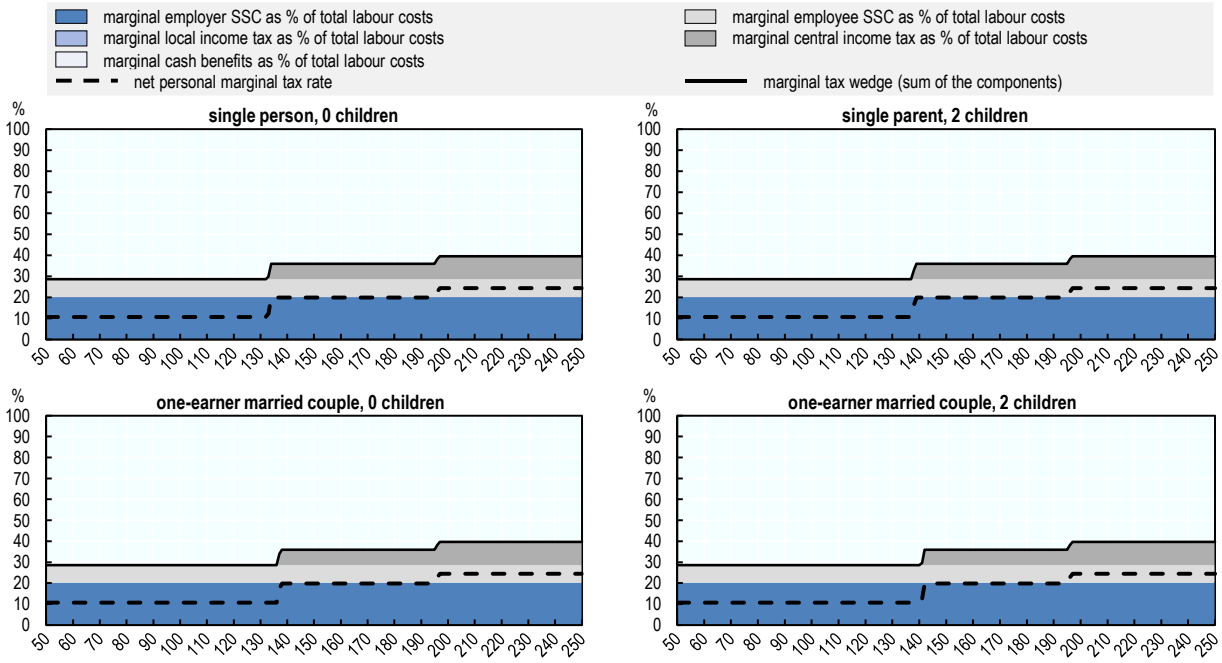

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Czechia 2023: average tax wedge decomposition

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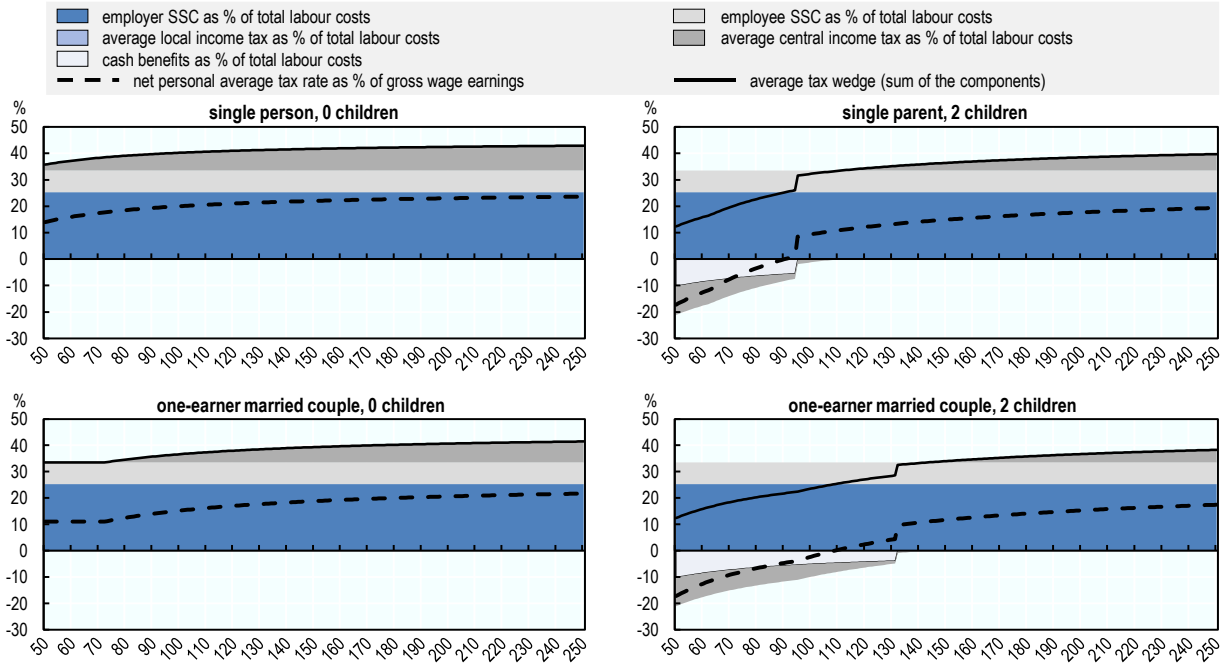

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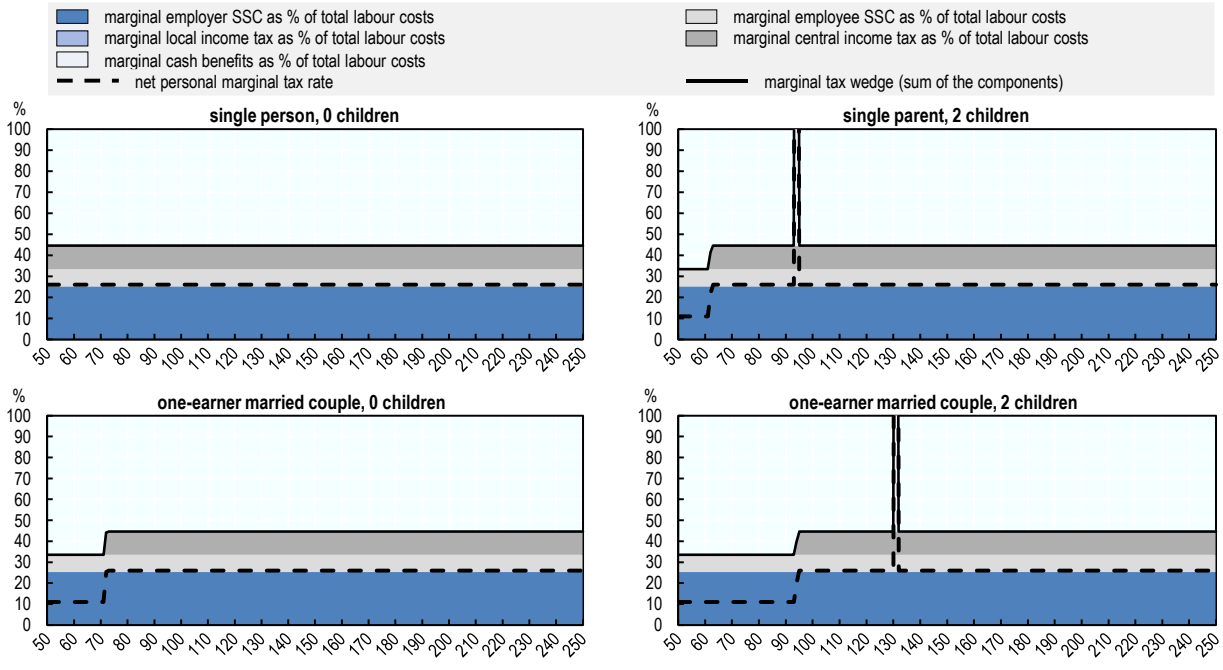
Czechia 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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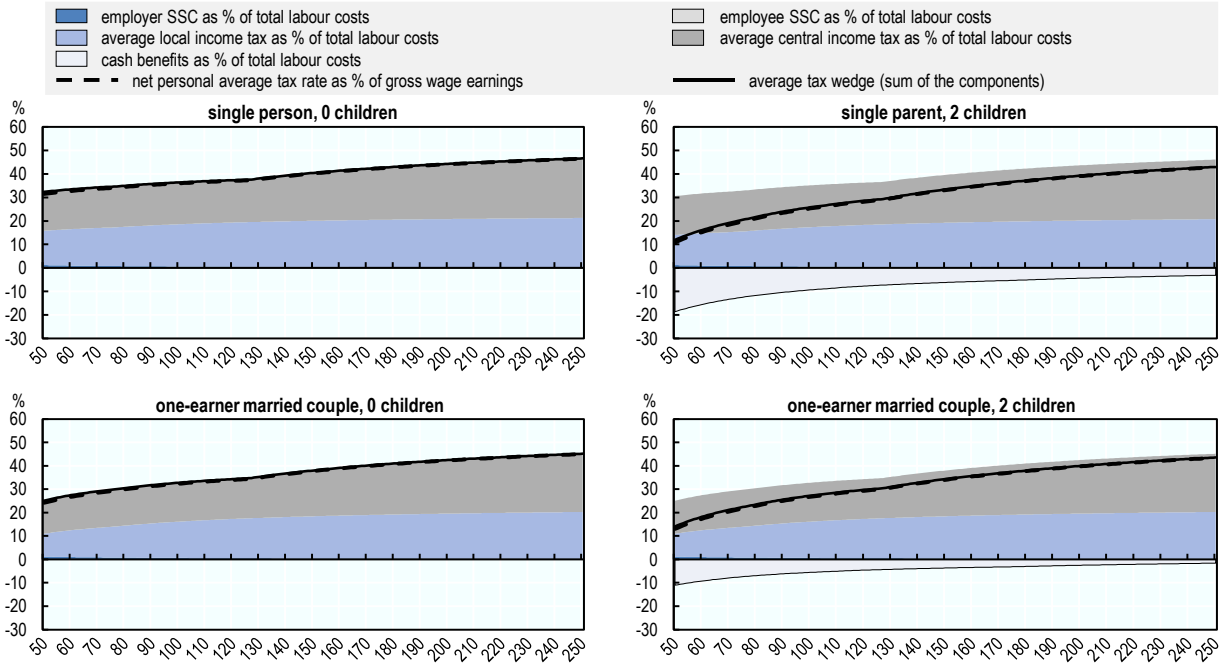
Denmark 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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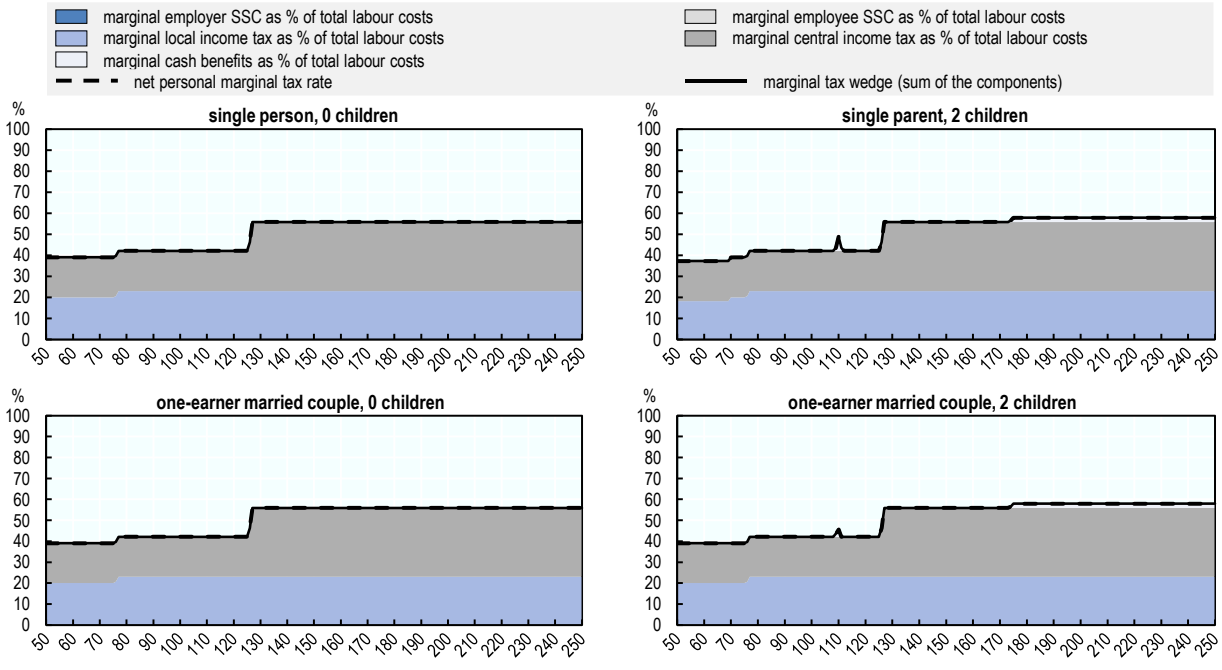
Denmark 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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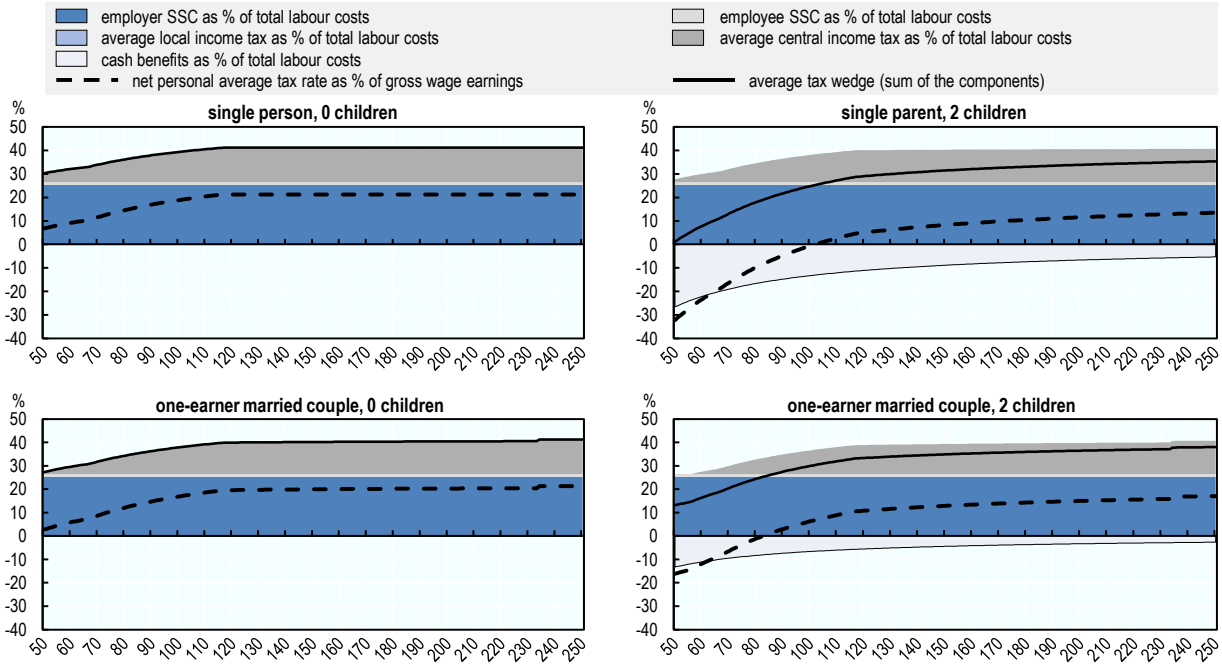
Estonia 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Estonia 2023: marginal tax wedge decomposition

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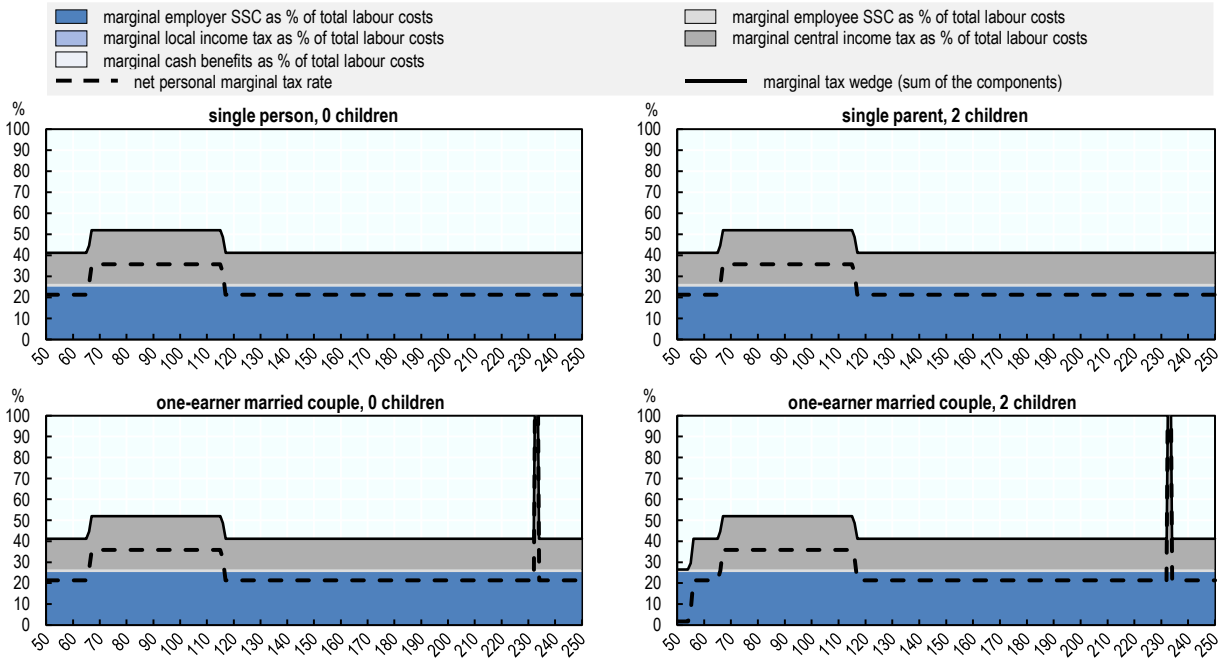

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Finland 2023: average tax wedge decomposition

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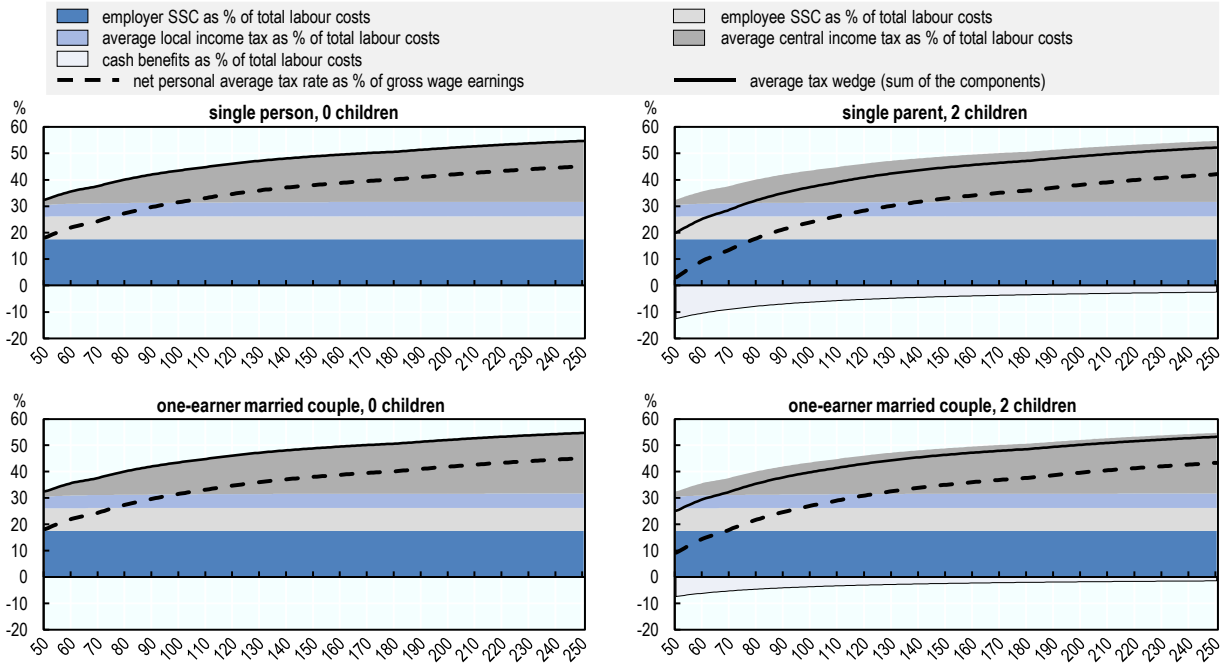

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Finland 2023: marginal tax wedge decomposition

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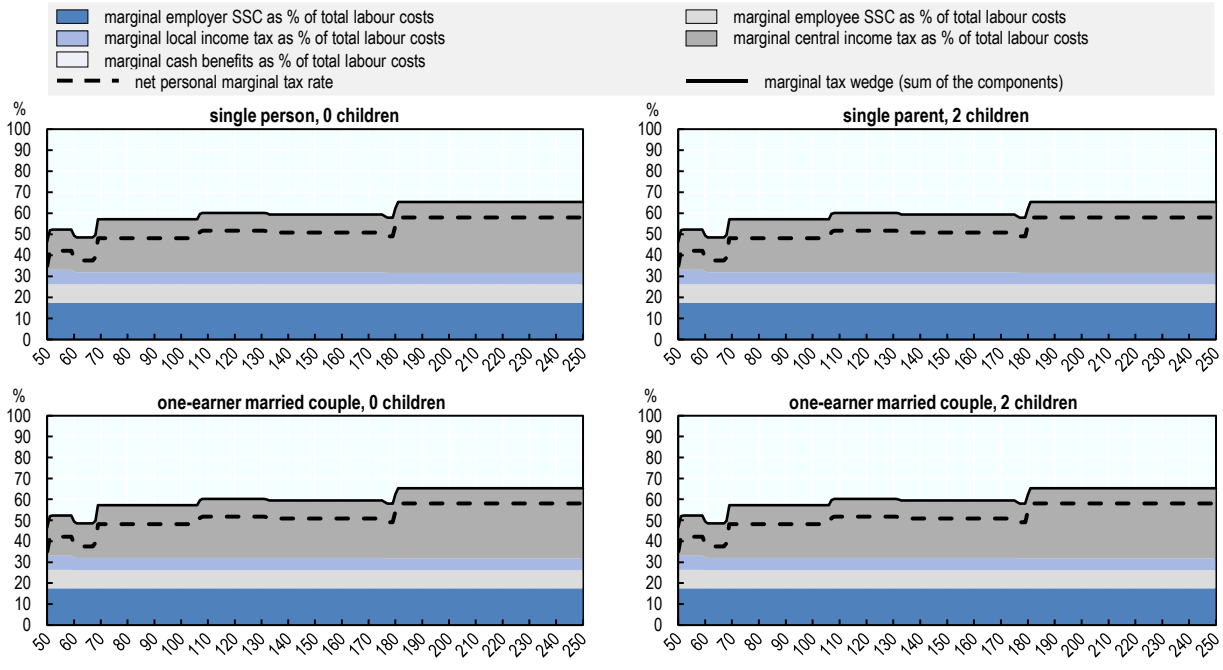

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France 2023: average tax wedge decomposition

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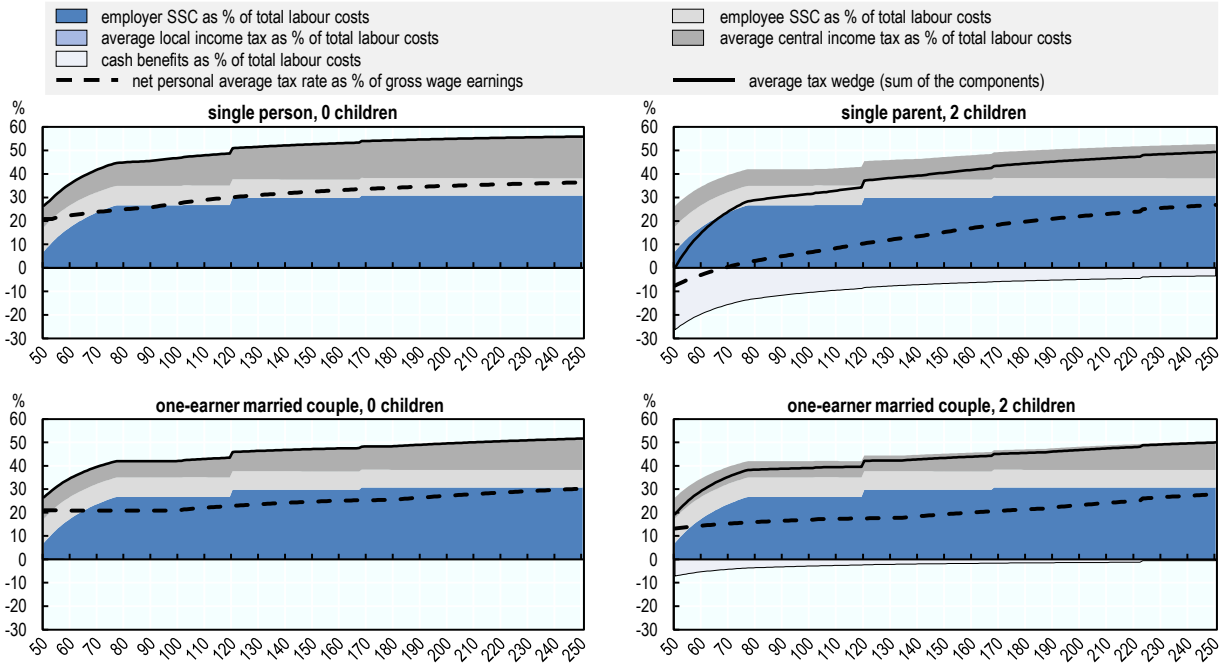

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France 2023: marginal tax wedge decomposition

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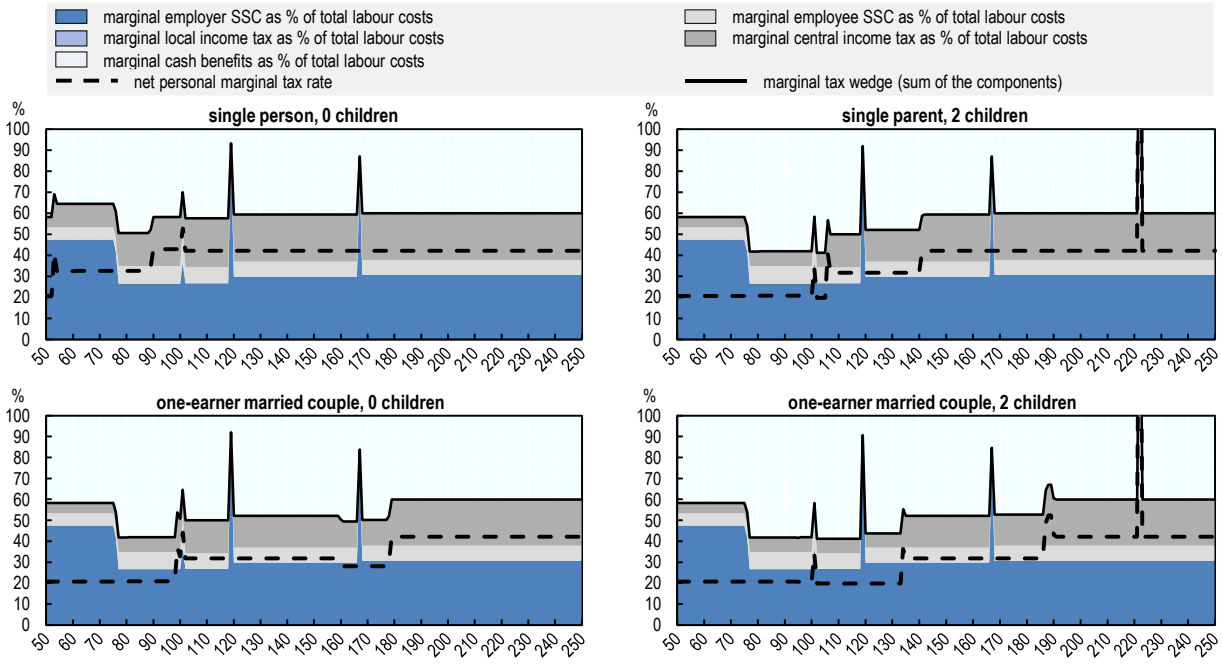

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Germany 2023: average tax wedge decomposition

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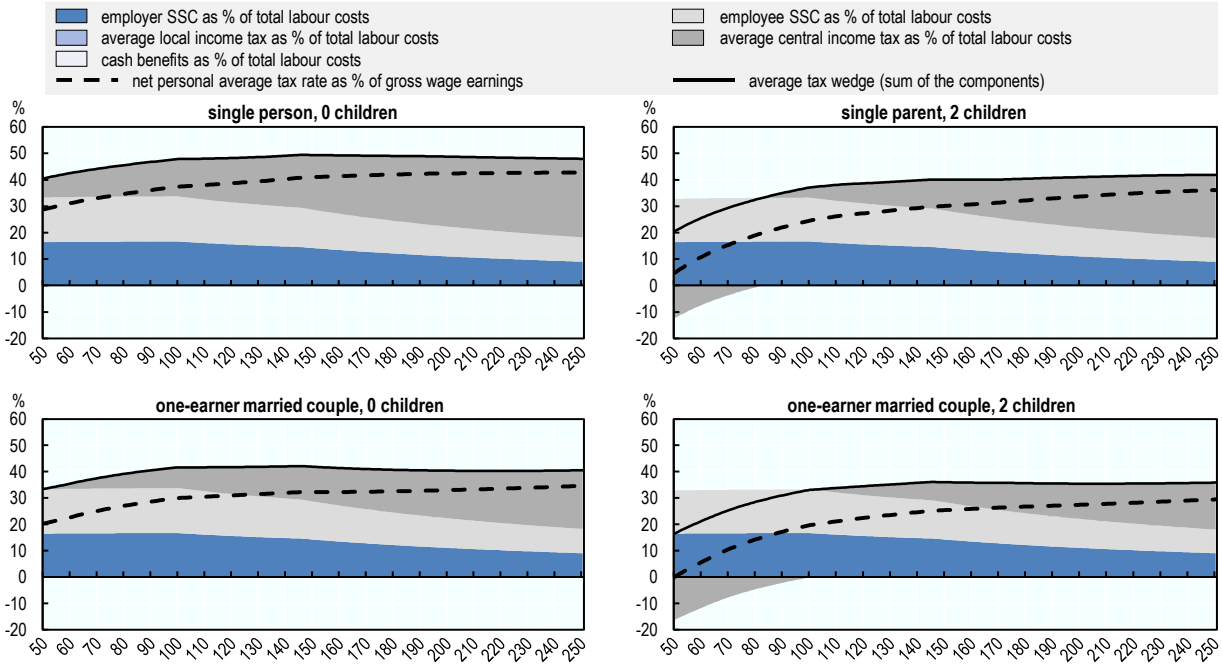

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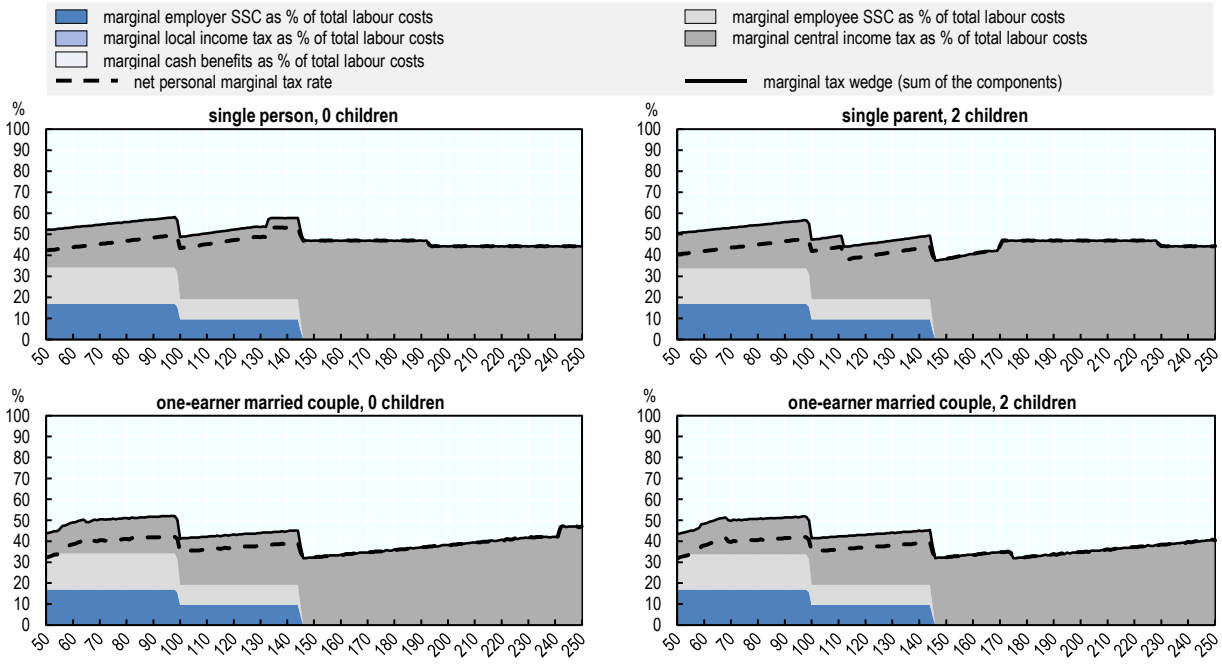
Germany 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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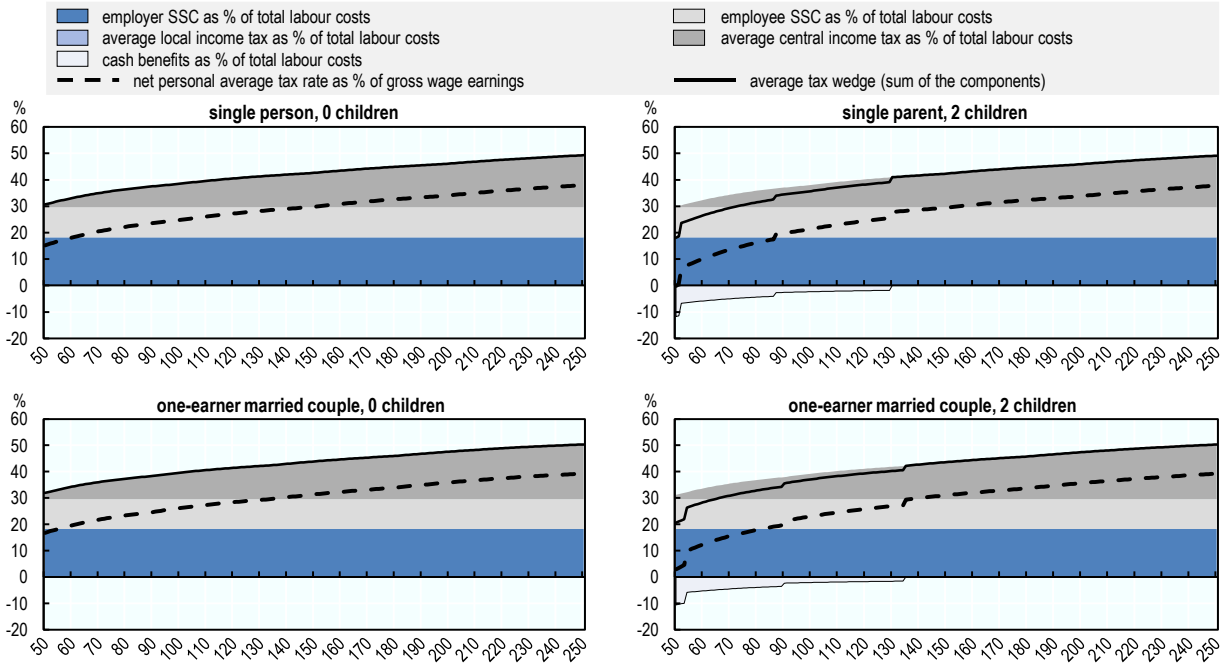
Greece 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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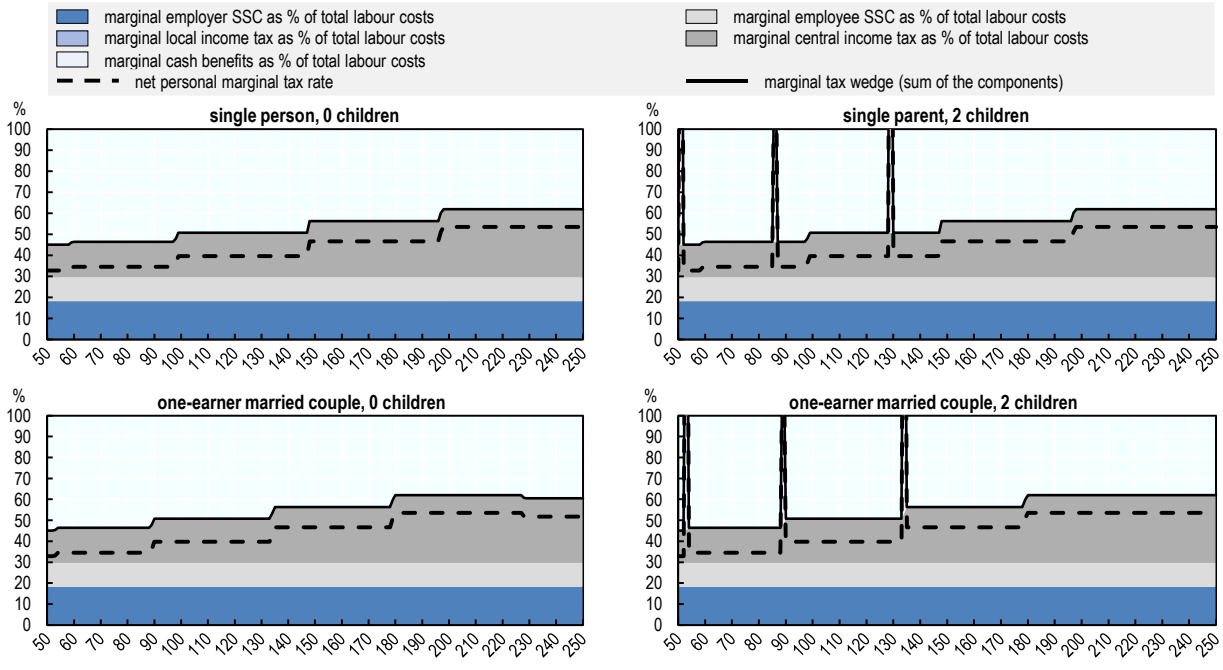
Greece 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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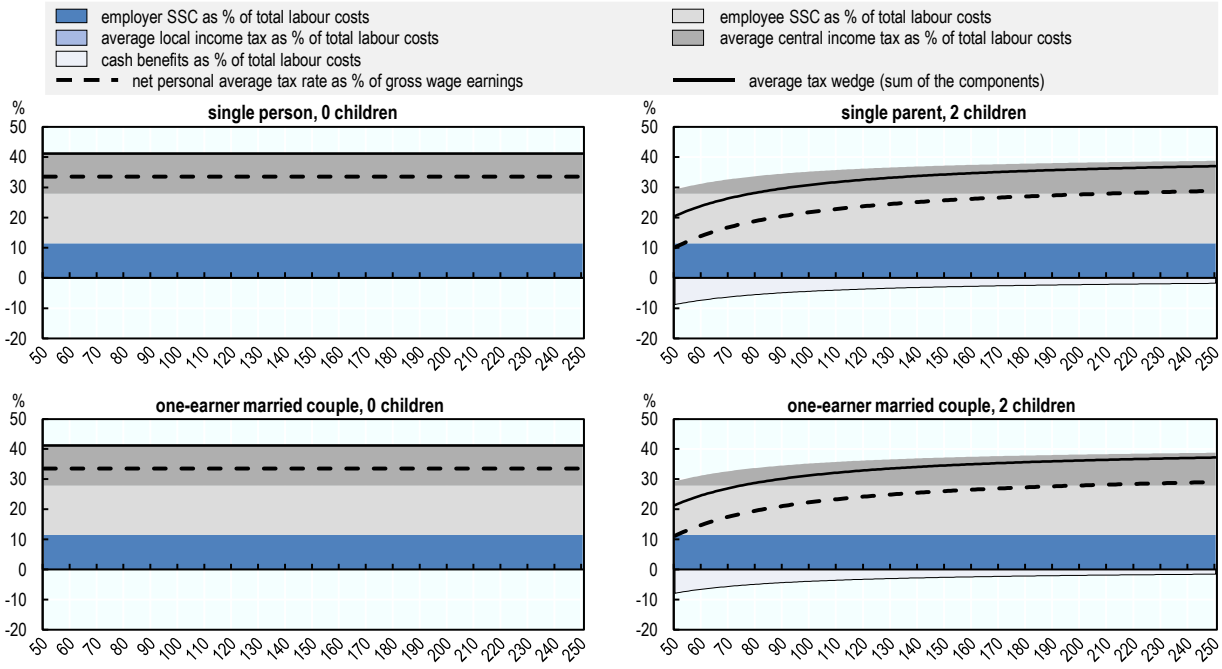
Hungary 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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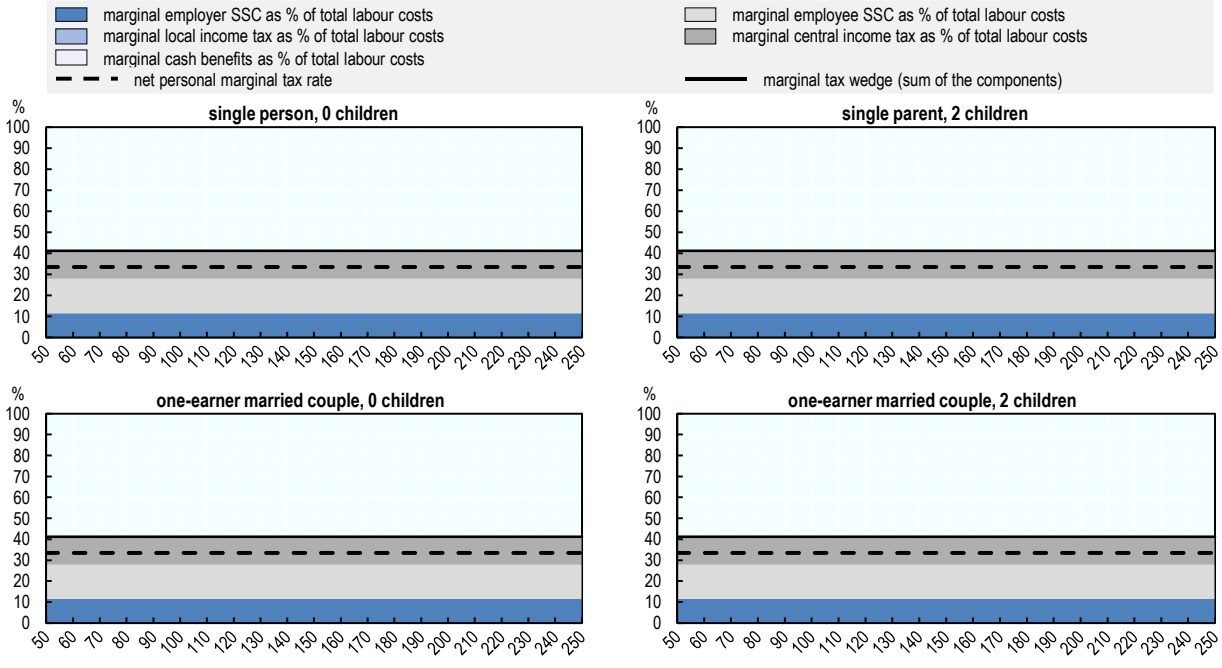
Hungary 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Iceland 2023: average tax wedge decomposition

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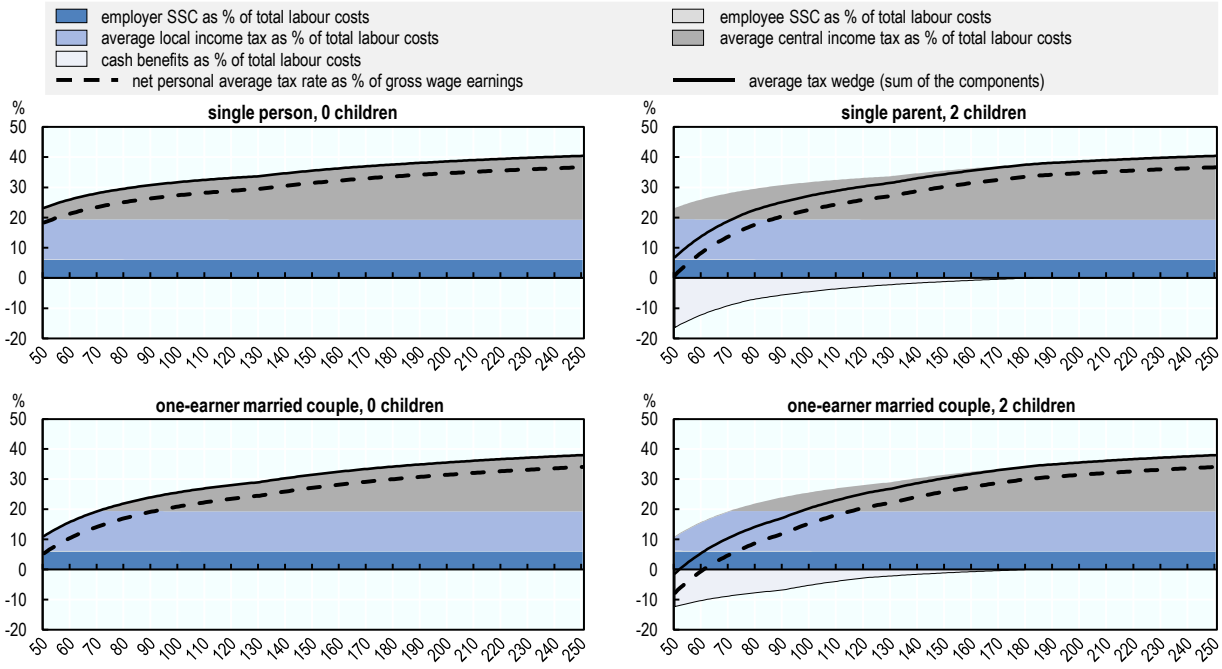

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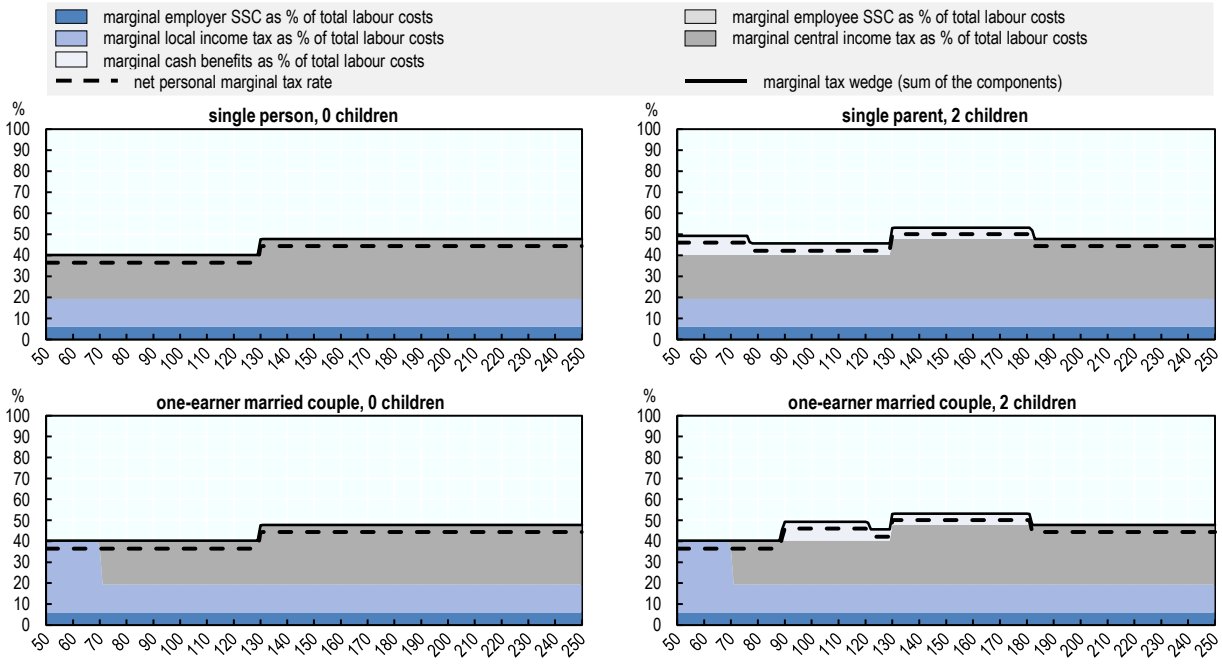
Iceland 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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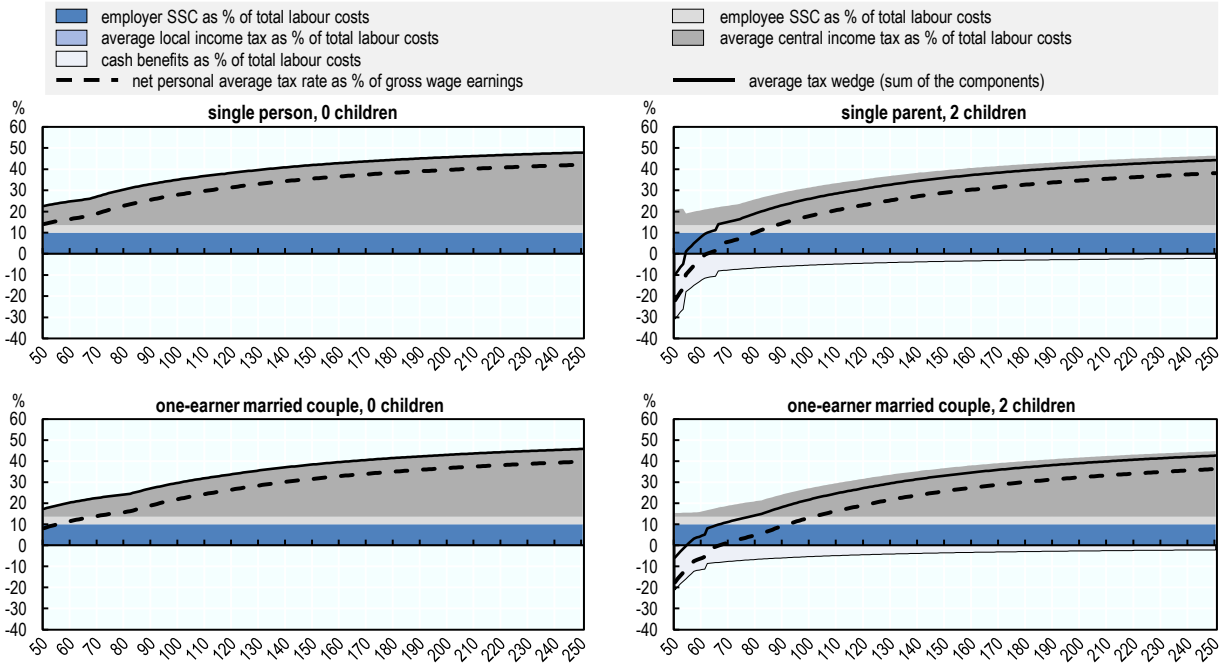
Ireland 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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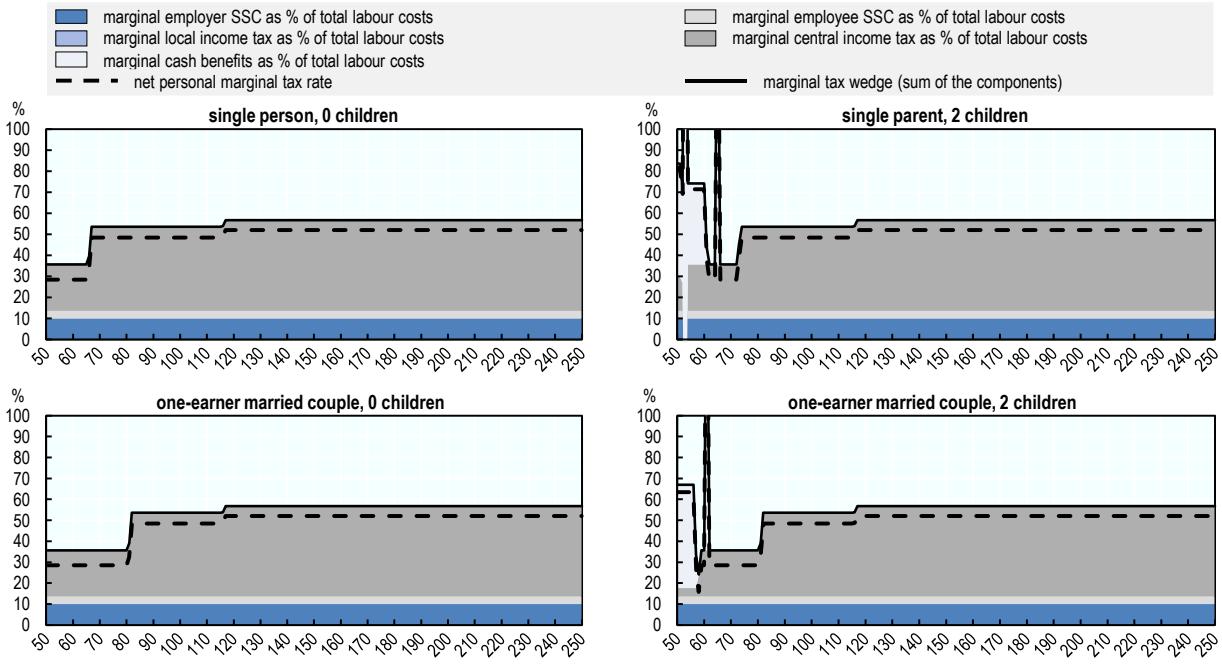
Ireland 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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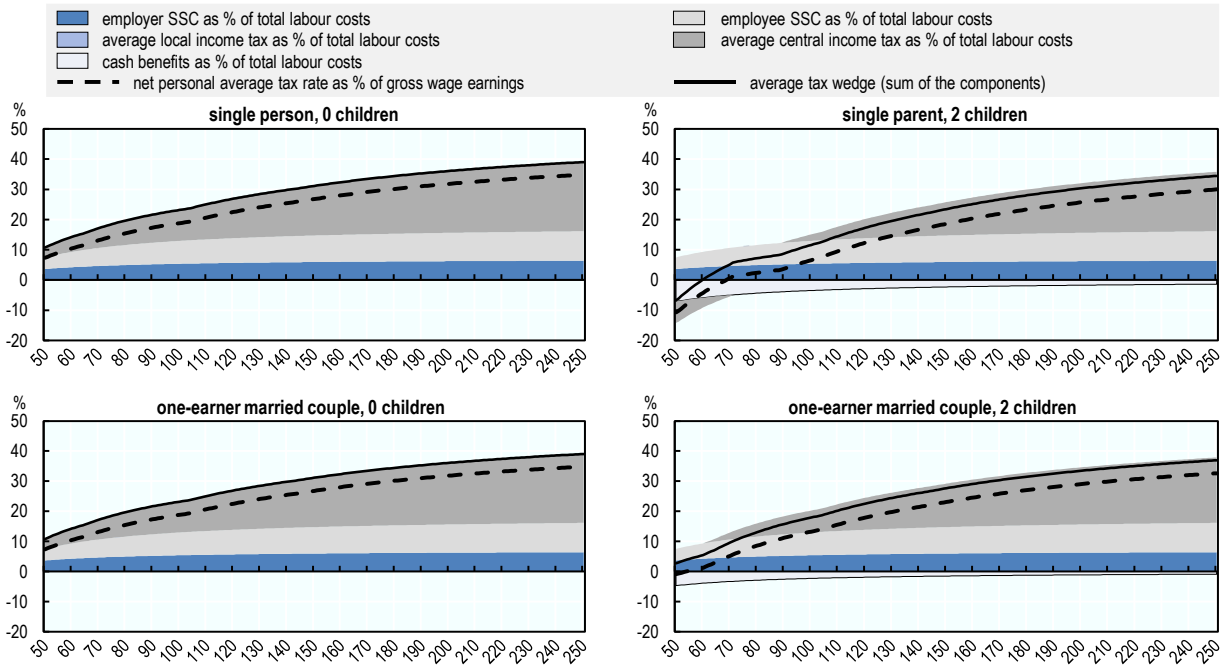
Israel 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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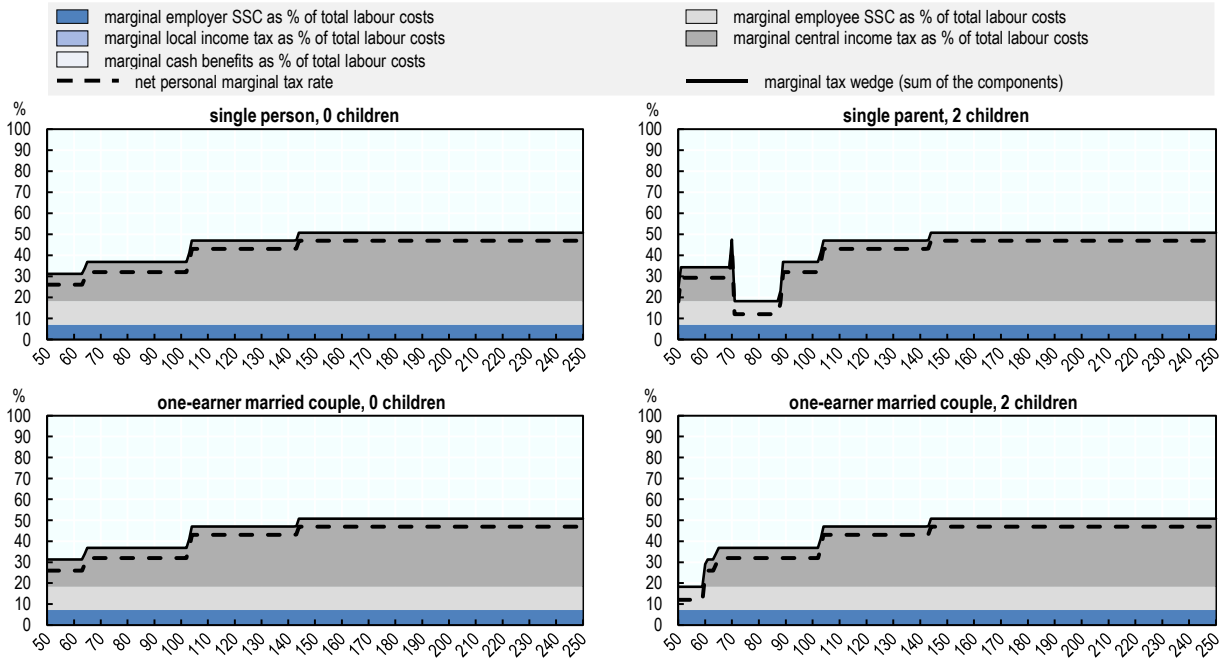
Israel 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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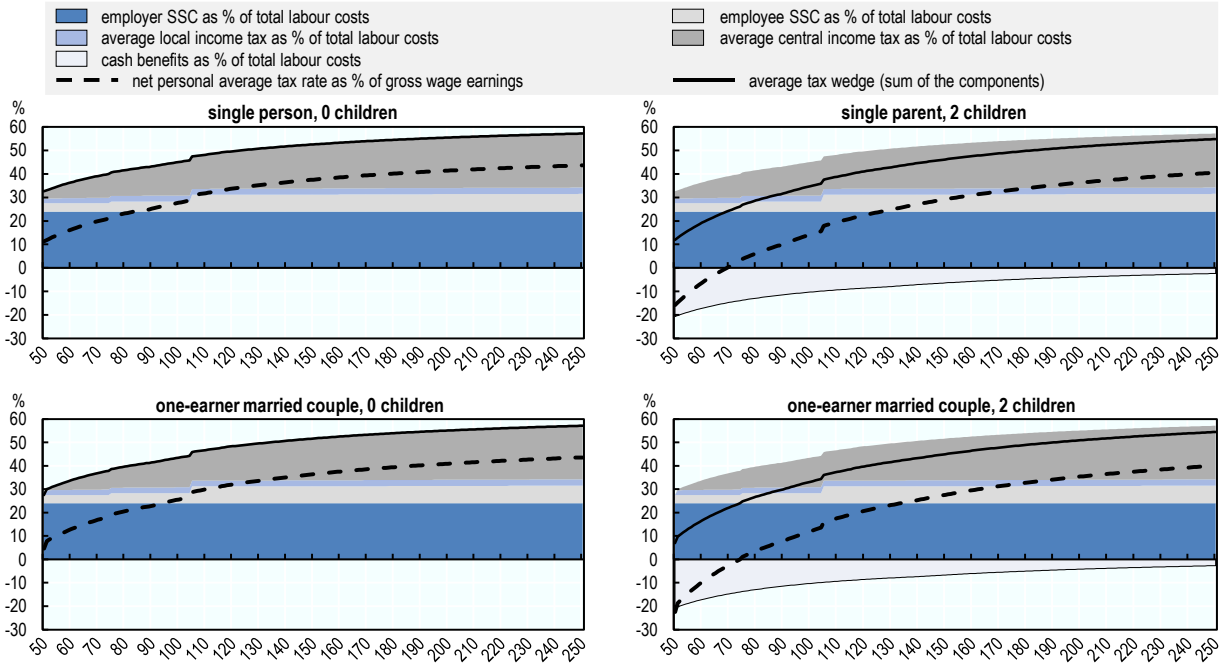
Italy 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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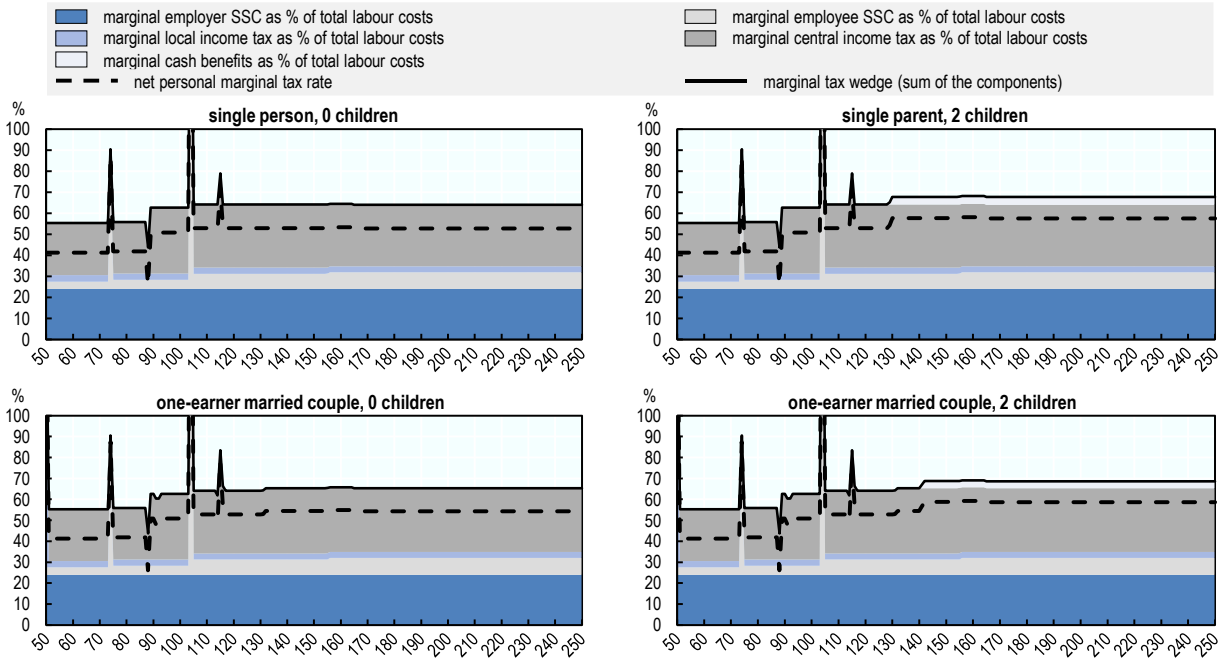
Italy 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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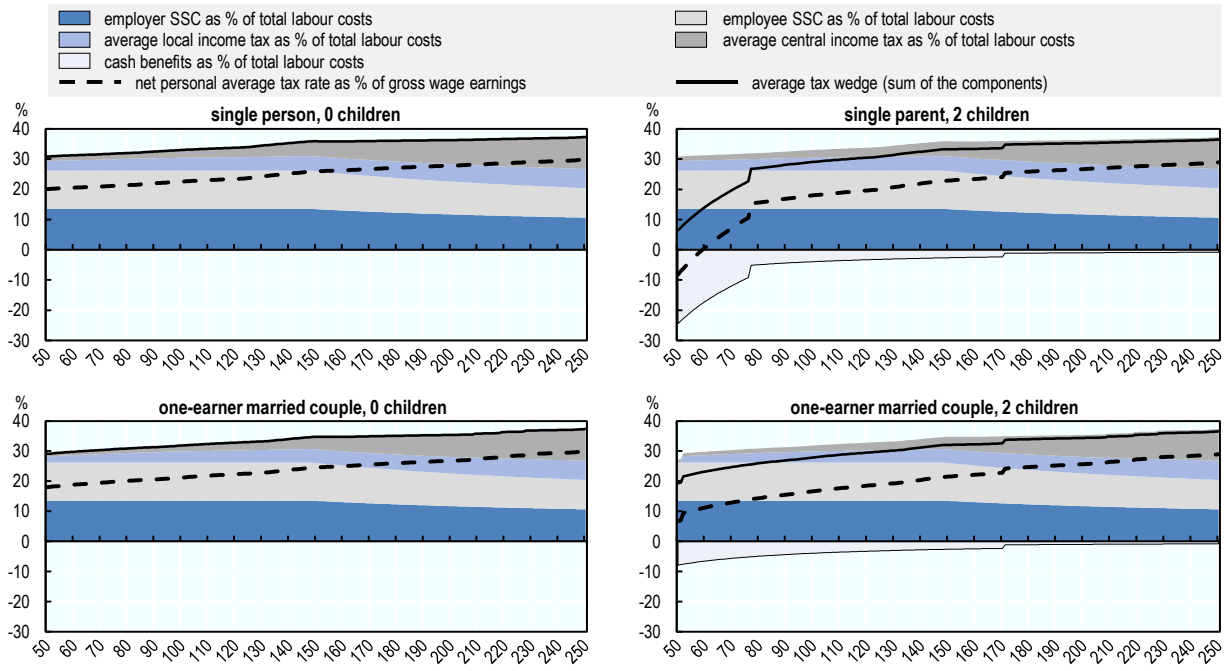
Japan 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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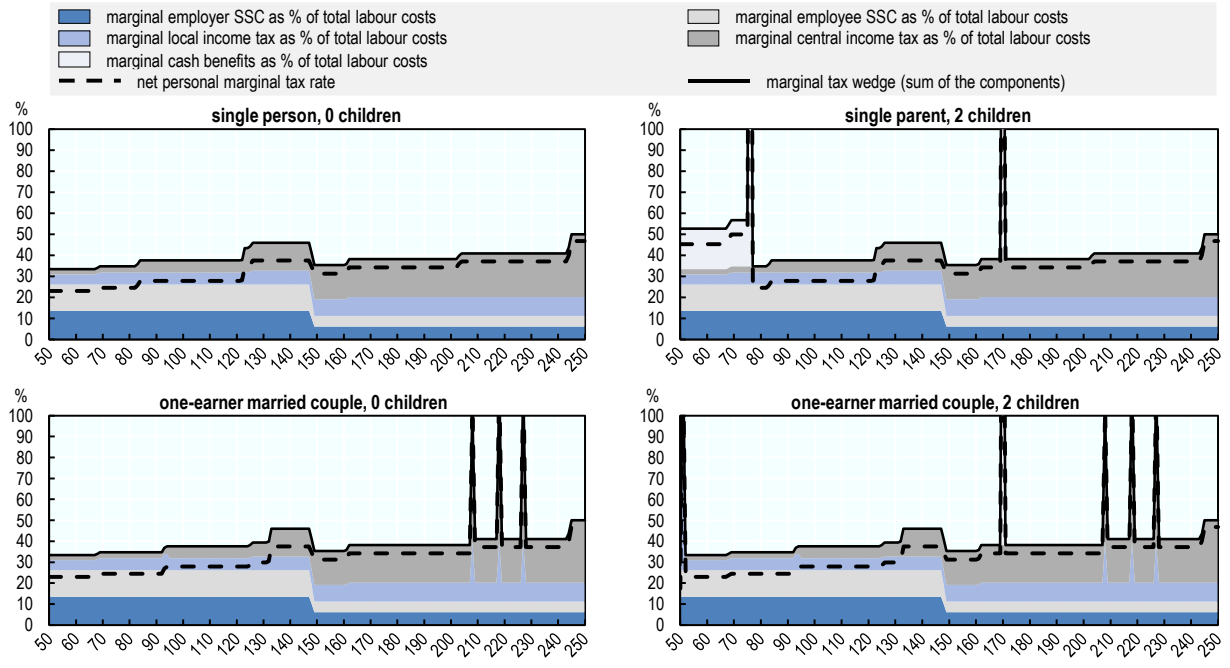
Japan 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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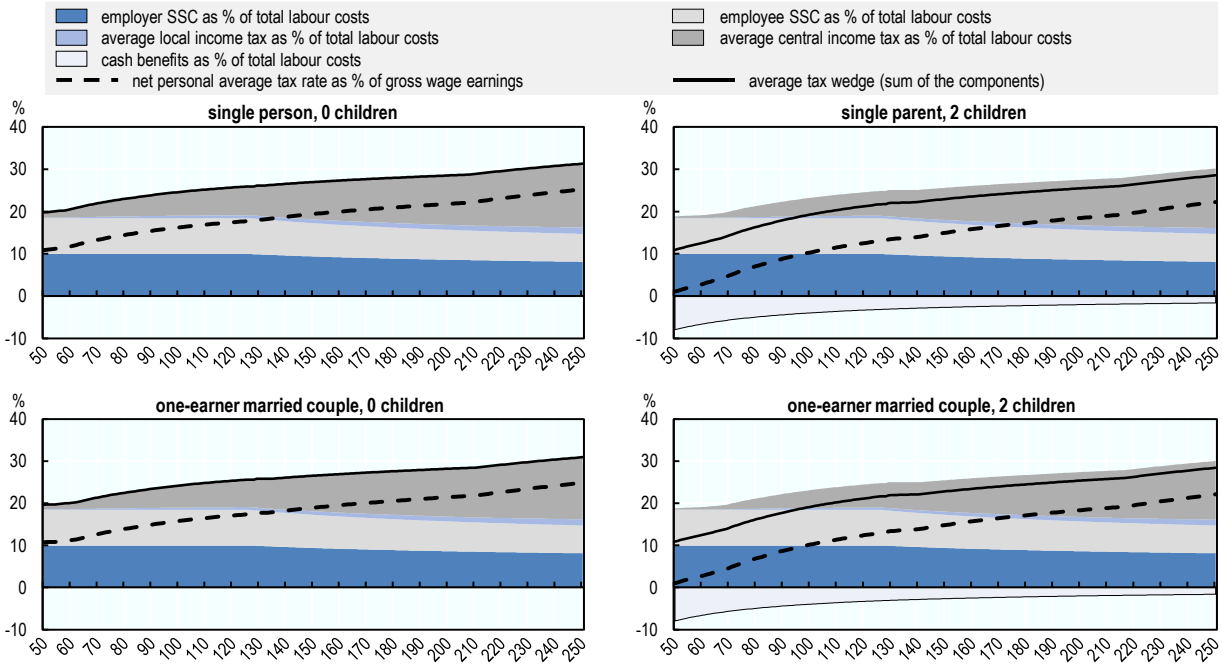
Korea 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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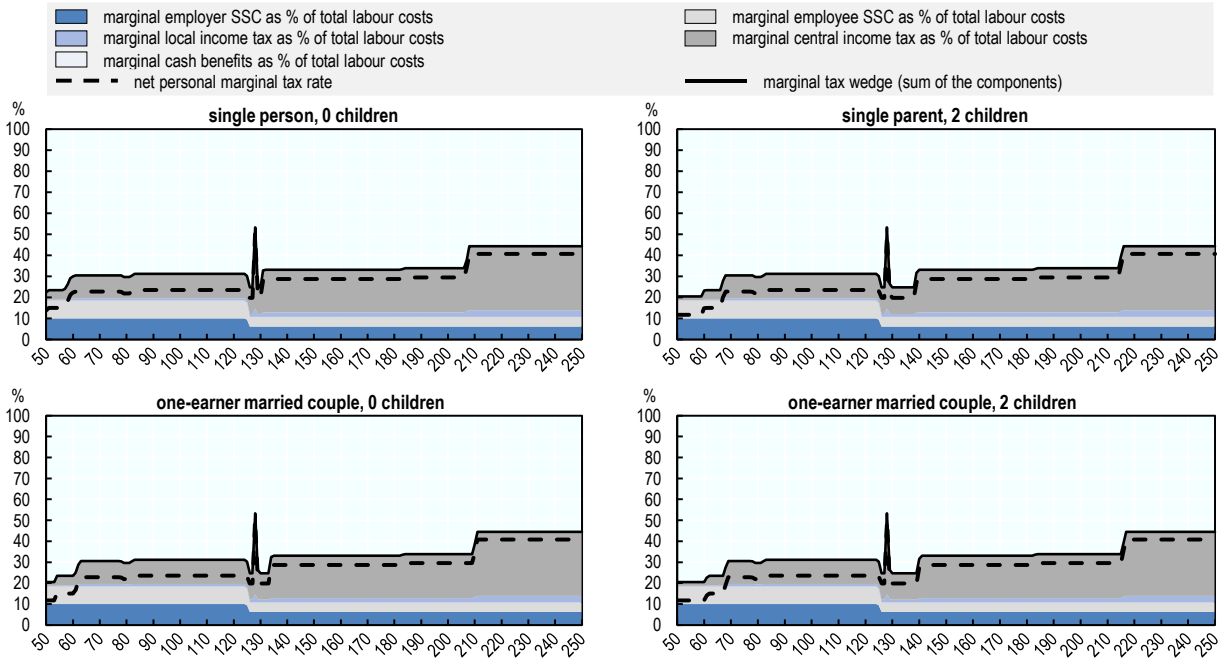
Korea 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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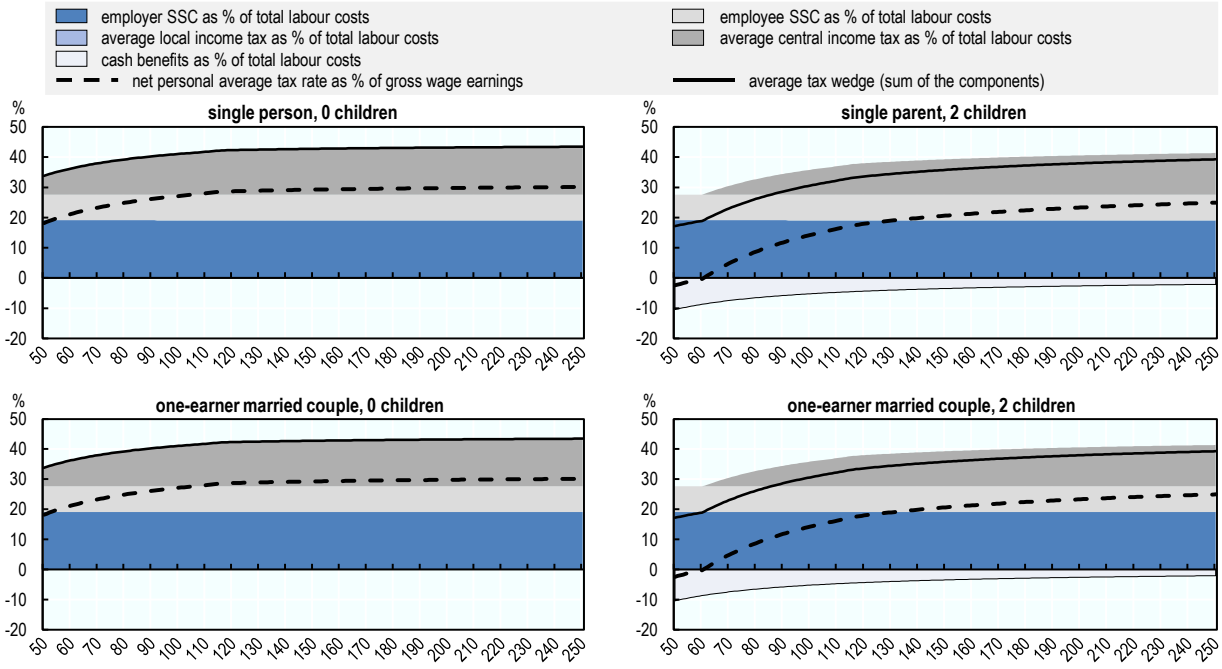
Latvia 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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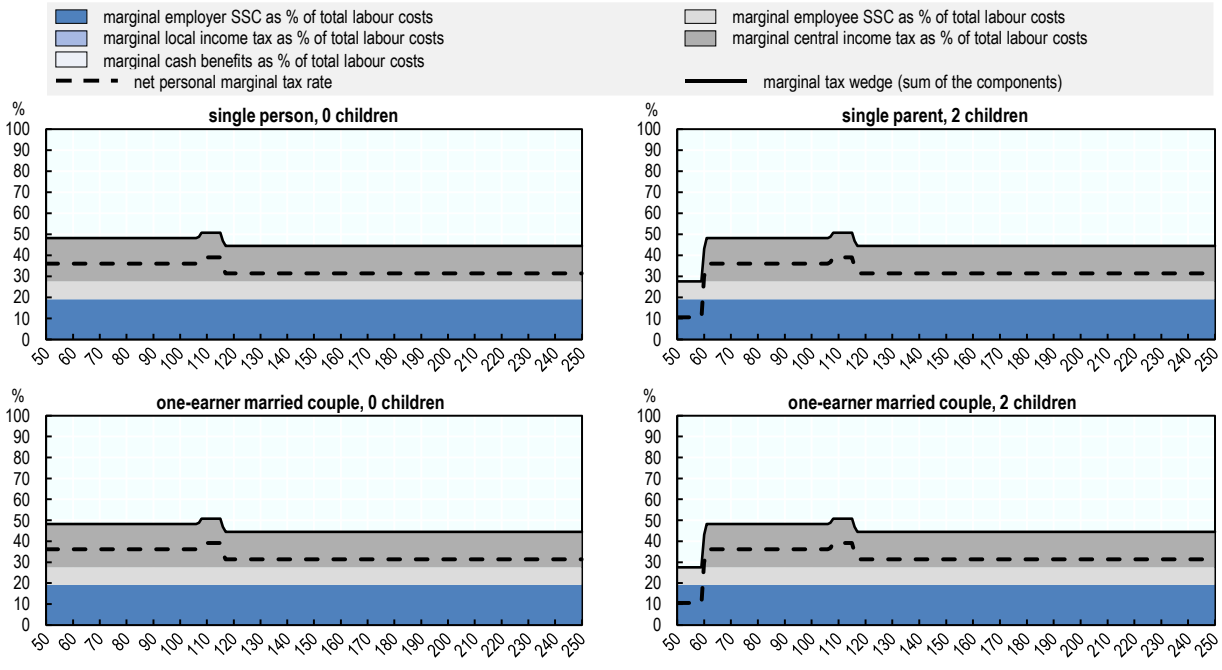
Latvia 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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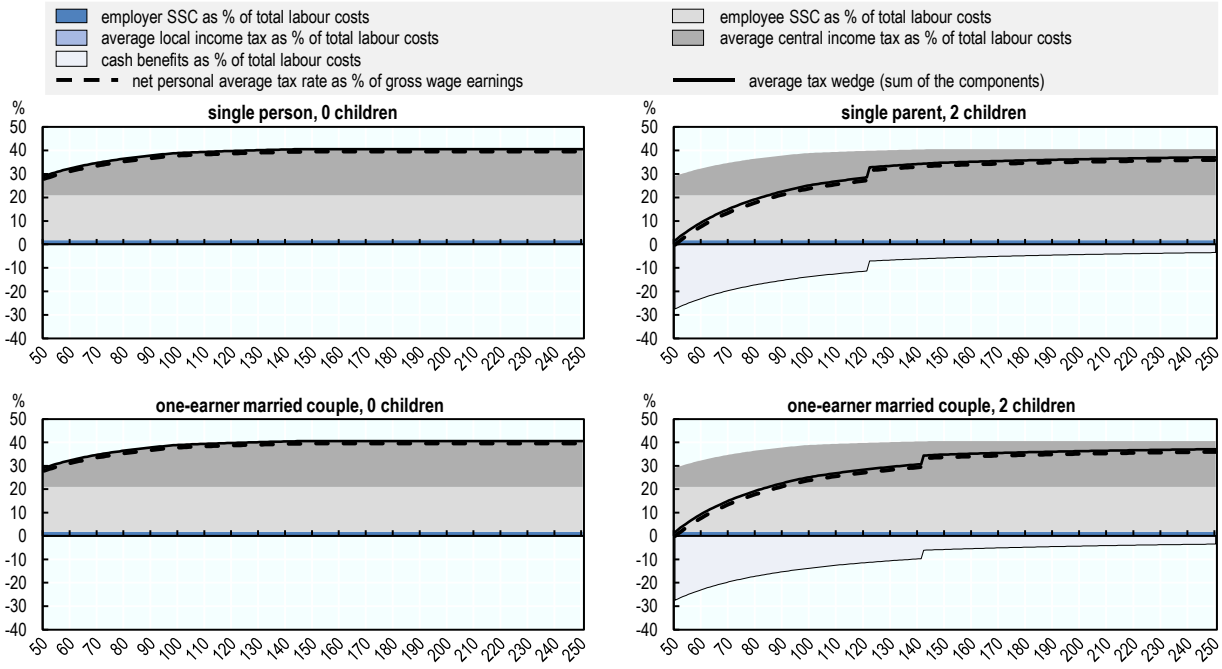
Lithuania 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Lithuania 2023: marginal tax wedge decomposition

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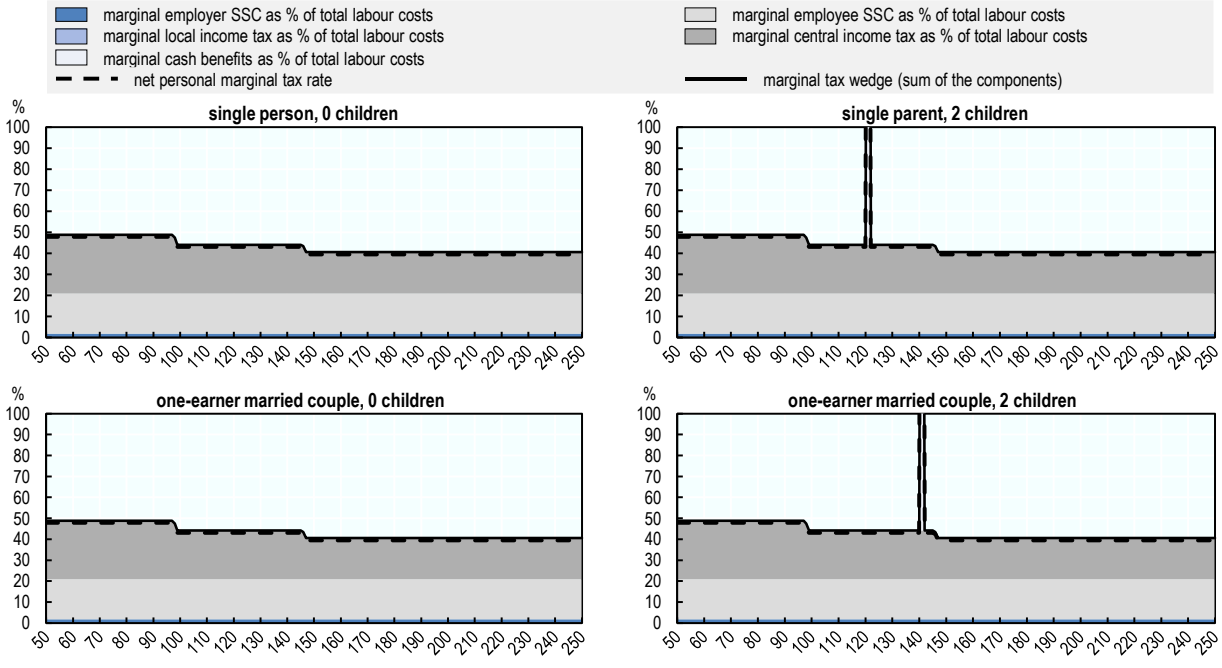

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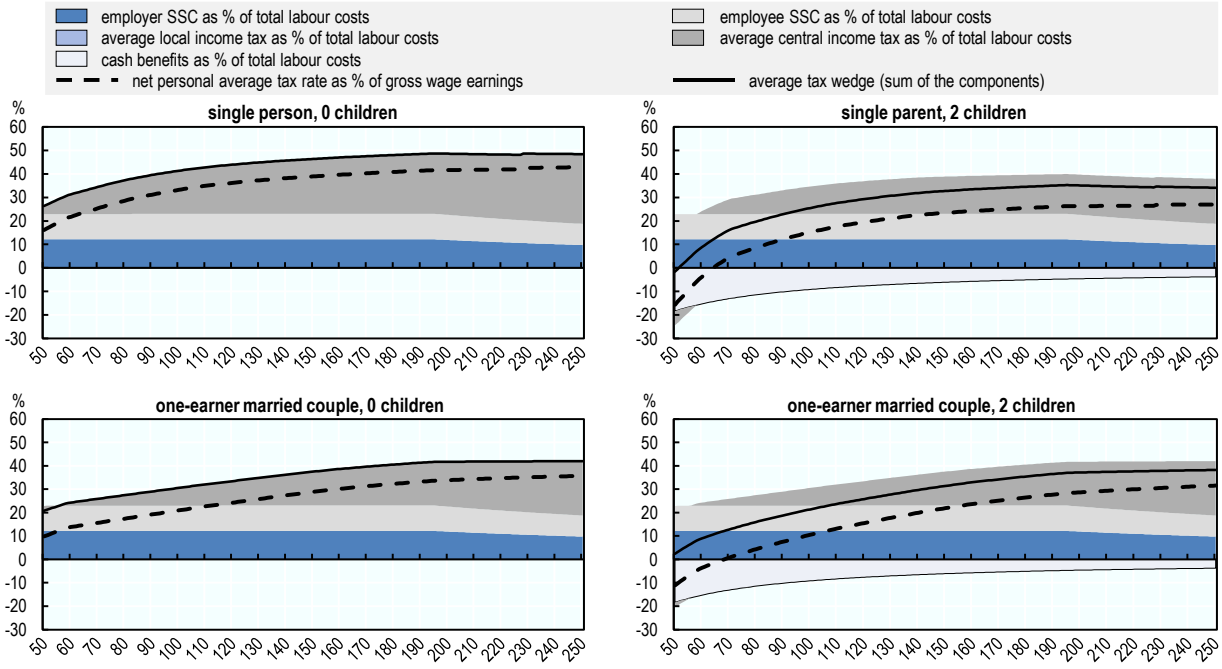
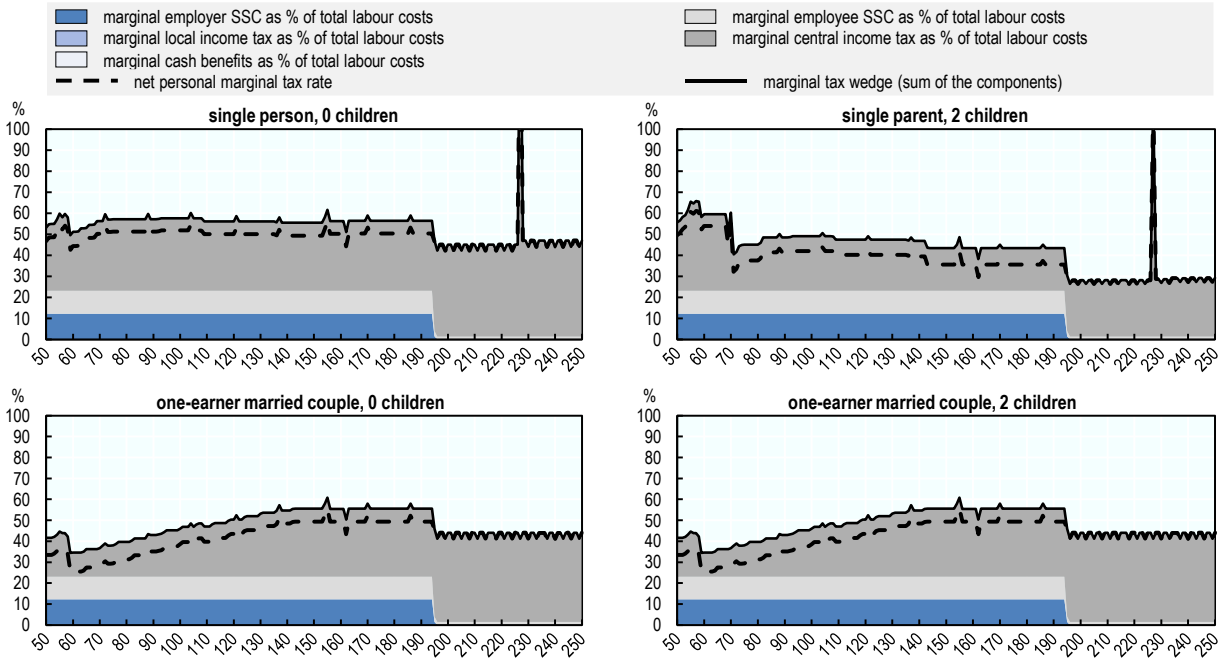
Luxembourg 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



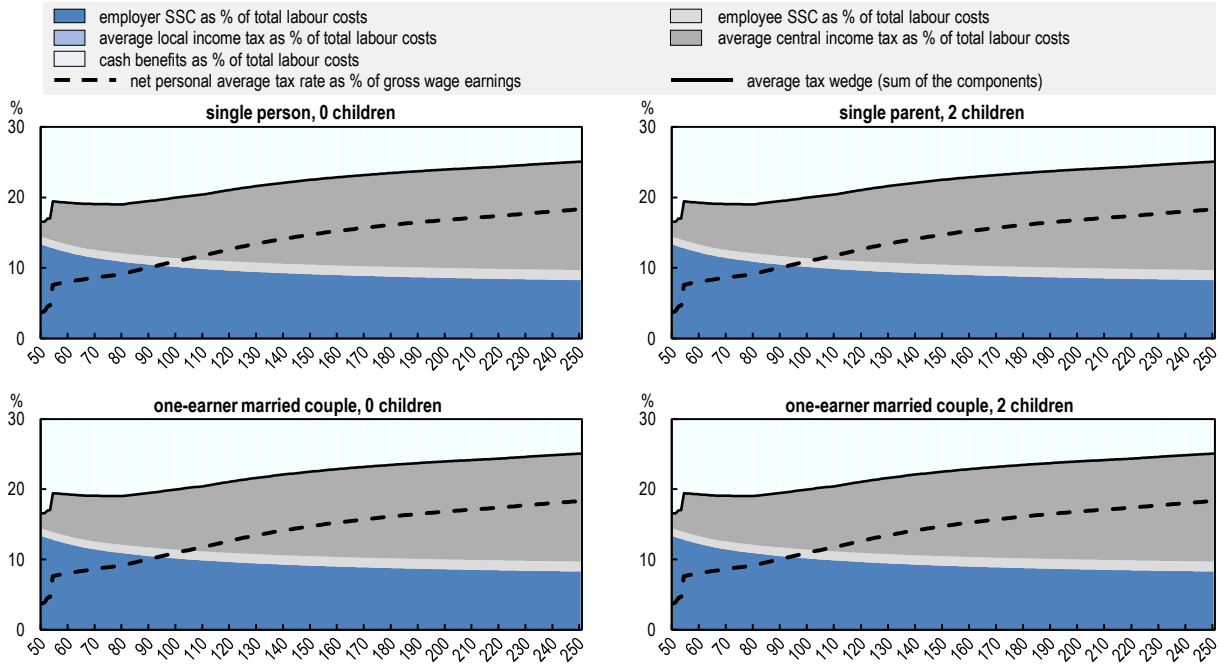
Luxembourg 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



Mexico 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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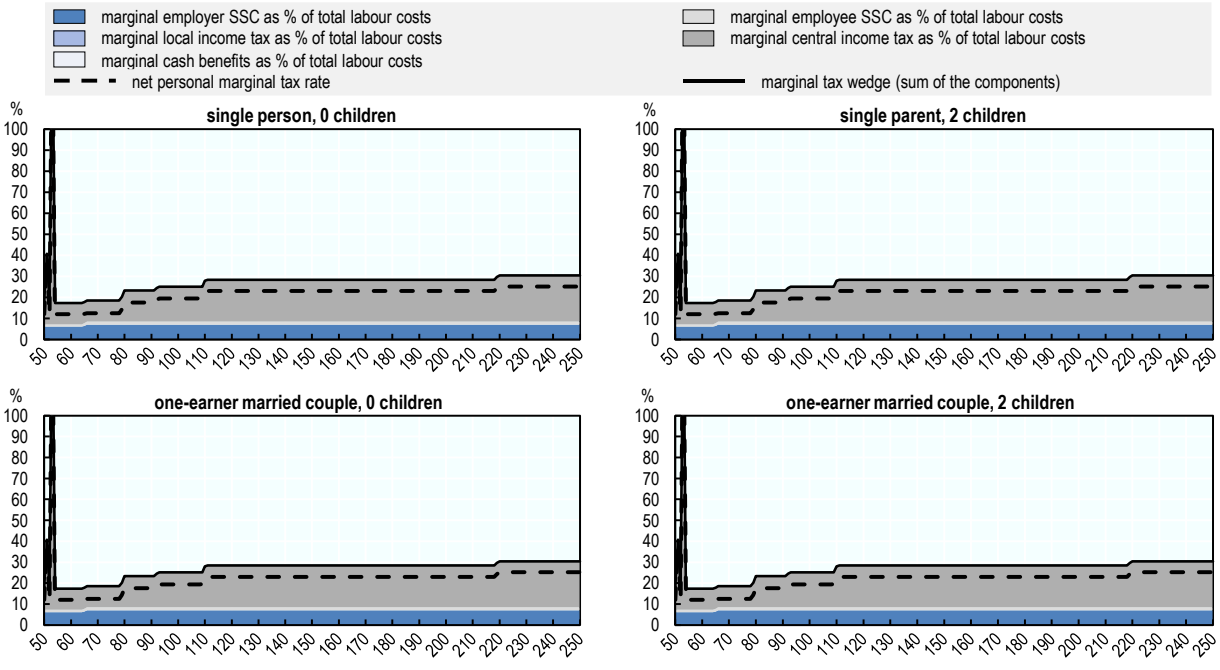
Mexico 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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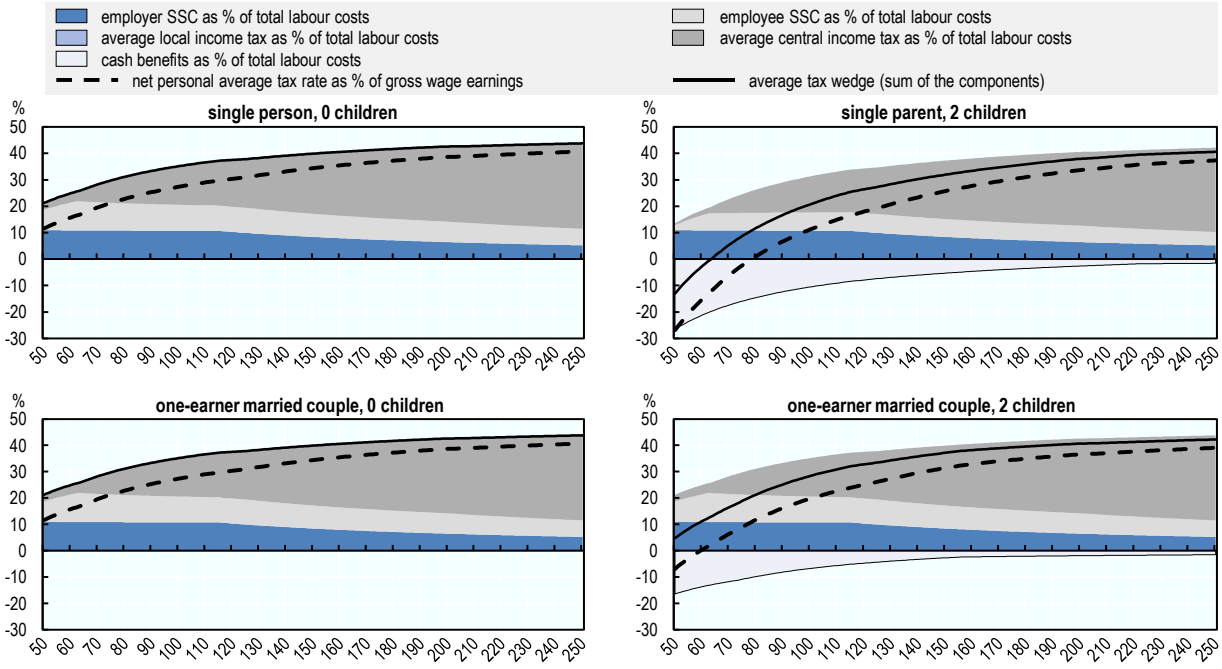
Netherlands 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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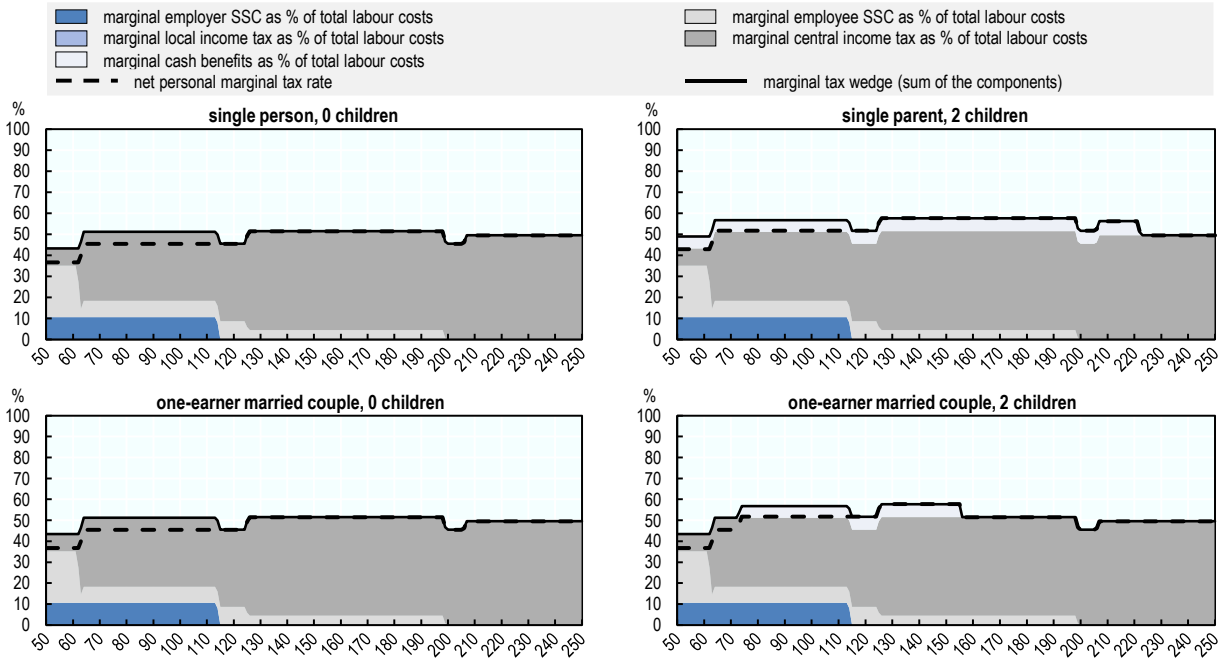
Netherlands 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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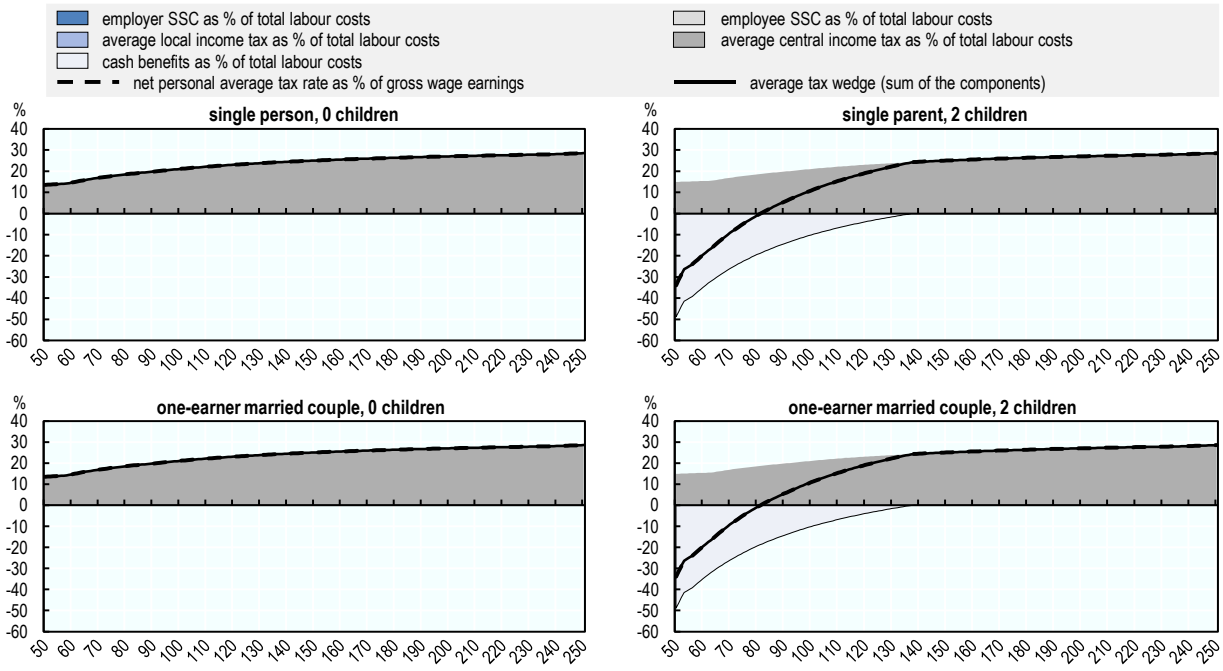
New Zealand 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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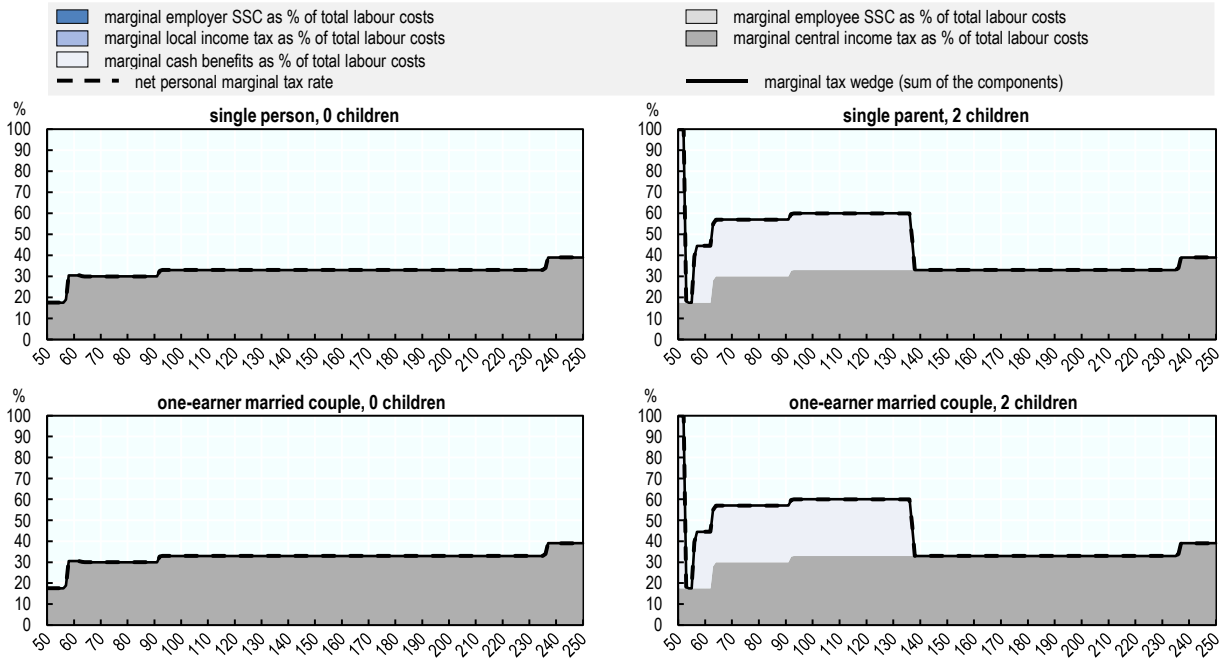
New Zealand 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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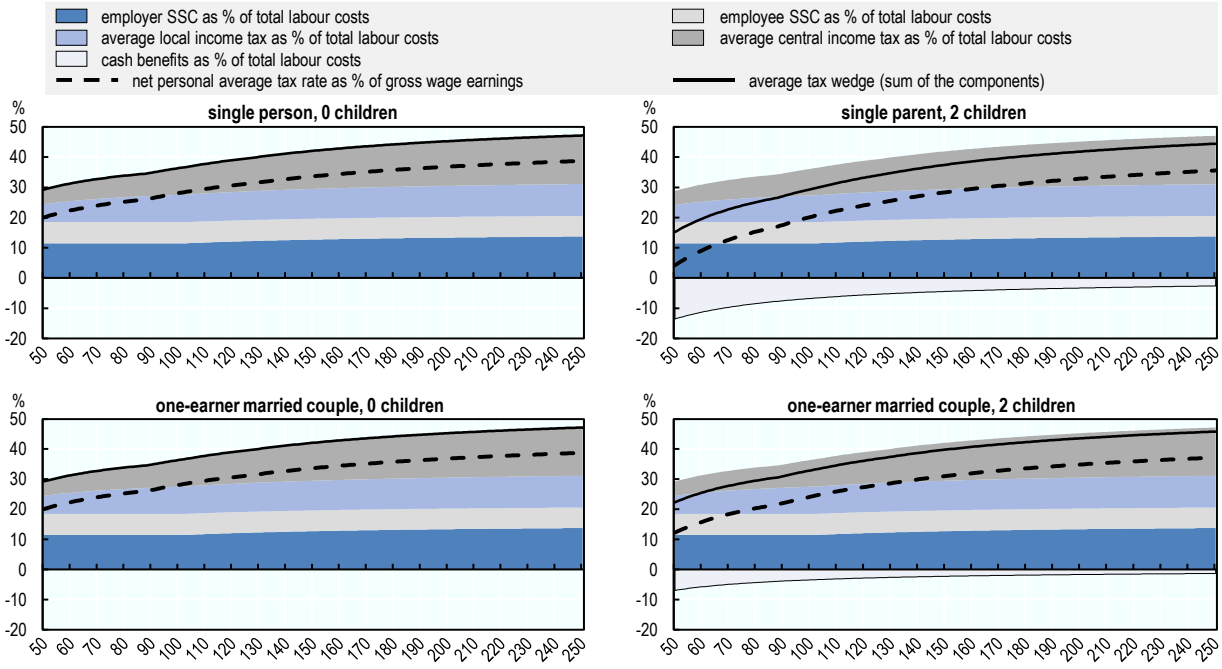
Norway 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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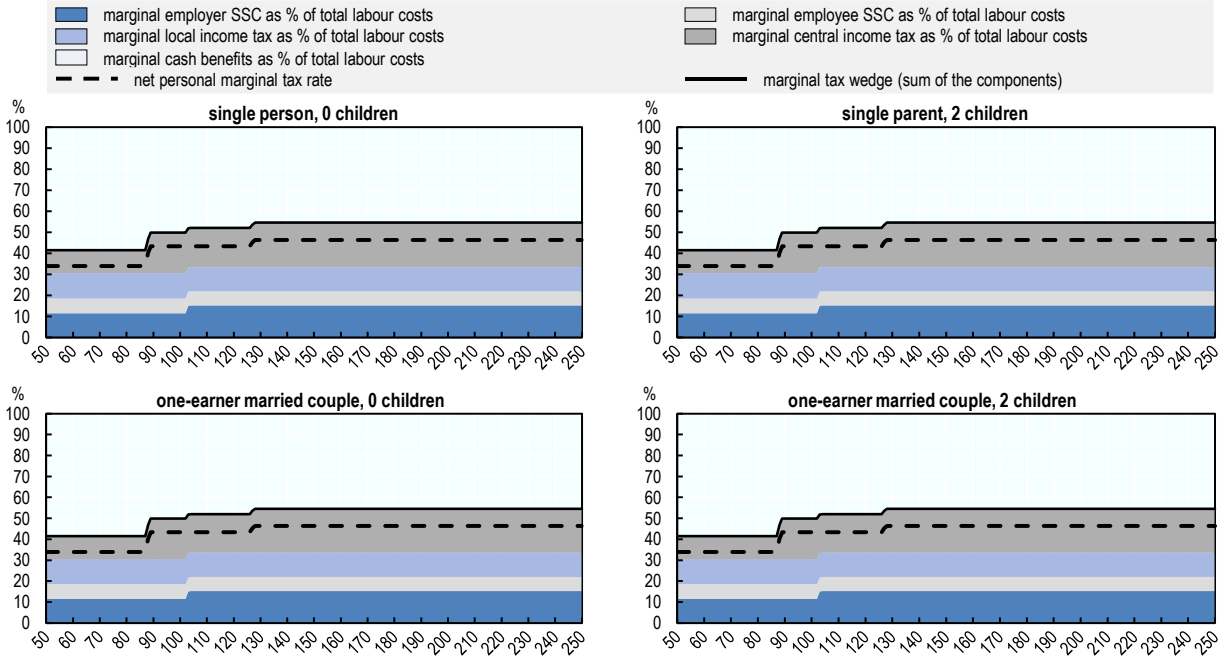
Norway 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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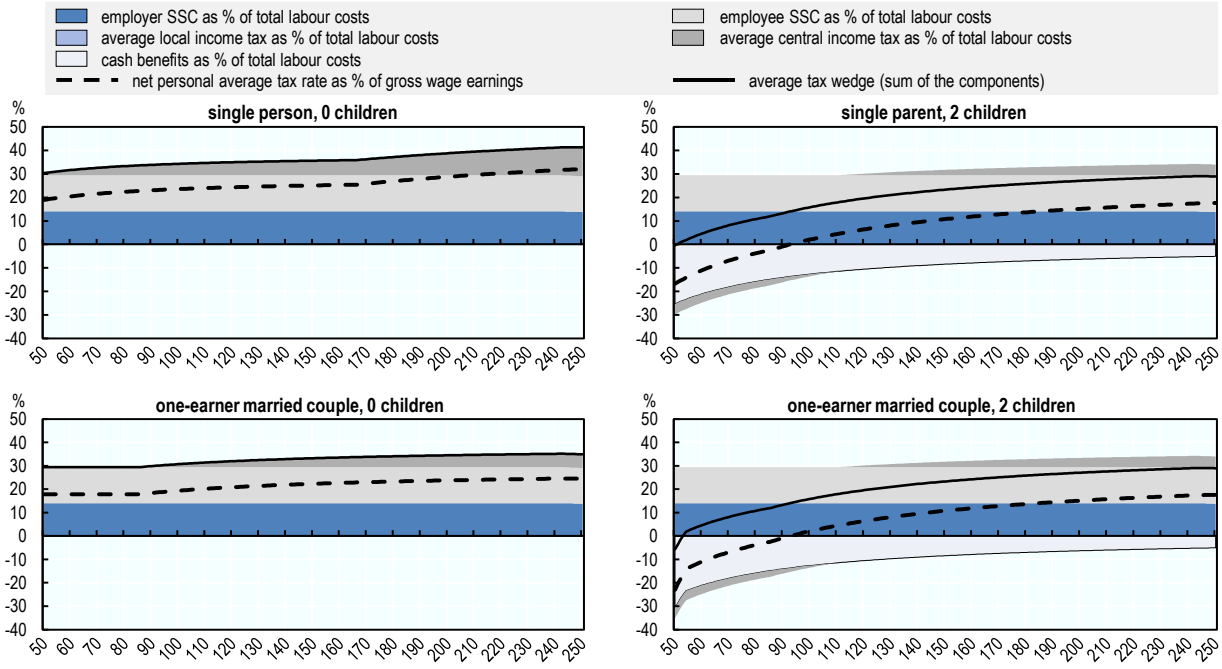
Poland 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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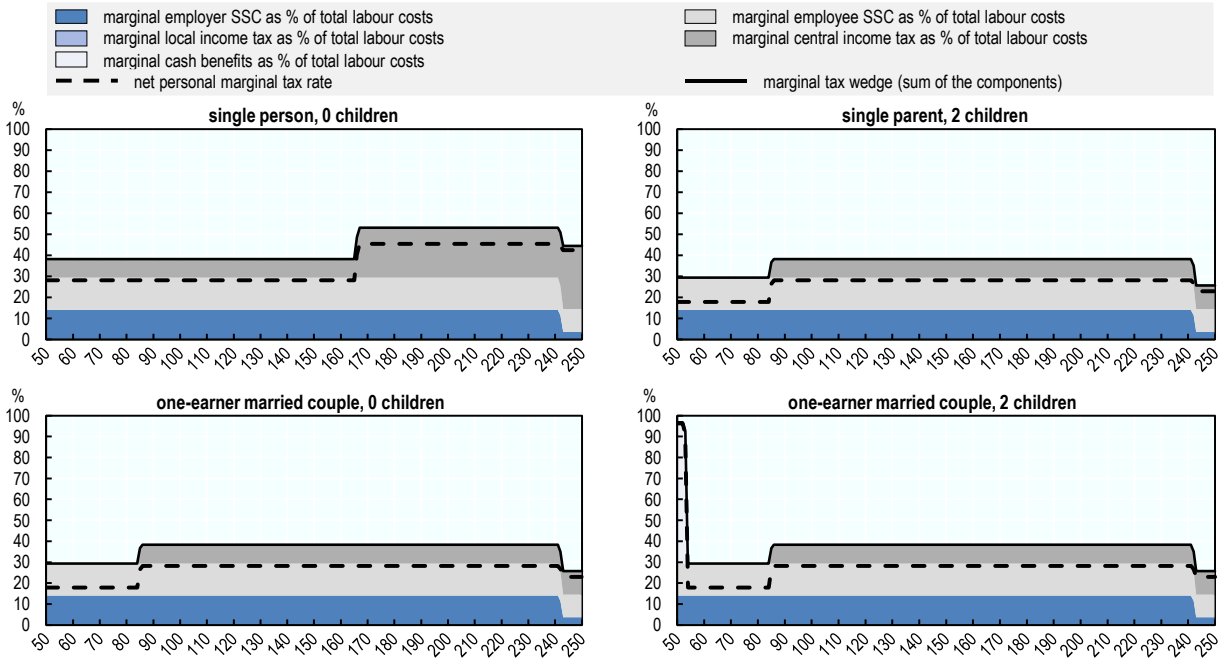
Poland 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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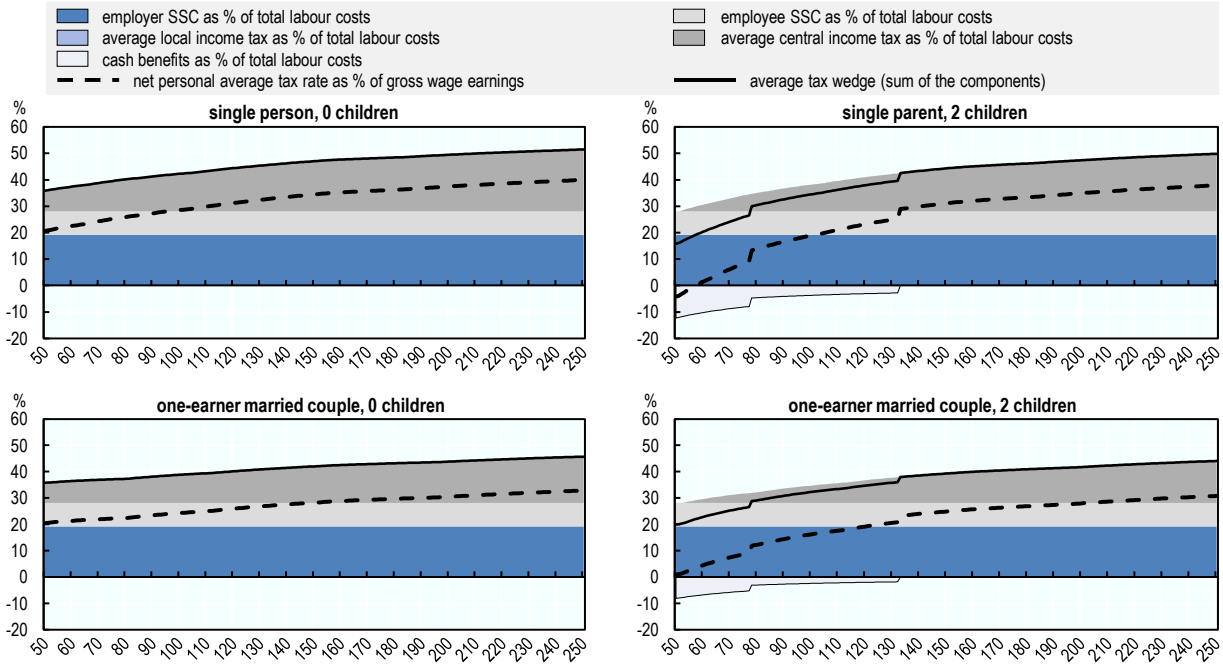
Portugal 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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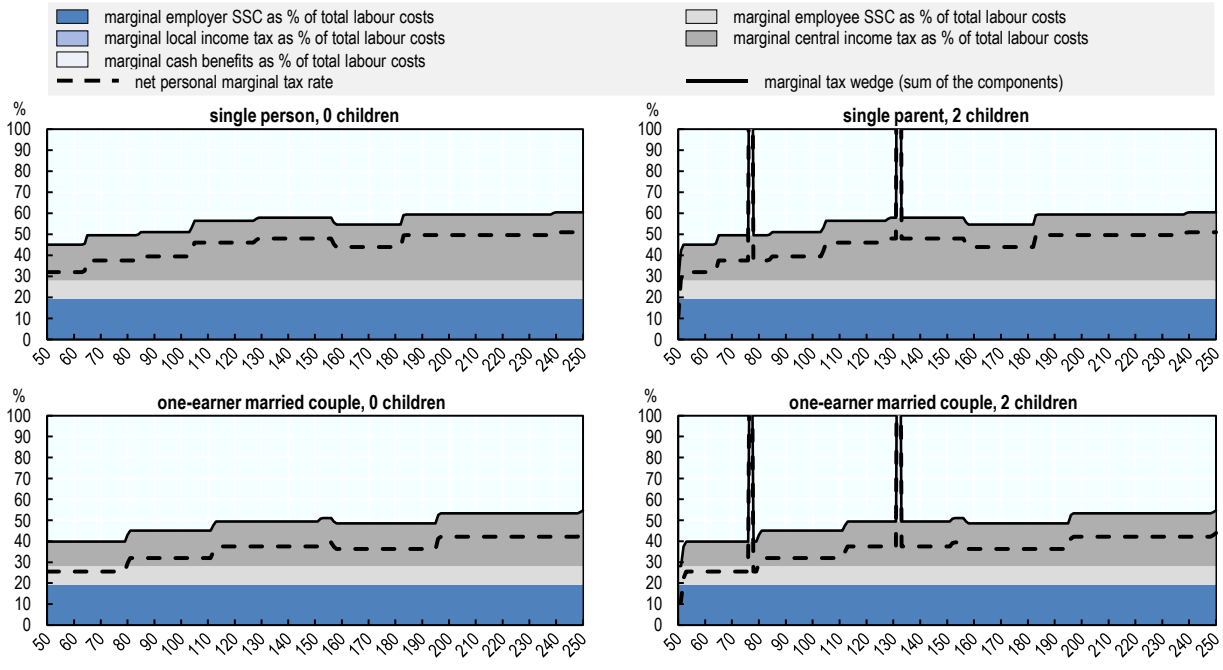
Portugal 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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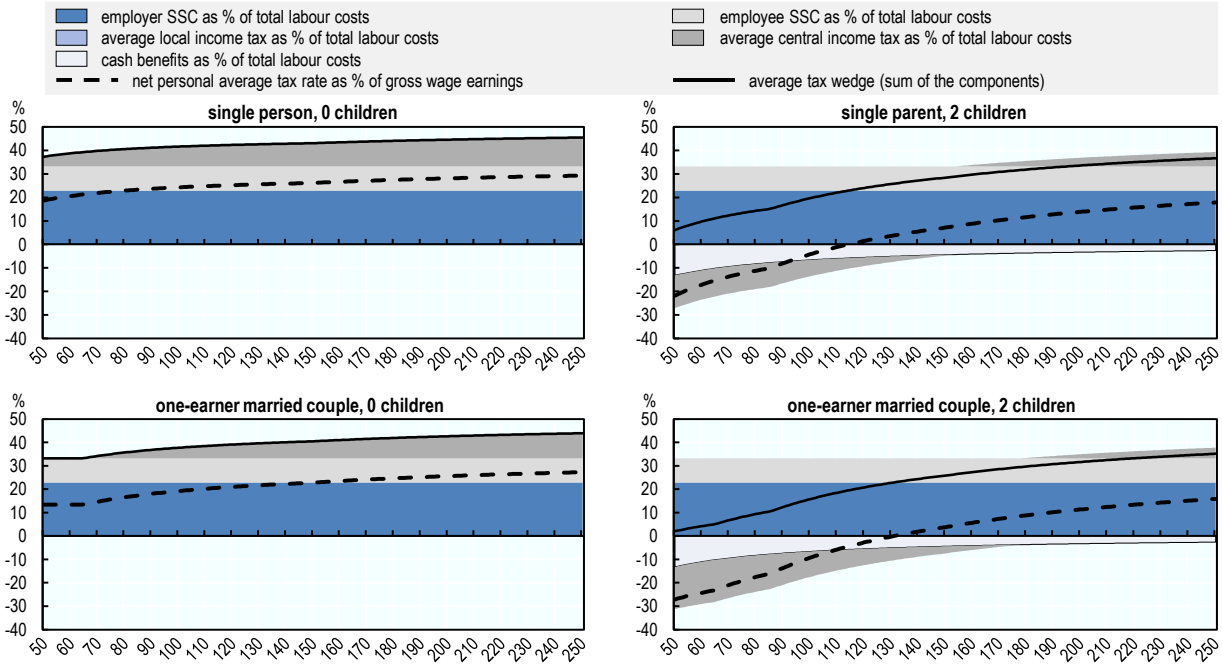
Slovak Republic 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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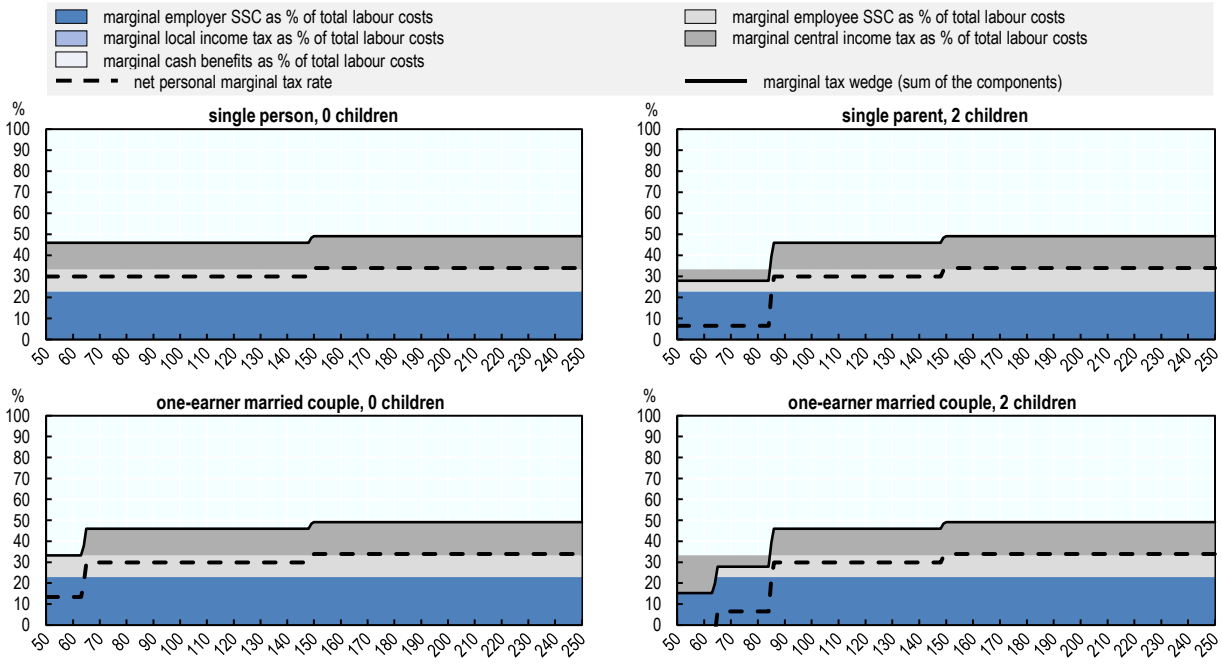
Slovak Republic 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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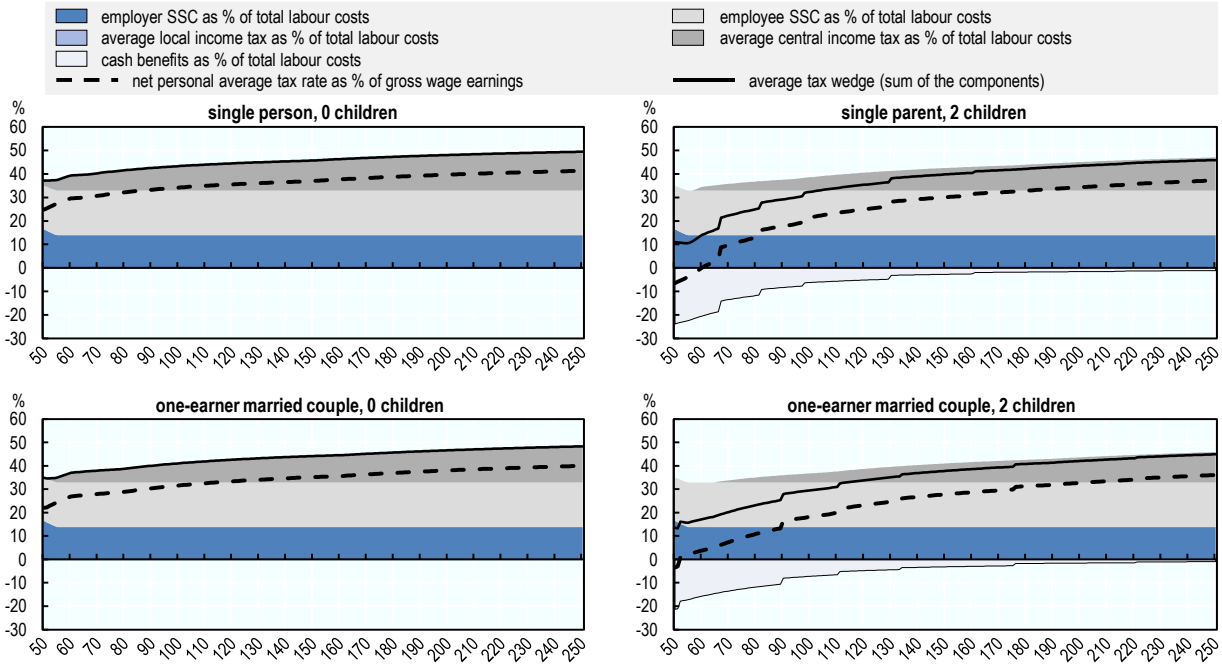
Slovenia 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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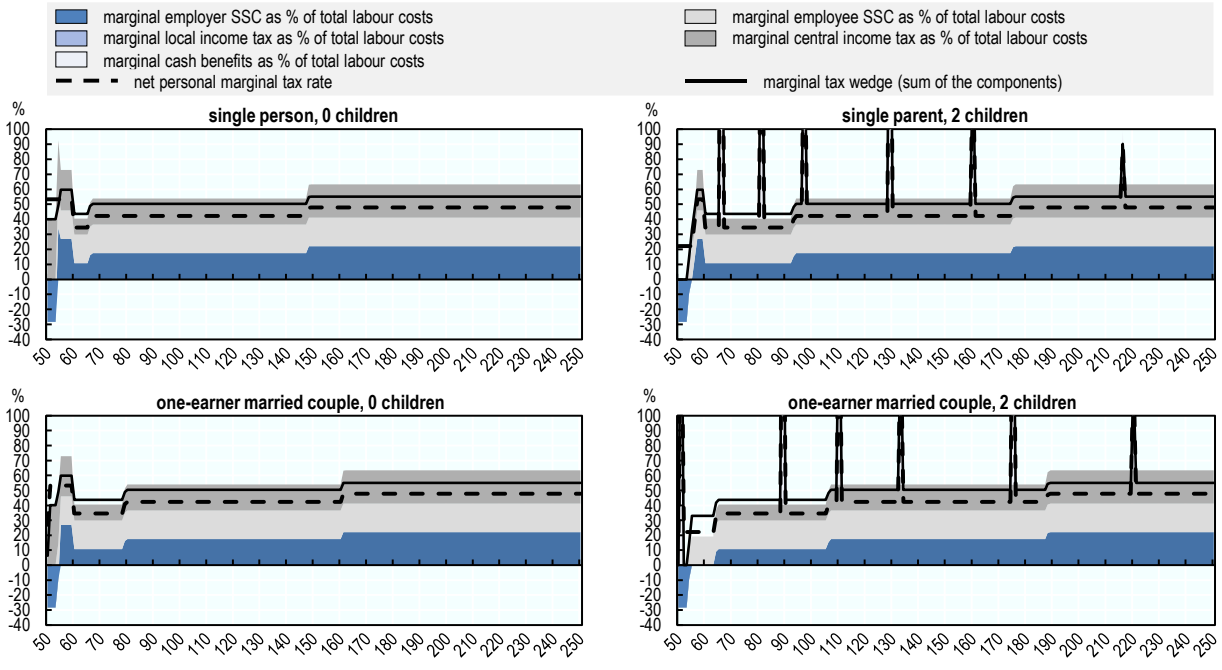
Slovenia 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Spain 2023: average tax wedge decomposition

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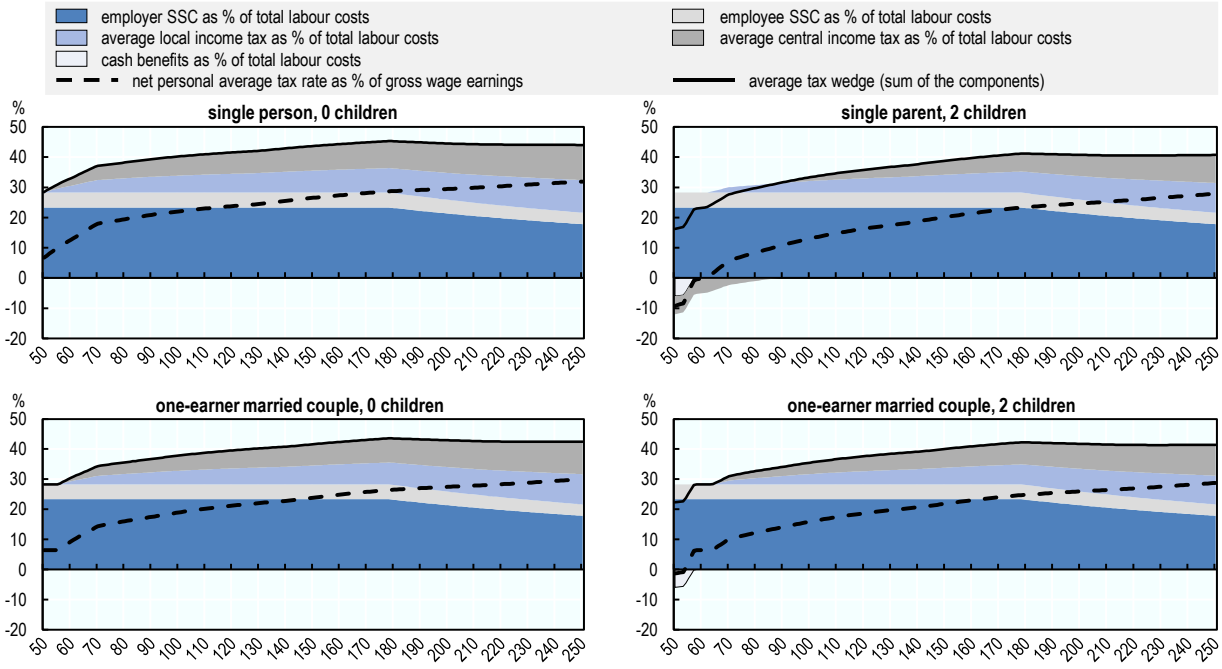

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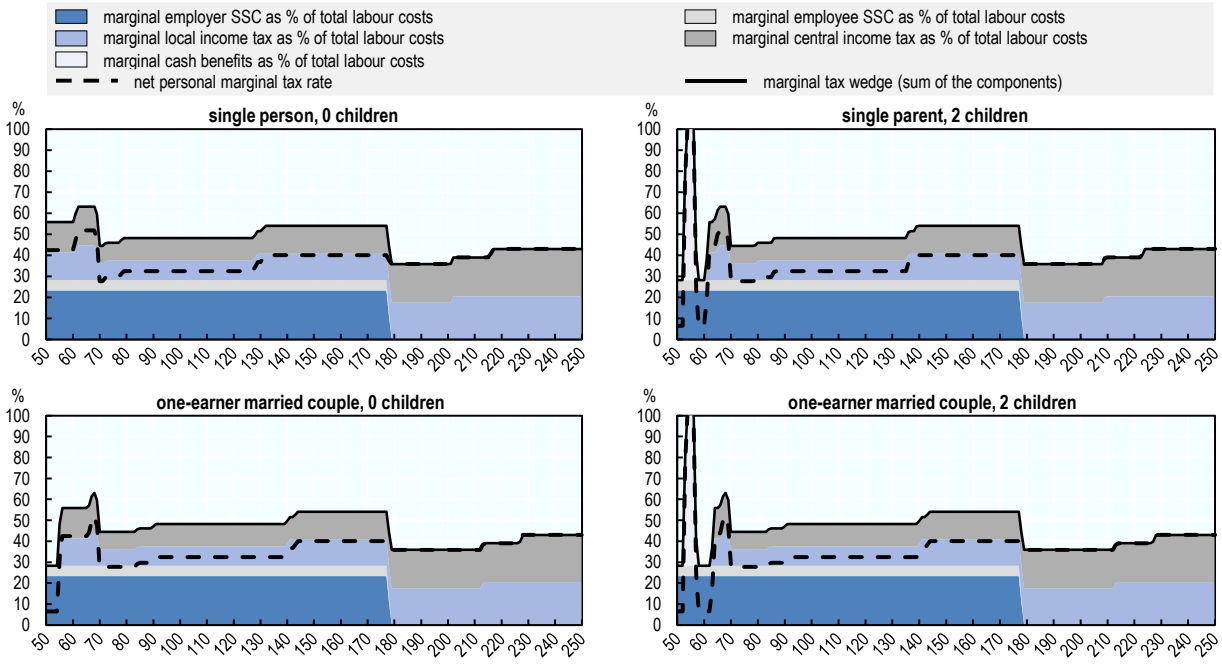
Spain 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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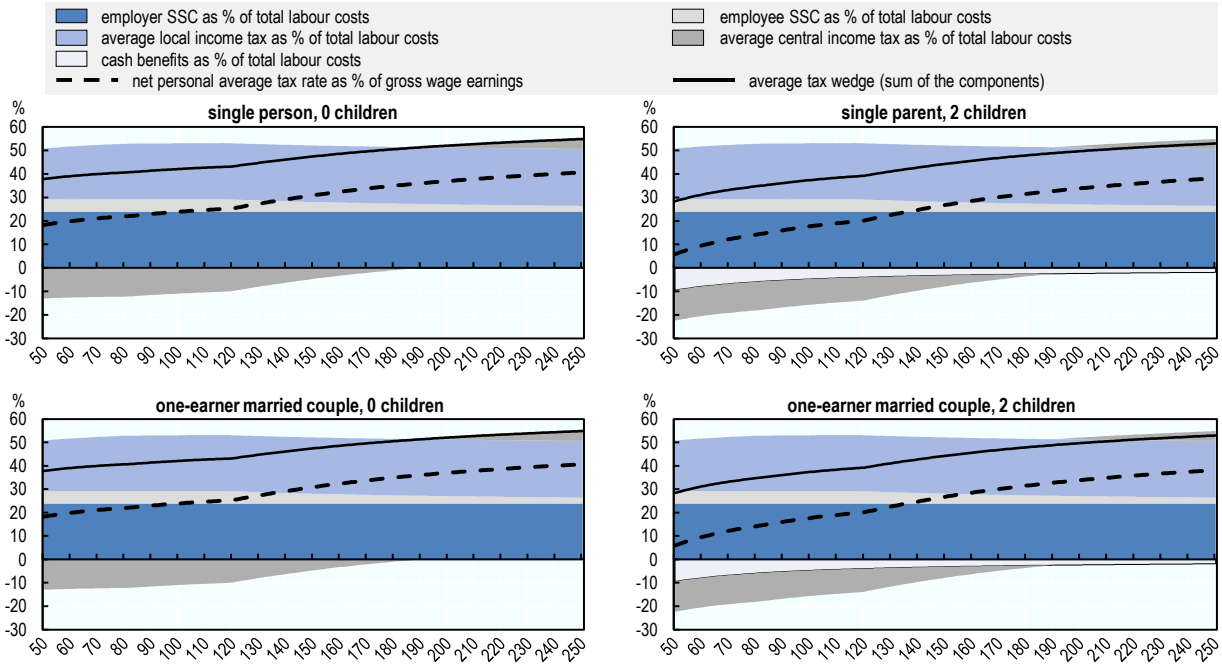
Sweden 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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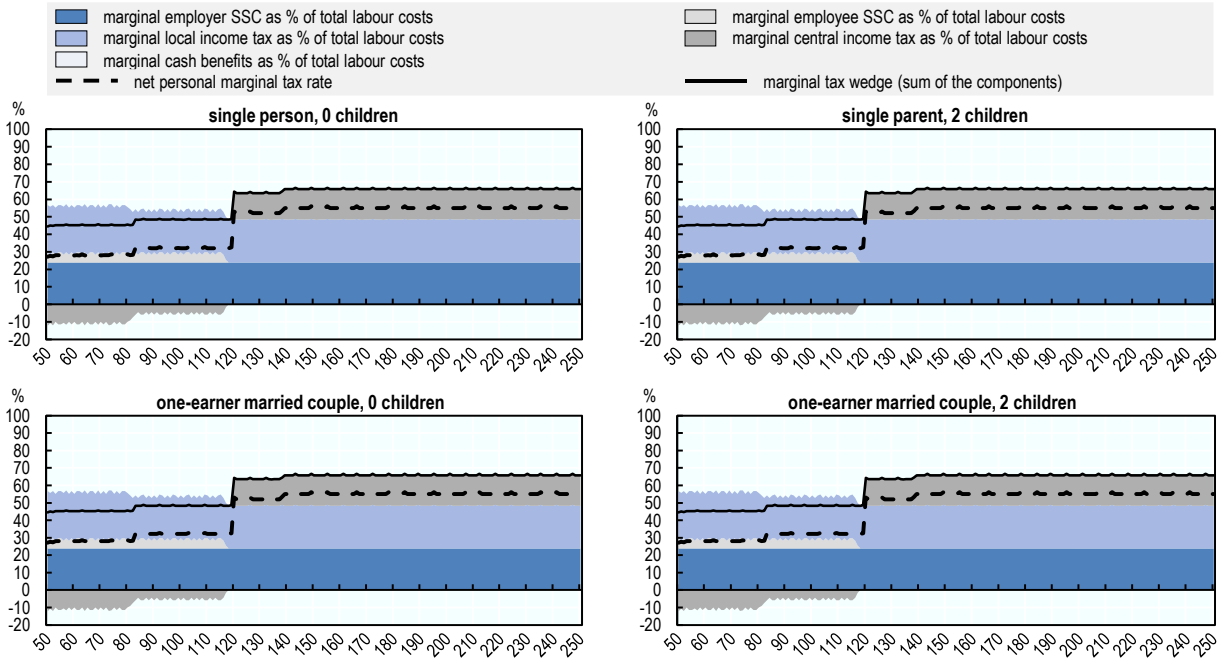
Sweden 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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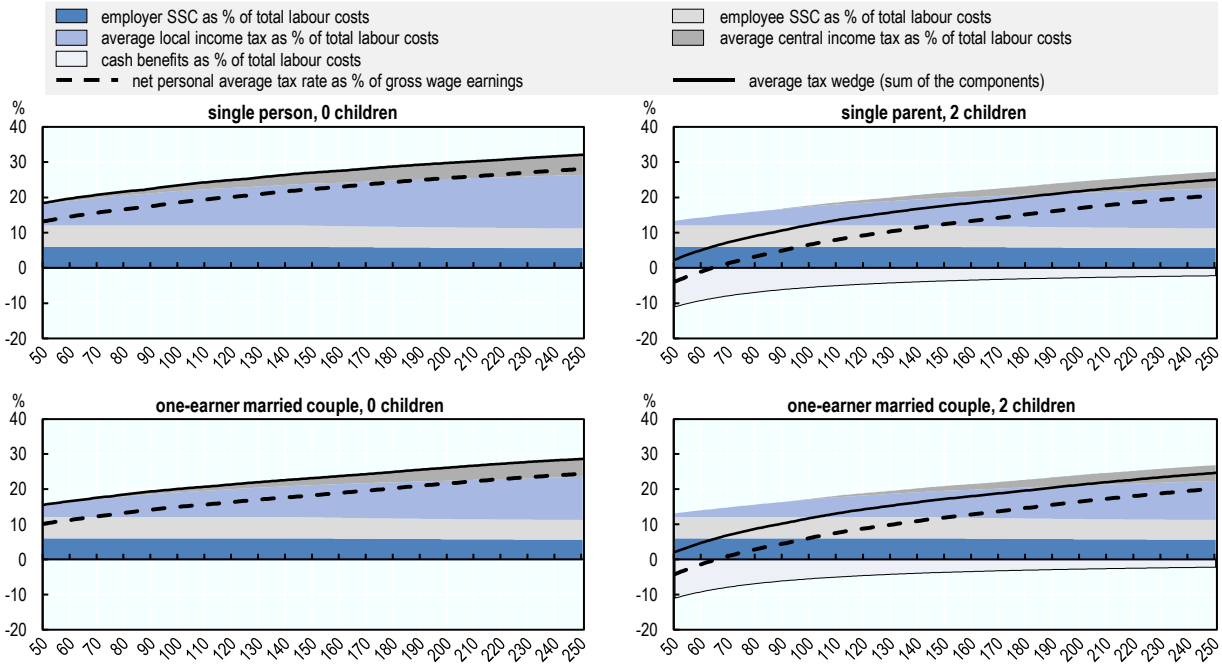
Switzerland 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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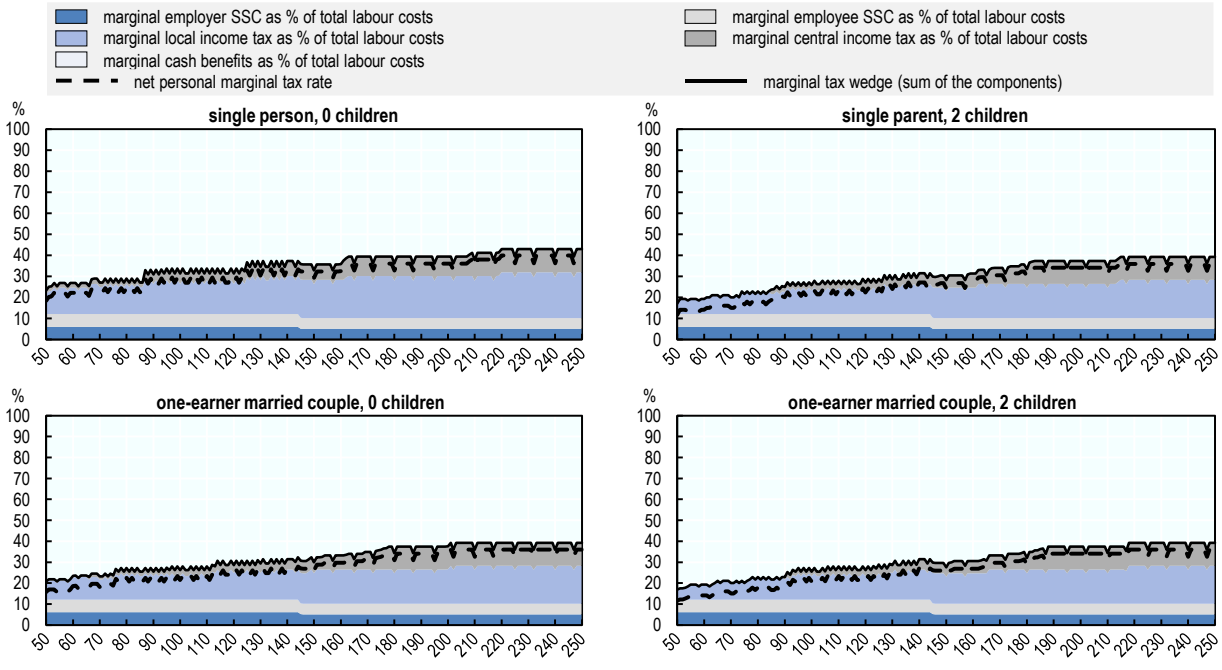
Switzerland 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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Türkiye 2023: average tax wedge decomposition

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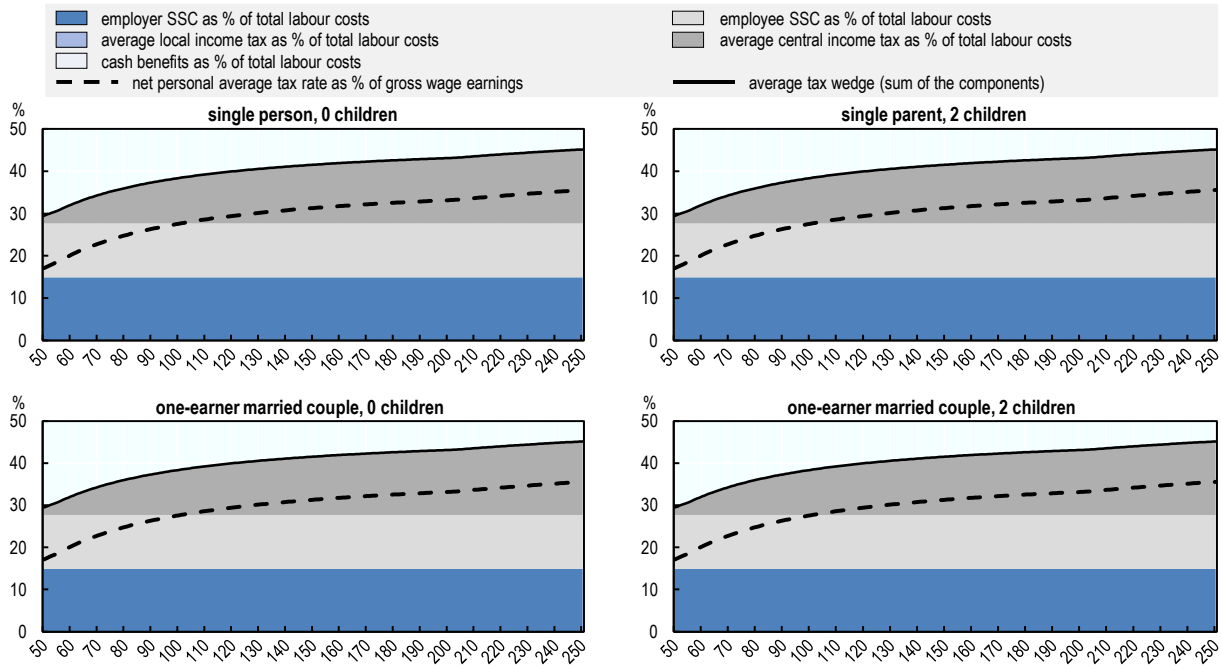

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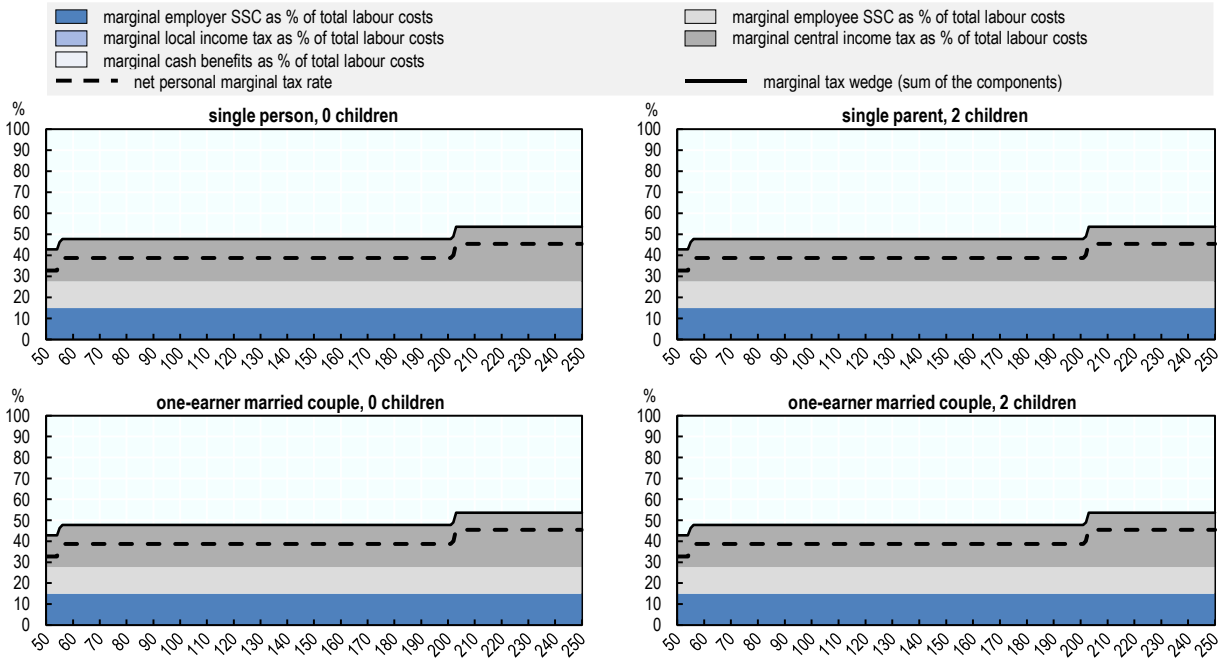
Türkiye 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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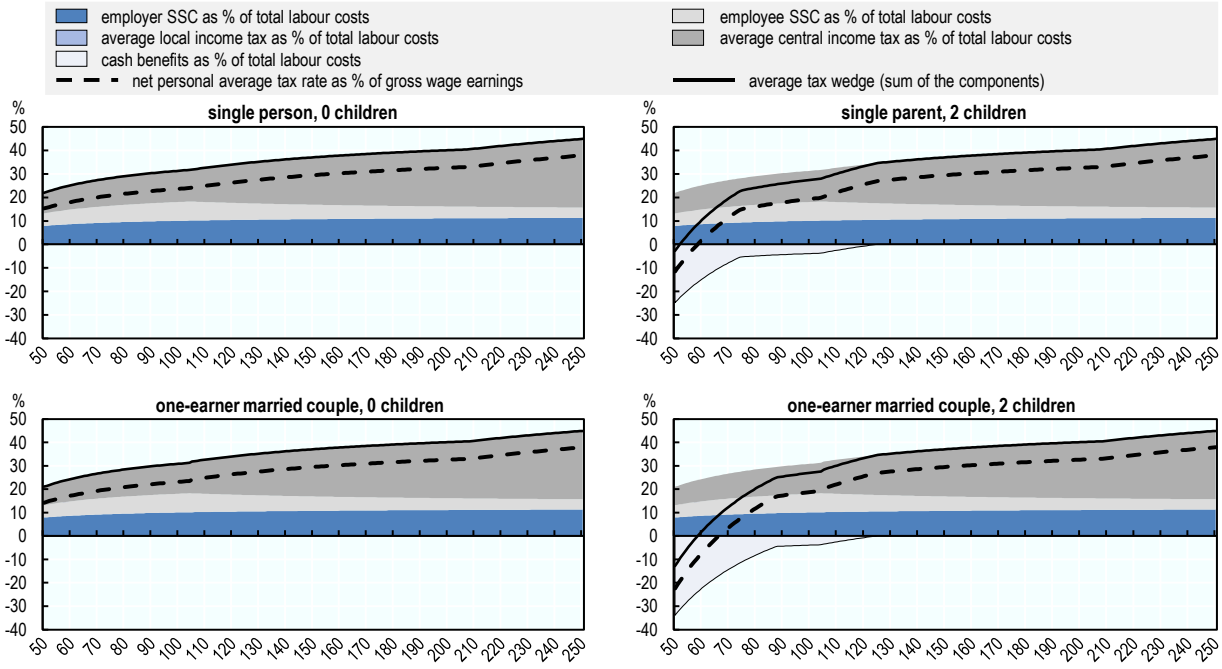
United Kingdom 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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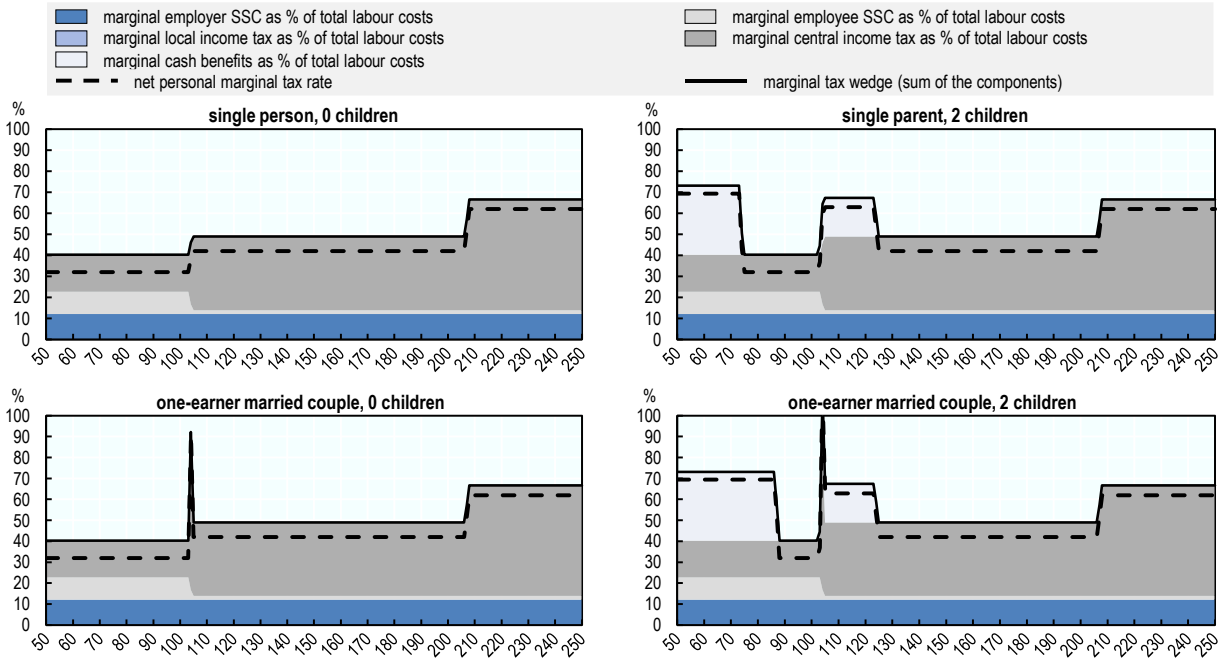
United Kingdom 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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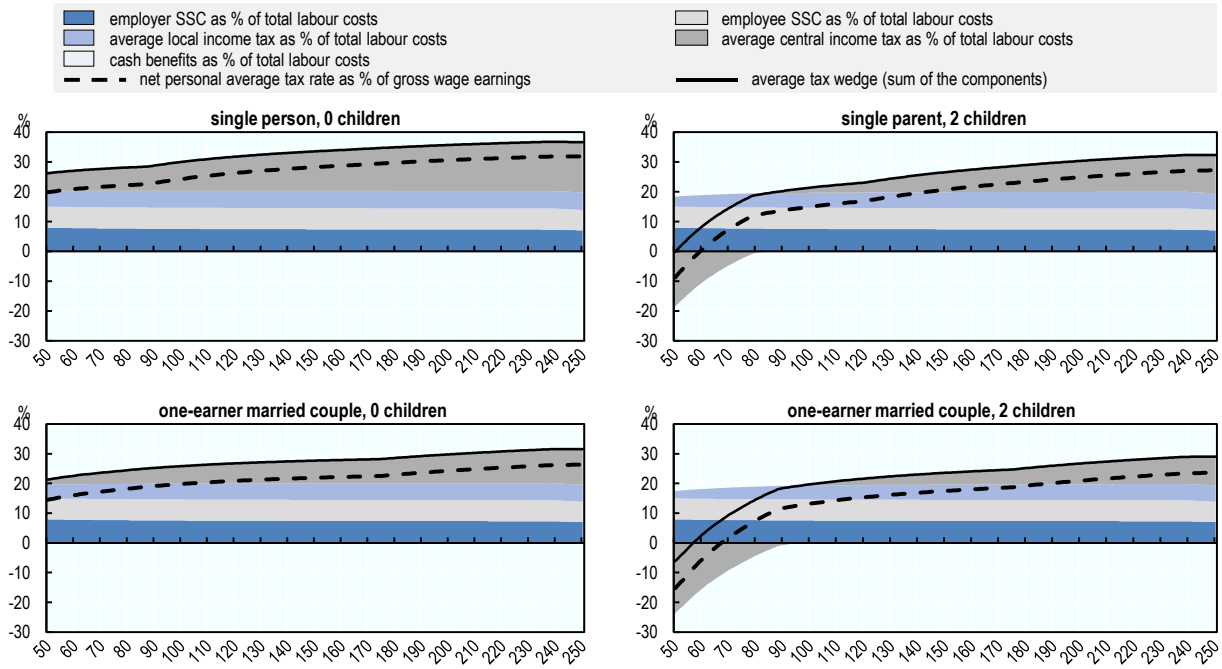
United States 2023: average tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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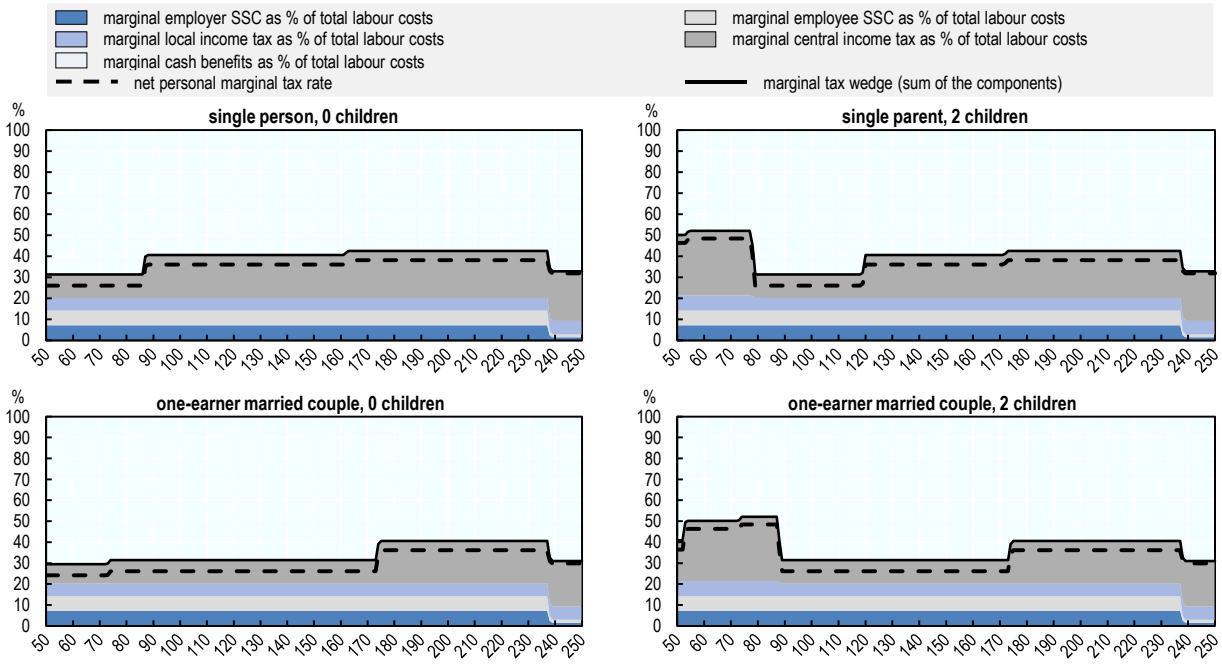
United States 2023: marginal tax wedge decomposition

by level of gross earnings expressed as a % of the average wage



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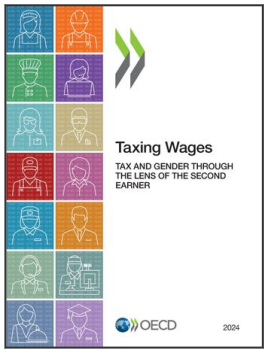
Notes

[1] The marginal tax wedges in the graphs are calculated in a slightly different manner than the marginal tax rates that are included in the rest of the *Taxing Wages* publication. In *Taxing Wages*, marginal rates are usually calculated by increasing gross earnings by one currency unit (except for the spouse in the one-earner married couple whose earnings increase by 67% of the average wage). However, the '+1 currency unit' approach requires the calculation of marginal rates for every single currency unit within the income range included in the graphs. It otherwise would not be correct to draw a line through the different data points because the data for the income levels in between the different points would be missing. In order to reduce the required number of calculations, the marginal rates that are shown in the graphs are calculated by increasing gross earnings by 1 percentage point – each line in the graph therefore consists of 200 data points – instead of 1 currency unit.

[2] Although it is not visible on the charts, the central government income tax was negative for income levels below 47% of the AW for the single parent and the couple with or without children.

[3] In Colombia, the general social security system for healthcare is financed by public and private funds. The pension system is a hybrid of two different systems: a defined contribution, fully-funded pension system; and a pay-as-you-go system. Each of those contributions is mandatory and more than 50% of total contributions are made to privately managed funds. Therefore, they are considered to be non-tax compulsory payments (NTCPs) (further information is available in the country details in Part II of the report). In addition, in Colombia, all payments for employment risk are made to privately managed funds and are considered to be NTCPs. Other countries also have NTCPs (please see http://www.oecd.org/tax/tax-policy/tax-database.htm#NTCP).



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Tax and Gender through the Lens of the Second Earner

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