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Effects of Tax-Benefit Policy Changes across the Income Distributions of the EU-28 countries: 2018-2019

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Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2018-2019*

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For Belgium, Bulgaria, Denmark, Germany, Spain, France, Ireland, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, the Netherlands, Portugal, Romania, Finland and Sweden we make use of micro-data from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat (259/2018-EU-SILC-LFS). For Czech Republic, Estonia, Luxembourg, Poland and Slovenia we use the Eurostat EU-SILC together with national variables provided by respective national statistical offices. For Greece, we use the national version of the EU-SILC. For Italy, Austria and the Slovak Republic we use the national SILC data made available by respective national statistical offices. For the UK we use Family Resources Survey data made available by the Department of Work and Pensions via the UK Data Service. The usual disclaimers apply.

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Introduction

This paper provides a short country-by-country harmonised analysis - using EUROMOD[1] - of the distributional effects on household disposable income of direct tax and cash benefit policy changes between 2018 and 2019. It is the latest in this series of reports, available as EUROMOD working papers, produced annually on the public release of an updated EUROMOD. At the same time, last year's equivalent report - covering policy changes between 2017 and 2018 - has also been revised to account for the availability of more recent input micro-data, model extensions and corrections and finalised HICP values for 2018.[2]

In this paper, we show how changes (or non-changes) in tax-benefit policies have affected household incomes, abstracting from changes in the population characteristics (e.g. increased unemployment) and the distribution of market/original gross incomes in the years under consideration.[3] The tax-benefit policies in a given year refer to those that applied on 30th of June.

For each country of the EU-28 a standard table and figure show the policy effects measured in real terms by policy component and income decile group, where income is household disposable income equivalised using the modified OECD scale (1:0.5:0.3). In Table 1 and Figure 1 for each country the first-order policy effect is estimated as the difference between simulated household disposable incomes under 2019 tax-benefit policies (deflating the tax-benefit monetary parameters back to 2018 by the Harmonized Index of Consumer Prices, HICP) and household disposable incomes simulated under 2018 policies. The difference is expressed as a percentage of mean household disposable income in 2018. The population is ranked into decile groups based on their equivalised household disposable income in 2018 and the effect is shown for each decile group as well as the population as a whole, based on each person's equivalised household disposable income. The total policy effect on household disposable incomes is decomposed into the following components: public pensions, means-tested benefits, non-means-tested benefits, employee and self-employed social insurance contributions (SIC) and direct taxes. We isolate the direct policy effect from changes in market/original income, which are held constant in our analysis and shown in the tables and figures as unchanging. Note that the scale used for Figure 1 differs across countries.

Projected values for HICP are shown in Table A below. In contrast to previous years, inflation is no longer very low (or negative) across the board and so some of the policy effects seen in some countries may arise in part due to a lack of indexation of tax thresholds, benefit levels or pensions payments. Given that the values are projections and were calculated before statistics on the whole year were available, the provisional nature of the indexes is something that the reader should bear in mind.

For most countries, the analysis makes use of micro-data from the EU Statistics on Income and Living Conditions (EU-SILC) for 2017 with market incomes updated to the starting year in each analysis -

[1] For more information about EUROMOD see Sutherland and Figari (2013) and www.euromod.ac.uk.

[2] EUROMOD, 2019, "Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2017-2018" EUROMOD Working Paper EM7/19 Colchester: ISER, University of Essex.

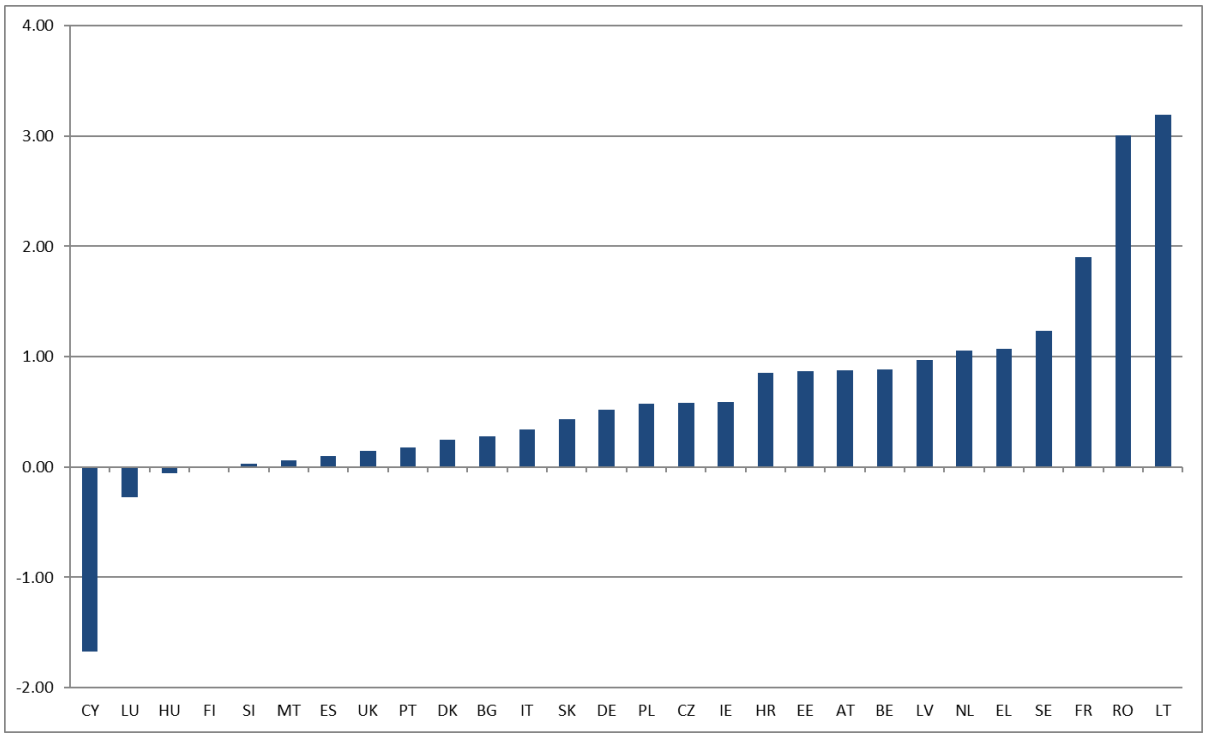
[3] The full methodology used to estimate the effects of tax-benefit policy changes is described in Section 2 of De Agostini, P., A. Paulus and I. Tasseva, 2016, "The effect of changes in tax-benefit policies on the income distribution in 2008-2015" EUROMOD Working Paper EM6/16 Colchester: ISER, University of Essex. For general framework, see A. Paulus and I. Tasseva, 2018, "Europe Through the Crisis: Discretionary Policy Changes and Automatic Stabilisers", EUROMOD Working Paper EM 16/18, Colchester: ISER, University of Essex.

2018. For the UK we make use of data from the Family Resources Survey (FRS) for 2016/2017 with market incomes updated to 2018.

Results and a cross-country summary

Figure A summarises the policy effect on average household disposable income across all EU-28 countries. The effect ranges from a decrease of 1.67% of household income in Cyprus to an increase of 3.19% of household income in Lithuania.

Figure A: Change in household disposable income (%) as a result of policy effects 2018-2019, using HICP indexation



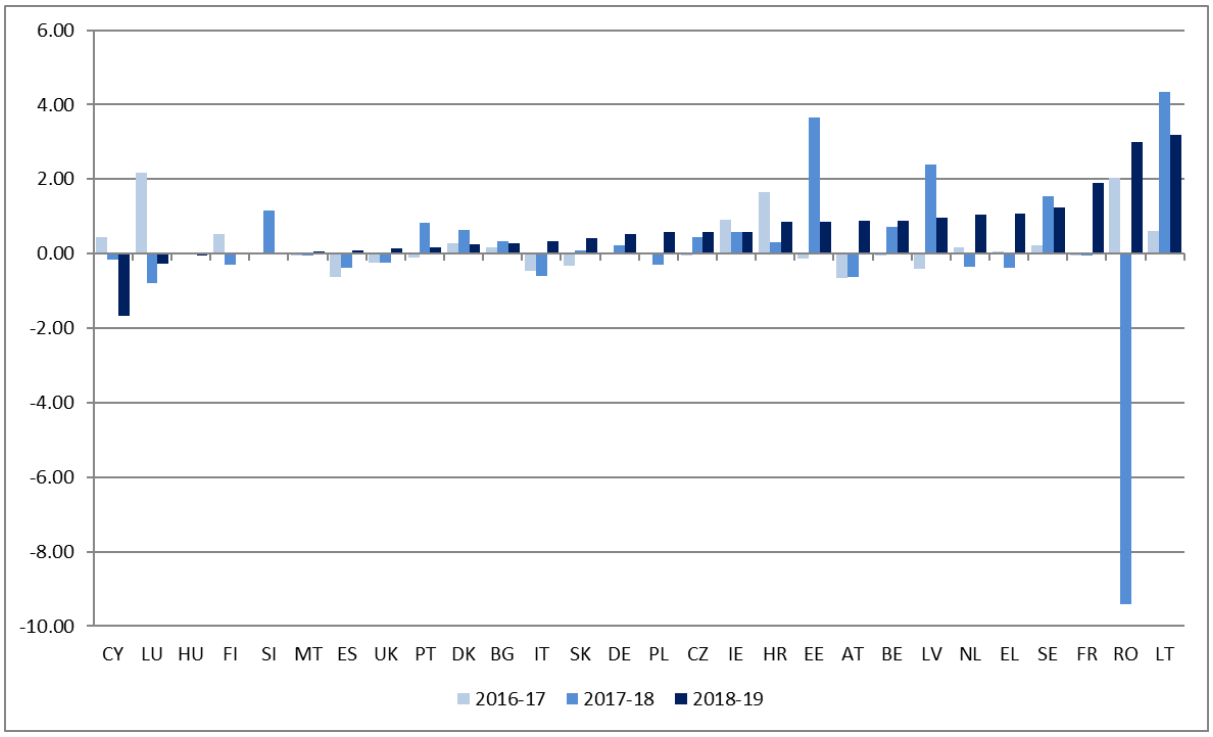
In the following section, policy effects are described and accounted for on a country-by-country basis - with a short commentary explaining the effects shown in terms of the policy reforms that are captured by the analysis and the extent of indexation, relative to inflation. However, to place both the range in effect across the countries (a little less than 5 percentage points) and the individual figures for Cyprus and Lithuania in the context of recent years, Figure B provides the equivalent information for each of the last three years.

Of the three periods analysed, the effects on household incomes attributable to policy changes in 2018-2019 are, almost across the board, positive. In contrast to previous years, only four countries saw a drop in incomes due to reforms in their tax-benefit system and in two cases, this loss was almost negligible. For seven countries, policy changes have delivered three consecutive years of growth in household incomes and, whilst Estonia and Latvia are not amongst those seven, when taken together,

the Baltic states can be categorised as having seen the strongest income growth attributable to policy change in any sub-region over the past three years.

In particular, Lithuania has seen the largest policy-related % income growth for the past two years. For 2018-2019, this has been due mainly to the newly introduced pension bonuses for those on the lowest pensions, as well as a generous indexation. Alongside that, more generous child benefits have had a positive impact on household incomes at the lower end of the income distribution.

Figure B: Change in household disposable income (%) as a result of policy effects 2016-2017, 2017-2018 and 2018-2019, using HICP indexation



The distributional effects across all the EU-28 countries due to policy changes between 2018-2019 are summarised in Figure C, breaking down the change into that for each decile group. The figures are not all drawn to the same scale but in each case the interval between gridlines is the same: 0.5%.

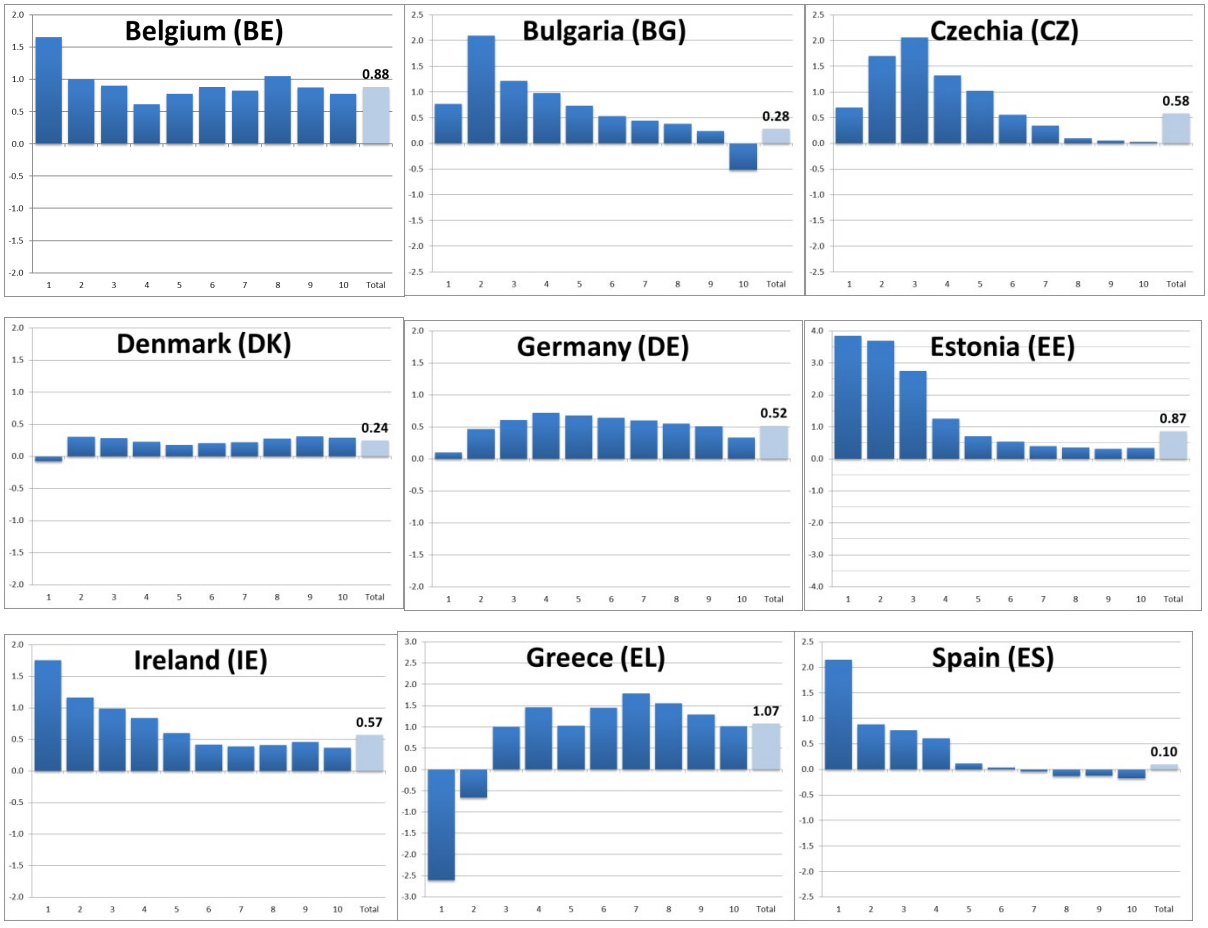
As per previous years, if we were to classify these distributions by type, the modal category would be an effect that is progressive (increases in income worth more, or decreases worth less, as a % of household income at lower incomes than at higher incomes). This description would fit around half the EU countries. For three countries in this group - Italy, Lithuania and Romania - income growth is particularly strong (greater than 5%) in the first few deciles. We have already described the policy drivers for this in Lithuania but for Italy, where the first income decile has experienced growth greater than 20%, the *Reddito di Cittadinanza* (a new guaranteed minimum income) accounts for almost all income growth on its own. For Romania, income growth of around 8% in the poorest deciles is most likely attributable to more generous child benefits.

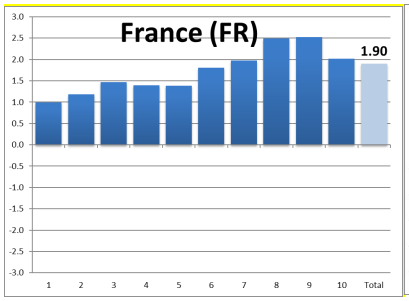
For seven countries, the effect of policy changes can be described as regressive, though very mildly in the case of Finland.

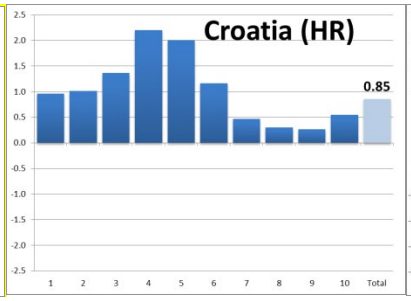
As usual, there are also several cases where an overall pattern is not easy to discern: some countries tend towards a U-shaped distribution with middle incomes doing less well (Cyprus), others towards an inverted U-shape (most obviously Croatia but also Germany and the Netherlands where the curve is much shallower), and others show gains/losses shared (broadly) equally across the income deciles (Denmark, perhaps also Belgium).

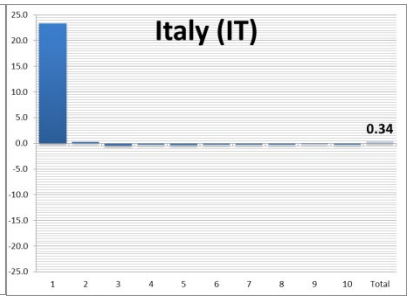
In all cases, it is worth reading the country summary in the next section to better understand the particular drivers of income change at different parts of a country's income distribution.

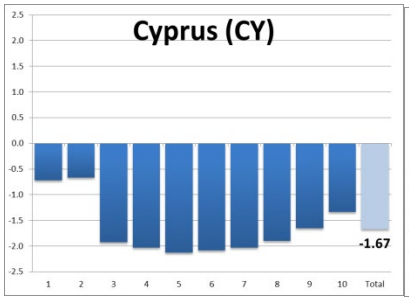
Figure C: Change in household disposable income (%) by income decile group as a result of policy effects 2018-2019, using HICP indexation

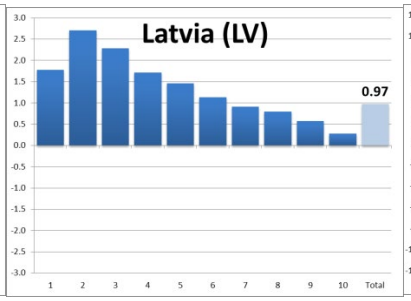


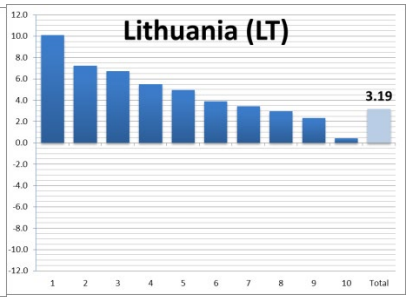

France (FR)
1.90

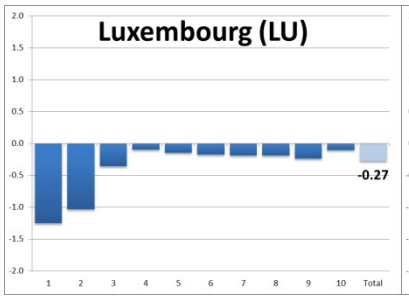

Croatia (HR)
0.85

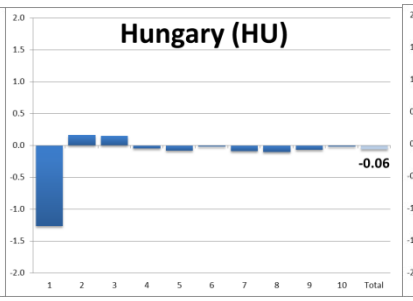

Italy (IT)
0.34

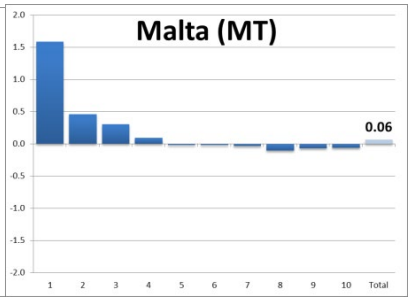

Cyprus (CY)
-1.67

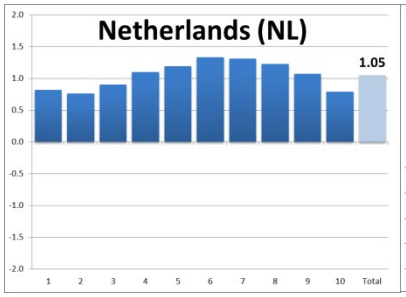

Latvia (LV)
0.97

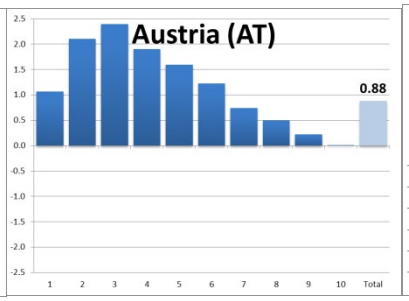

Lithuania (LT)
3.19

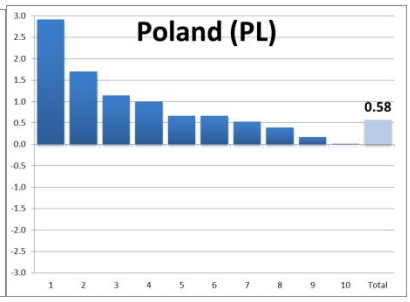

Luxembourg (LU)
-0.27

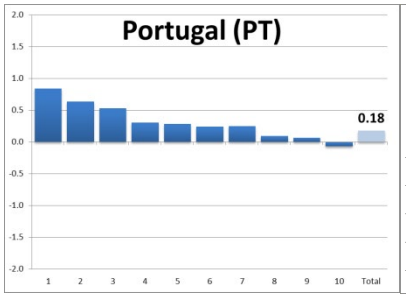

Hungary (HU)
-0.06

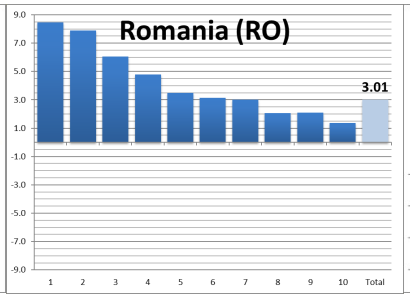

Malta (MT)
0.06

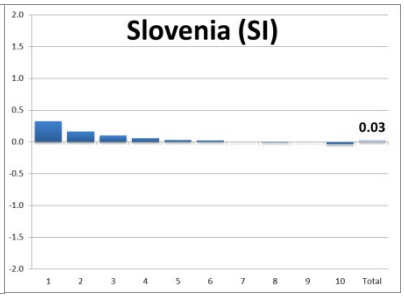

Netherlands (NL)
1.05

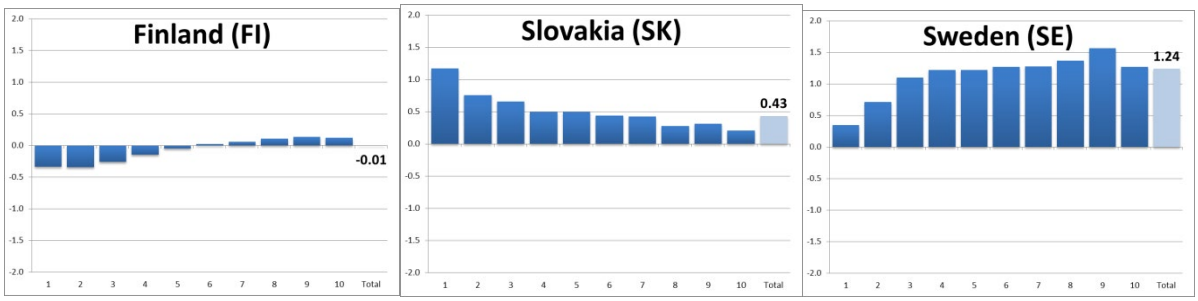

Austria (AT)
0.88

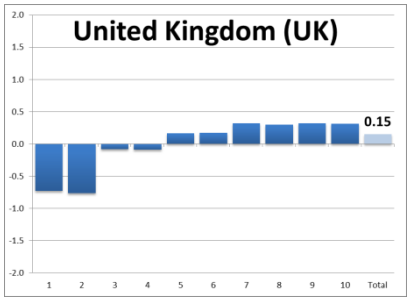

Poland (PL)
0.58


Portugal (PT)
0.18


Romania (RO)
3.01


Slovenia (SI)
0.03





Interpreting the results

First, the reader is reminded of four features of this analysis that may differ from other analysis, and which should be borne in mind when interpreting the results.

- In some countries there were no changes to policies in nominal terms. However, when measured in real terms if the HICP is increasing, usually this will appear as a loss to households (a reduction in benefit or increase in tax or contribution).
- In some countries there were changes to public sector wages that other analysis of public policy changes might include. In this analysis we hold all wages constant and do not include the distributional effect of real changes to public sector wages, nor to the interaction between these changes and the tax-benefit system.
- For all countries, these results do not show the direct effect of any change to the minimum wage (though note that indirect effects may be seen where benefits are anchored to the minimum wage).
- In some countries, increases in social assistance and similar benefits (or the introduction of new benefits) may not have the effects shown at the bottom of the income distribution if take-up turns out to be incomplete (though note below that adjustments for this are made in some countries).

Secondly, the analysis is carried out with the aim of providing a harmonized and comparable analysis for each of the countries of the EU-28. However, there are some aspects of the modelling and data which may differ across countries and the results should be interpreted with this possibility in mind. They include:

- Approximate adjustments for the non take-up of benefits are made in several countries for some benefits but not in others. Approximate adjustments for tax evasion are made in Bulgaria, Greece,

Italy and Romania, but not in other countries.[4] It is not possible to simulate all policies because of a lack of necessary information in the micro-data (i.e. EU-SILC, and FRS for the UK). There is some difference in the extent of simulation across countries. If policies cannot be simulated their values are uprated by indexes that capture the typical or average change in value between the two policy years, based on statutory indexation where this exists and has been applied.

- Pensions are not simulated in most cases and these are uprated using statutory uprating (where this exists) or using an index of average pension payments. This difference in uprating treatment may result in conceptual differences in the policy effect attributed to pensions in this analysis. In some cases, where average pension payments are used to uprate observed pension values, the results may capture changes in the composition of pensioners (e.g. a higher proportion of younger/older pensioners with higher or lower pensions) which may result in (small) changes in pensions appearing in the analysis even if pensions in payment were in fact indexed for inflation.
- In some cases other non-simulated short-term contributory benefits (e.g. to cover sickness, unemployment or maternity) have been assumed to rise in line with earnings in the previous year.[5] This may imply a higher rate of growth than inflation (and appear as an increase in benefit) even if there have been no policy changes to these benefits in the year in question.

For more information on how each country is treated in EUROMOD see the Country Reports.[6]

[4] See Tammik (2019) for detail on which countries adjust for benefit non take-up and which adjust for tax evasion and the approach they take.

[5] This assumption is usually made where benefits are a function of past earnings, for which data are not available in the EU-SILC.

[6] https://www.euromod.ac.uk/using-euromod/country-reports

Change in prices 2018-2019

Table A shows the value of the change in (projected) HICP for each country. Projections employ the DG ECFIN indicator ZCPIH.

Table A: Harmonized Index of Consumer Prices (HICP), 2019

Country	HICP
Belgium	1.018
Bulgaria	1.020
Czech Republic	1.024
Denmark	1.013
Germany	1.015
Estonia	1.024
Ireland	1.009
Greece	1.008
Spain	1.011
France	1.013
Croatia	1.010
Italy	1.008
Cyprus	1.009
Latvia	1.028
Lithuania	1.021
Luxembourg	1.018
Hungary	1.033
Malta	1.018
The Netherlands	1.025
Austria	1.018
Poland	1.018
Portugal	1.011
Romania	1.036
Slovenia	1.018
Slovak Republic	1.024
Finland	1.014
Sweden	1.015
United Kingdom	1.020

Source: http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm.

Belgium

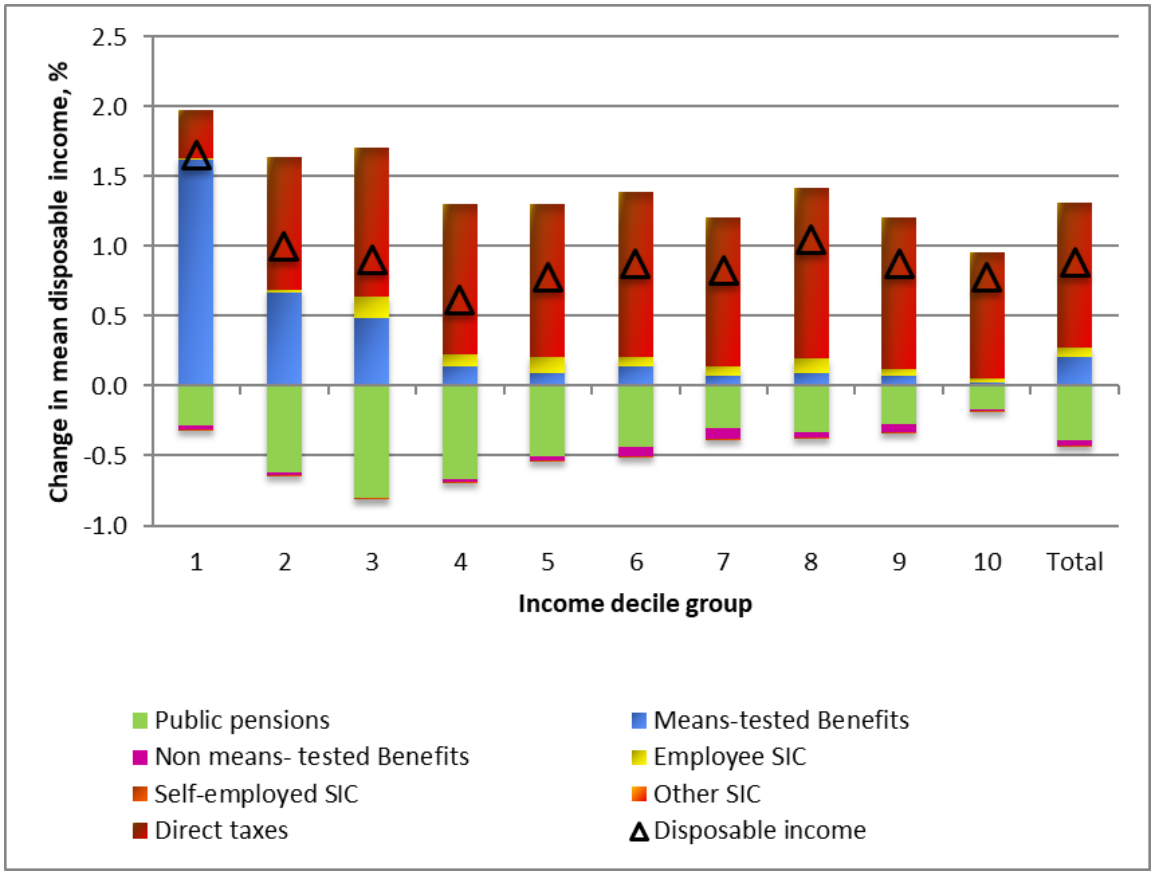
On average, the policy changes between 2018 and 2019 resulted in a 0.88% increase in the mean disposable income of the population and had a positive impact throughout the income distribution. Overall, the changes were of a progressive character. The large increase in the tax-free allowance from €7,430 to €8,860, is the main driver for the positive changes in all deciles. The impact of changes to direct taxation for the lowest decile is lower because the extra tax allowance for low taxable incomes was removed. There is an income reduction due to public pensions in all deciles, in this case most likely because we assume that the increase in pensions will be the same as it was in 2018 due to the lack of data for 2019. The positive effect from changes in means-tested benefits is due to the fact that child benefits and social assistance were uprated in September 2018 because the main inflation index (in Dutch: the 'spilindex'), used to determine when all social benefits need to be increased, had reached its 2% threshold. Therefore, social benefits were automatically adjusted for inflation, by the same 2%. The impact of means-tested benefits is higher for the lowest deciles. This is mainly caused by the fact that the 2019 system contains the study allowances, which are awarded to households under certain income thresholds, and by the reform of the child benefits.

Table 1 (Belgium): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested Benefits	Non means-tested Benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.29	1.62	-0.03	0.02	0.00	0.00	0.34	**1.66**
2	0.00	-0.62	0.66	-0.02	0.02	0.00	0.00	0.95	**1.00**
3	0.00	-0.80	0.48	-0.01	0.15	0.00	0.00	1.07	**0.90**
4	0.00	-0.67	0.14	-0.02	0.09	0.00	0.00	1.08	**0.62**
5	0.00	-0.51	0.09	-0.02	0.11	0.00	0.00	1.10	**0.78**
6	0.00	-0.43	0.14	-0.07	0.07	0.00	0.00	1.17	**0.88**
7	0.00	-0.30	0.07	-0.07	0.07	0.00	0.00	1.07	**0.83**
8	0.00	-0.33	0.09	-0.03	0.10	0.00	0.00	1.23	**1.05**
9	0.00	-0.27	0.07	-0.06	0.05	0.00	0.00	1.09	**0.88**
10	0.00	-0.17	0.02	-0.01	0.03	0.00	0.00	0.90	**0.78**
Total	**0.00**	**-0.39**	**0.21**	**-0.03**	**0.07**	**0.00**	**0.00**	**1.04**	**0.88**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Belgium): Policy effects in 2018-2019, using the CPI-indexation, %



Bulgaria

As can be seen from the table, in 2018-19 household disposable incomes increased on average by 0.28% in real terms. This effect is mainly a result of pension indexation (3.8% as of 1 July 2018) and lump-sum pension supplements paid in December 2018 and April 2019 (BGN 40 paid to pensioners whose pensions are below the national poverty line of BGN 348 per month). While these policy changes affected all income groups, their effect is considerably stronger for households placed at the bottom of the income distribution. This can be explained by the fact that pensioners are concentrated in lower-income households and middle- and higher-income households are represented mainly by people actively participating in the labour market and receiving employment incomes.

In that context, the first four decile groups benefited the most from the pension indexation. Their disposable income measured in real terms rose by 1.27% (first decile), 2.15% (second decile), 1.31% (third decile) and 1.00% (fourth decile). The effect for other deciles tends to decrease gradually as household disposable income rises.

In 2018-19 there were no significant changes regarding non means-tested and means-tested benefits. Policy rules shaping entitlement to the main contributory benefits, i.e. maternity benefits and unemployment benefit, remained unchanged. Nor were the statutory amount of the contributory maternity benefit for bringing up a child up to the age of 2 *(обезщетение за отглеждане на дете до 2г.)*, and the minimum (BGN 9.00 per day) and maximum (BGN 74.29 per day) amounts of the unemployment benefit uprated.

The same goes for means-tested benefits where both eligibility conditions and applicable income thresholds were not modified. No policy changes were introduced in the field family allowances, which represent the largest component of the means-tested non-contributory benefits. Both income thresholds and statutory amounts of individual allowances were not uprated compared to 2018. The Guaranteed Minimum Income (GMI), serving as a base for calculating the amount of monthly social assistance allowances and access to social assistance, stayed at its 2018-level of BGN 75 per month.

These developments explain why the contribution of means-tested benefits to dynamics of the household disposable income in real terms is negative for the households to which these benefits are actually paid, with the households from first decile group experiencing the largest decline. The households at the top of income distribution were not affected as the incidence of means-tested benefits in these households is completely insignificant. For all households the effect is negative but close to zero (-0.04%).

The effect of non means-tested benefits for all households is also close to zero (0.03%) and is negligible for all decile groups.

Policy changes in social contributions and taxes influenced negatively the dynamics of household disposable income both in nominal and real terms. There are some reasons for these results. On the one hand, the monthly minimum wage rose from BGN 510 in 2018 to BGN 560 (as of 1 January 2019). Considering the fact that there is no non-taxable income threshold, the mentioned increase of monthly minimum wage resulted in higher social security contributions and income taxes to be paid by low-paid employees. On the other hand, compared to 2018, as of 1 January 2019 the amounts both of the statutory minimum insurable income for self-employed and statutory maximum insurable income were increased, from BGN 510 to BGN 560 and from BGN 2 400 to BGN 3 000 respectively. These developments explain the observed decrease in the household disposable income caused by the employee and self-employed social insurance contributions. The decrease is significantly higher for the households representing tenth decile (-0.40% in real terms for employee and -0.28% in real terms for self-employed), mainly because of the change in the statutory maximum insurable income.

The spike in the maximum insurable income, however, lowered the tax base for the highest-income households. This is because income taxes are paid after deducting social insurance contributions from

the gross income. For that reason, policy changes in direct taxes had a low, yet positive, effect on disposable incomes of the households from ninth and tenth decile (0.01 and 0.07% respectively).

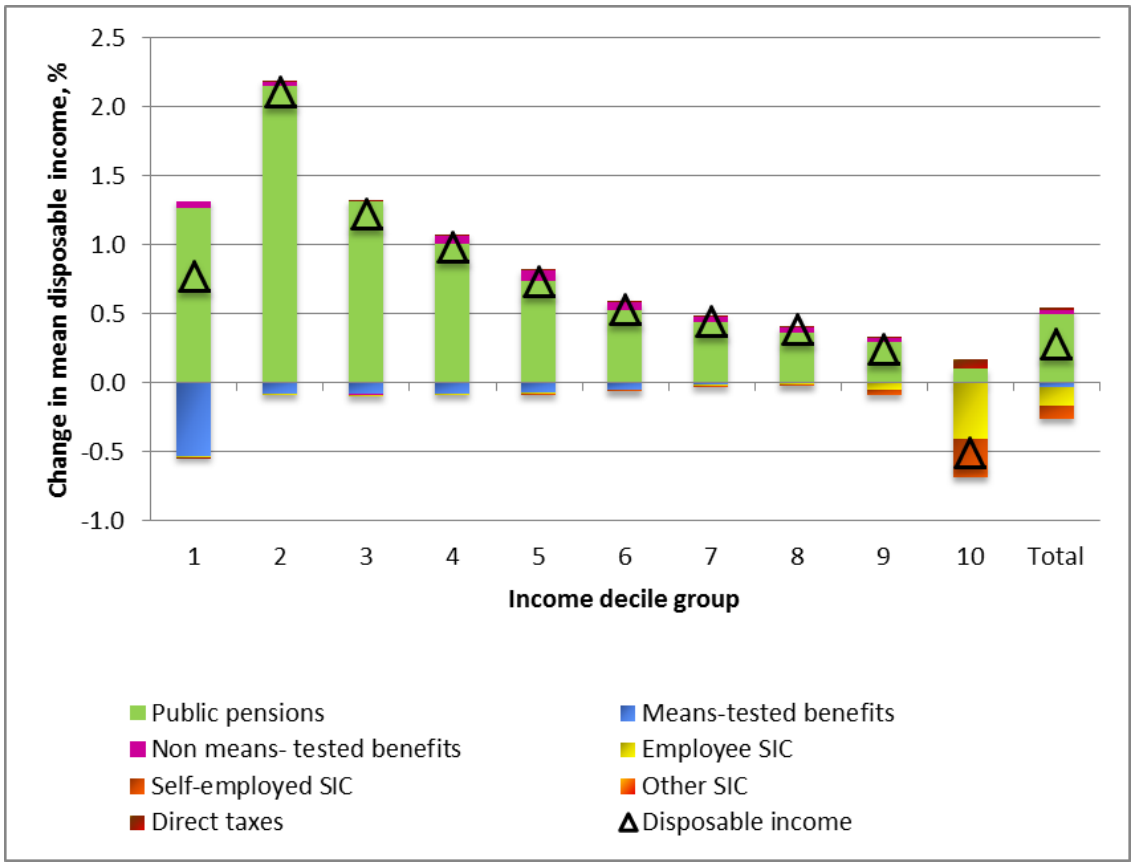
To conclude, it seems that the overall effect of policy developments in 2018-19 tends to benefit the households from the bottom of the income distribution. Nevertheless, the increase is not so high. The main driver of these effects is the pension indexation which influenced positively the disposable incomes in real terms of all households. Despite that fact, the effect of pension indexation was lowered by the lack of changes in the means-tested and non-means tested benefits to take into account the consumer prices dynamics. In addition, recent changes in social insurance contributions regime, mainly the introduction of higher social insurance thresholds, caused a small decline in the disposable income of households at the very top of income distribution.

Table 1 (Bulgaria): Policy effects in 2018-19, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	1.27	-0.54	0.05	-0.01	0.00	0.00	0.00	**0.77**
2	0.00	2.15	-0.08	0.03	0.00	0.00	0.00	0.00	**2.10**
3	0.00	1.31	-0.08	0.00	0.00	0.00	0.00	0.00	**1.22**
4	0.00	1.00	-0.08	0.05	0.00	0.00	0.00	0.00	**0.97**
5	0.00	0.74	-0.08	0.07	-0.01	0.00	0.00	0.00	**0.73**
6	0.00	0.52	-0.05	0.06	-0.01	0.00	0.00	0.00	**0.53**
7	0.00	0.44	-0.02	0.03	-0.01	-0.01	0.00	0.00	**0.44**
8	0.00	0.36	0.00	0.04	-0.01	-0.01	0.00	0.00	**0.38**
9	0.00	0.30	0.00	0.03	-0.05	-0.04	0.00	0.01	**0.24**
10	0.00	0.10	0.00	0.00	-0.40	-0.28	0.00	0.07	**-0.51**
Total	**0.00**	**0.49**	**-0.04**	**0.03**	**-0.13**	**-0.09**	**0.00**	**0.02**	**0.28**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Bulgaria): Policy effects in 2018-19, using CPI-indexation, %



Czechia

Overall, the real disposable income of the population as impacted by tax and benefit policy change increased by 0.58% between years 2018 and 2019. The largest increase in disposable income was in the third decile (by 2.06%), while the lowest and higher deciles gained less (0.7% in the first decile, 1.7% in the second decile, 1.33% in the fourth, etc.). Individuals in the highest deciles experienced the smallest increase in disposable income.

The driving force behind the increase in disposable incomes was an increase in public pensions. This increase was part of a yearly valorization of pensions, but it was much more generous this year (in 2019, Czech pensioners experienced the highest increase in public pensions in the last 20 years). This valorization affected all income deciles, but mostly the first fourrth deciles, where most pensioners are concentrated.

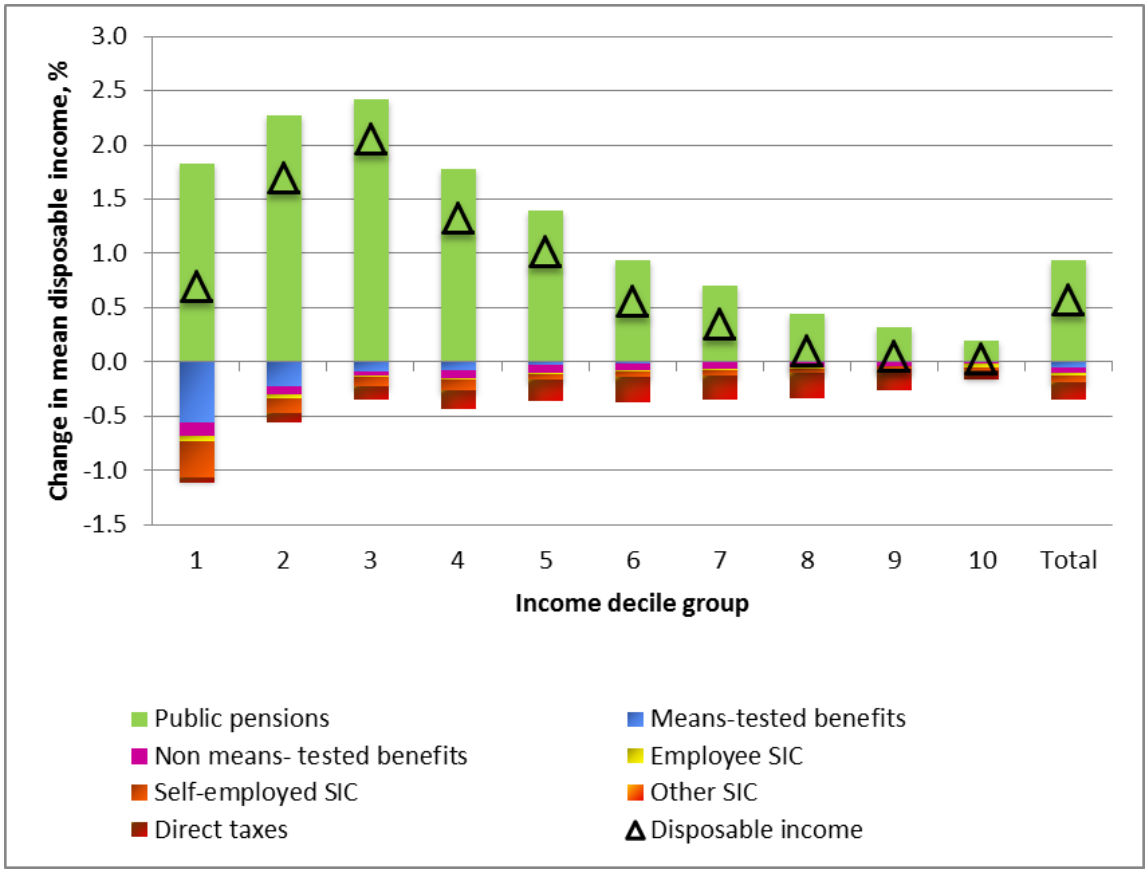
However, the bottom deciles (especially the first) also suffered net losses in disposable income due to lower amount of means-tested benefits. Since pensions are part of the income that is used to calculate the eligibility for most means-tested benefits, it makes sense that higher pensions lead to lower amount of means-tested benefits. Another factor decreasing the bottom deciles' incomes were higher payments to SIC by self-employed and employees. This was likely caused by higher minimum contribution bases for social and health insurance. Another important change was an increase in direct taxes, which was experienced by all deciles, but especially by the higher ones. Increase in direct taxes is likely caused by the fact that wages have grown steadily in the past years, but the tax credits are defined in absolute amounts and have not been valorized for many years.

Table 1 (Czech Republic): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	1.82	-0.56	-0.13	-0.06	-0.32	0.00	-0.05	**0.70**
2	0.00	2.26	-0.23	-0.07	-0.04	-0.13	0.00	-0.09	**1.70**
3	0.00	2.41	-0.09	-0.04	-0.02	-0.08	0.00	-0.12	**2.06**
4	0.00	1.77	-0.08	-0.07	-0.02	-0.09	0.00	-0.18	**1.33**
5	0.00	1.39	-0.03	-0.07	-0.01	-0.05	0.00	-0.20	**1.02**
6	0.00	0.93	-0.02	-0.06	-0.01	-0.05	0.00	-0.23	**0.56**
7	0.00	0.70	-0.01	-0.06	-0.01	-0.04	0.00	-0.23	**0.35**
8	0.00	0.43	0.00	-0.05	-0.01	-0.03	0.00	-0.24	**0.10**
9	0.00	0.32	0.00	-0.04	-0.01	-0.02	0.00	-0.20	**0.05**
10	0.00	0.20	0.00	-0.02	-0.03	-0.02	0.00	-0.10	**0.03**
Total	**0.00**	**0.94**	**-0.06**	**-0.05**	**-0.02**	**-0.06**	**0.00**	**-0.17**	**0.58**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Czech Republic): Policy effects in 2018-2019, using the CPI-indexation, %



Denmark

The total effect of (deflated) 2019 policies on mean income is relatively small (0.24%). No major reforms have taken place from 2018 to 2019. There has been an increase in the income dependence parameters for old-age pension supplement, and also in the calculation of the pension-supplement rate. The changes in how to calculate the direct taxation has continued mostly to be beneficial for the upper part of the income distribution. On the contrary, lower deciles gain mostly by the increase in public pension, as indexation of pensions was higher than growth in HICP. The larger effect at the bottom of the income distribution likely reflects where most of pensioners are located.

In terms of changes attributable to benefit reform, there is only a very small income decrease via means-tested benefits (-0.04%) and a an even smaller increase of 0.02% via non-mean tested benefits.

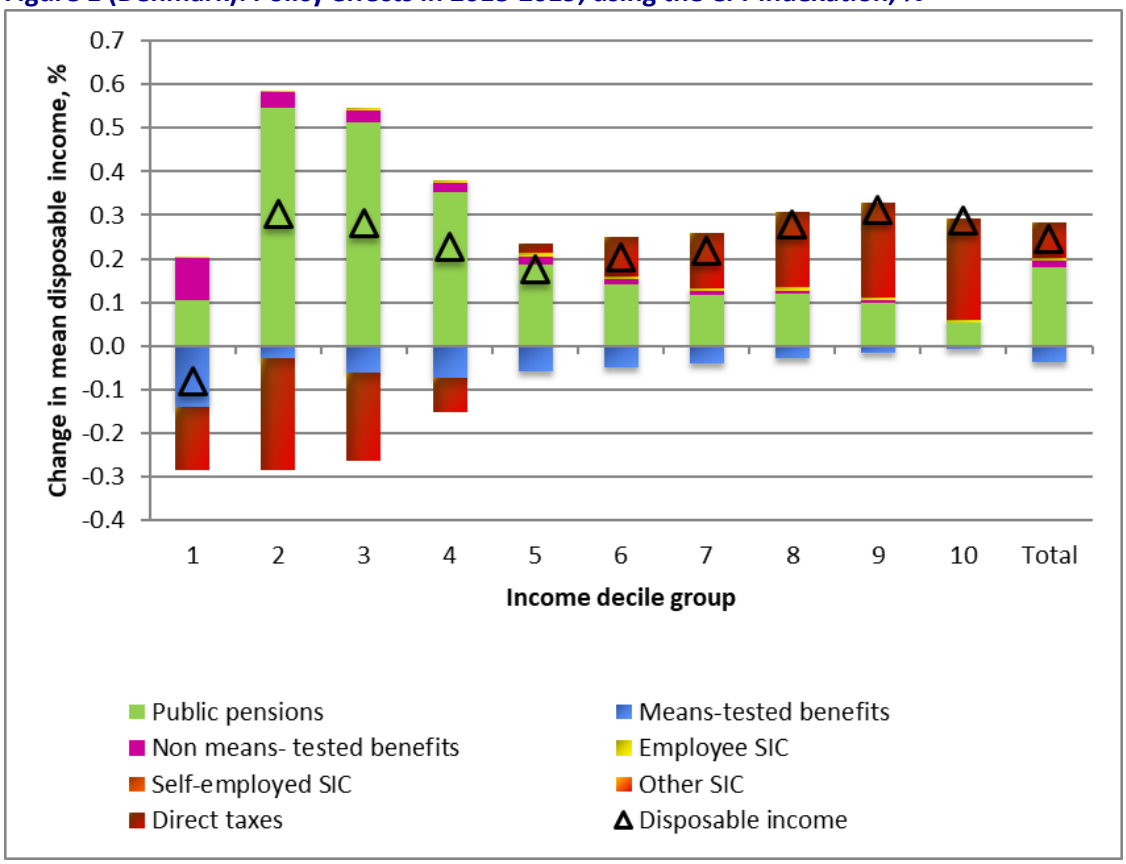
Assessing changes across the distribution shows a mixed pattern with households in the bottom decile having a slight decrease of 0.08%, whereas there is an increase in all deciles from 2-10, with the lowest in the middle of the distribution, albeit the difference is small. In the lower deciles, increases are mainly based on an increase in public pensions, whereas for those at the higher end of the distribution it is the changes in the direct taxes that have pushed up incomes. For those in the first decile the benefit ceiling could have had an impact, as the effect of changes to means-tested benefits was a reduction in real incomes of 0.14%.

Table 1 (Denmark): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.11	-0.14	0.10	0.00	0.00	0.00	-0.15	**-0.08**
2	0.00	0.54	-0.03	0.04	0.00	0.00	0.00	-0.26	**0.30**
3	0.00	0.51	-0.06	0.03	0.00	0.00	0.00	-0.20	**0.28**
4	0.00	0.35	-0.07	0.02	0.01	0.00	0.00	-0.08	**0.23**
5	0.00	0.19	-0.06	0.02	0.01	0.00	0.00	0.02	**0.18**
6	0.00	0.14	-0.05	0.01	0.01	0.00	0.00	0.09	**0.20**
7	0.00	0.12	-0.04	0.01	0.01	0.00	0.00	0.13	**0.22**
8	0.00	0.12	-0.03	0.01	0.01	0.00	0.00	0.17	**0.28**
9	0.00	0.10	-0.02	0.00	0.01	0.00	0.00	0.22	**0.31**
10	0.00	0.05	-0.01	0.00	0.00	0.00	0.00	0.23	**0.29**
Total	**0.00**	**0.18**	**-0.04**	**0.02**	**0.01**	**0.00**	**0.00**	**0.08**	**0.24**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Denmark): Policy effects in 2018-2019, using the CPI-indexation, %



Germany

In 2018-19, the average household disposable income increased slightly by 0.52%. However, a look at the effects across decile groups reveals that the policy effect was the biggest at the middle of the distribution (fourth to sixth deciles), where the increase reached 0.72%, and it was the smallest at the very bottom of the distribution, where the increase amounted to just 0.1%.

Changes to two income components were mostly responsible for the increase in household disposable income: public pensions, which contributed on average to a 0.27% increase in household disposable income, and employee SIC, which contributed on average to a 0.3% increase. In the case of employee SIC, such increases derived from cuts in the contribution rates for health and unemployment insurance (8.3% to 7.75% and 1.5% to 1.25%, respectively). These cuts benefitted the entire distribution but were higher for the central deciles. In the case of public pensions, the increase in household disposable income which we observe in Table1. is due to the fact that the German legislated pension value grew more than the CPI projection. In reality, this increase should be even bigger than these figures suggest, as public pension entitlements for mothers who reared one or more children were increased from 2019 onwards .

By contrary, changes to means- and non means-tested benefits in 2018-19 contributed to a small decrease in household disposable income, especially at the very bottom of the distribution (at the first decile, -0.31% due to means-tested benefits and -0.1% due to non means-tested benefits). In both cases, benefits improved in nominal terms but they were offset by the higher CPI projection.

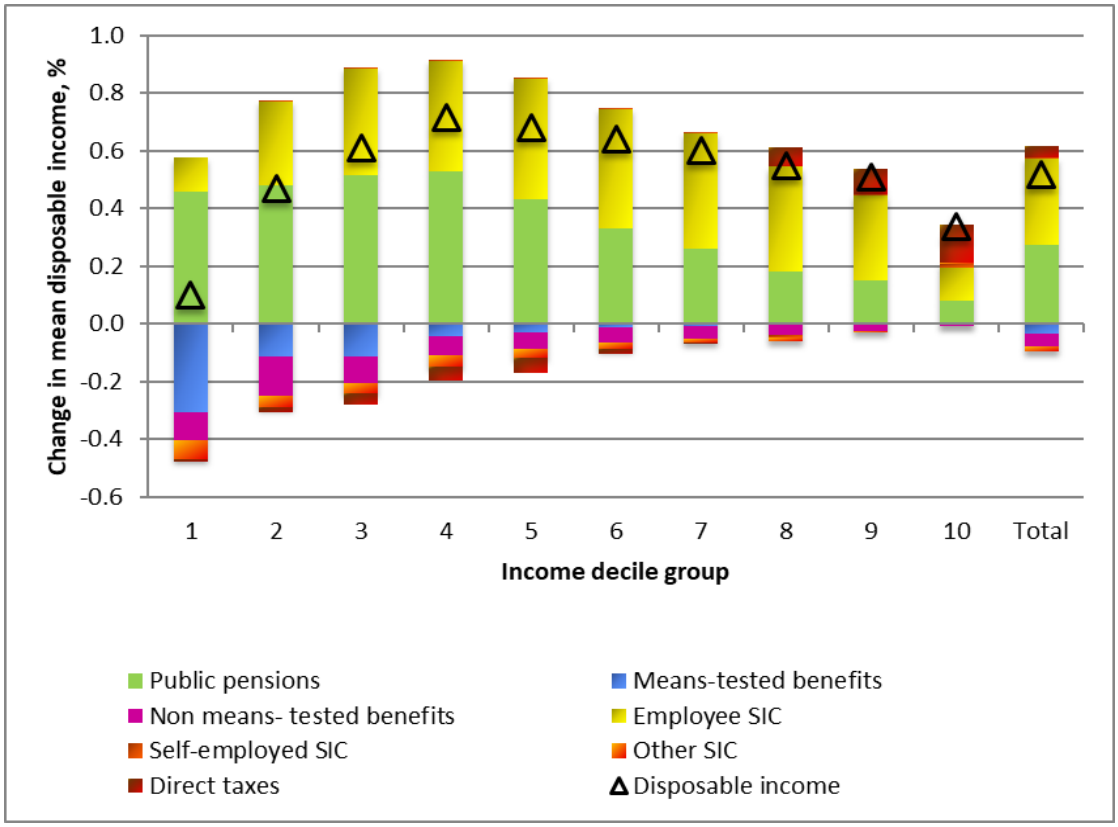
Finally, changes in direct taxes in 2018-2019 had a slightly regressive effect on the distribution of household disposable income. They contributed to a small decrease for households in the lower half of the distribution and to an increase for those at the top of the distribution (0.14% for the 10th decile). The main reason for the slightly negative figures was the insufficient increase of the basic tax-free allowance so as to counterbalance the CPI projection. Households in the upper tail of the distribution benefitted from the increase in the children tax allowance, which exceeded the projected inflation.

Table 1 (Germany): Policy effects in 2018-2019, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.46	-0.31	-0.10	0.12	0.00	-0.07	-0.01	**0.10**
2	0.00	0.48	-0.11	-0.14	0.29	0.00	-0.04	-0.02	**0.47**
3	0.00	0.51	-0.11	-0.09	0.37	0.00	-0.04	-0.04	**0.61**
4	0.00	0.53	-0.04	-0.07	0.38	0.00	-0.04	-0.05	**0.72**
5	0.00	0.43	-0.03	-0.06	0.42	0.00	-0.03	-0.05	**0.68**
6	0.00	0.33	-0.01	-0.05	0.41	0.00	-0.02	-0.02	**0.64**
7	0.00	0.26	-0.01	-0.04	0.40	0.00	-0.01	0.00	**0.60**
8	0.00	0.18	0.00	-0.04	0.37	-0.01	-0.01	0.06	**0.55**
9	0.00	0.15	0.00	-0.02	0.29	0.01	0.00	0.09	**0.51**
10	0.00	0.08	0.00	-0.01	0.11	0.01	0.00	0.14	**0.33**
Total	**0.00**	**0.27**	**-0.03**	**-0.05**	**0.30**	**0.00**	**-0.02**	**0.04**	**0.52**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Germany): Policy effects in 2018-2019, using CPI-indexation, %



Estonia

In comparison to 2018 policies, (deflated) 2019 policies increased mean household income by 0.87%. All income decile groups gained on average and relative gains were larger for first three income groups (around 3-4%). Income gains are mainly related to the indexation of pensions. The real value of public pensions increased as these were indexed by 8.4% in 2019 compared to the inflation of 2.4%. Owing to the location of the pensioners in the income distribution, it was the first, second and third deciles which gained the most in relative terms.

Income gains also resulted from changes in non means-tested benefits (0.31%). Among non means-tested benefits, income gains were mainly due to higher parental benefits (0.16%) and child allowances (0.11%). Increases in parental benefits are due to higher (reference) wages and an increase in minimum wage, which also provides the floor for parental benefit. However, the first three decile groups do not benefit as much as other deciles (about 0.1% vs 0.2%) due to the composition of households. An increase in the child allowance (from €55 to €60 per month) benefitted all decile groups but poorer decile groups more in relative terms (from 0.25% to 0.06%). The bottom decile group further benefitted (0.53%) from an increase of subsistence benefit income limit (from €140 to €150).

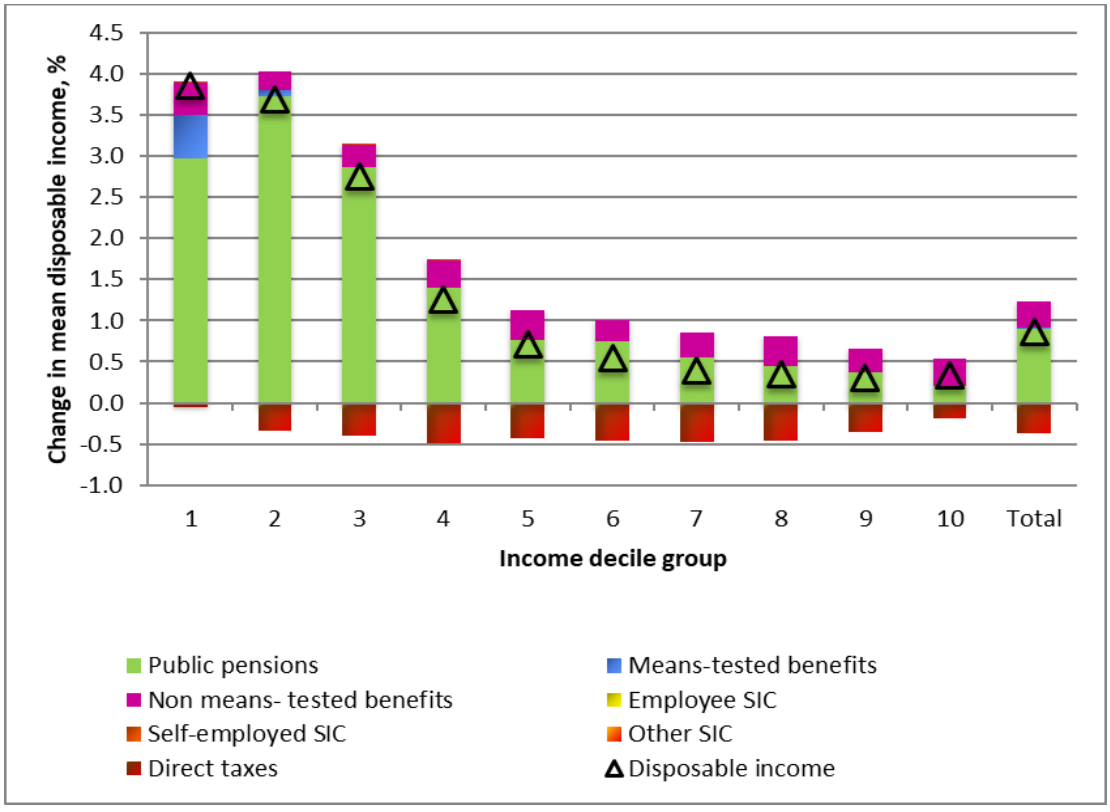
On the other hand, the basic tax allowance which was kept nominally constant (€500) had a negative effect for every decile group (average -0.36%) but especially for middle-income groups (around -0.5%).

Table 1 (Estonia): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	2.98	0.53	0.39	0.00	0.01	0.00	-0.05	**3.85**
2	0.00	3.73	0.07	0.22	0.00	-0.01	0.00	-0.32	**3.69**
3	0.00	2.86	0.00	0.27	0.00	0.01	0.00	-0.40	**2.75**
4	0.00	1.39	0.00	0.34	0.00	0.00	0.00	-0.49	**1.25**
5	0.00	0.76	0.00	0.36	0.00	-0.01	0.00	-0.42	**0.70**
6	0.00	0.74	0.00	0.26	0.00	-0.01	0.00	-0.46	**0.54**
7	0.00	0.55	0.00	0.31	0.00	0.00	0.00	-0.47	**0.39**
8	0.00	0.45	0.00	0.36	0.00	0.00	0.00	-0.45	**0.35**
9	0.00	0.37	0.00	0.29	0.00	0.00	0.00	-0.35	**0.31**
10	0.00	0.21	0.00	0.32	0.00	0.00	0.00	-0.20	**0.34**
Total	**0.00**	**0.89**	**0.02**	**0.31**	**0.00**	**0.00**	**0.00**	**-0.36**	**0.87**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Estonia): Policy effects in 2018-2019, using the CPI-indexation, %



Ireland

In total, mean household disposable income is 0.59% higher under the 2019 system than under the 2018 system. Looking at individual deciles, this change is particularly progressive.

Increases in means-tested benefits account for a 0.2% increase in mean incomes, with a particularly large gain in the lowest income decile (1.66%). Increases in public pensions account for another 0.16% increase in mean EHDI. On par with public pensions, changes in direct taxes account for a 0.16% increase in incomes, with losses in the lowest three income deciles, however. This may be due to a combination of factors. While most tax credits have remained unchanged (the personal tax credit and the PAYE Tax Credit in particular), wage growth has exceeded CPI growth, leading to a reduction of these tax credits as a proportion of earnings. Secondly, poorer households are unlikely to benefit from the increase in the threshold from which the higher rate of income tax applies. The reduction in Mortgage Interest Relief may also explain these losses.

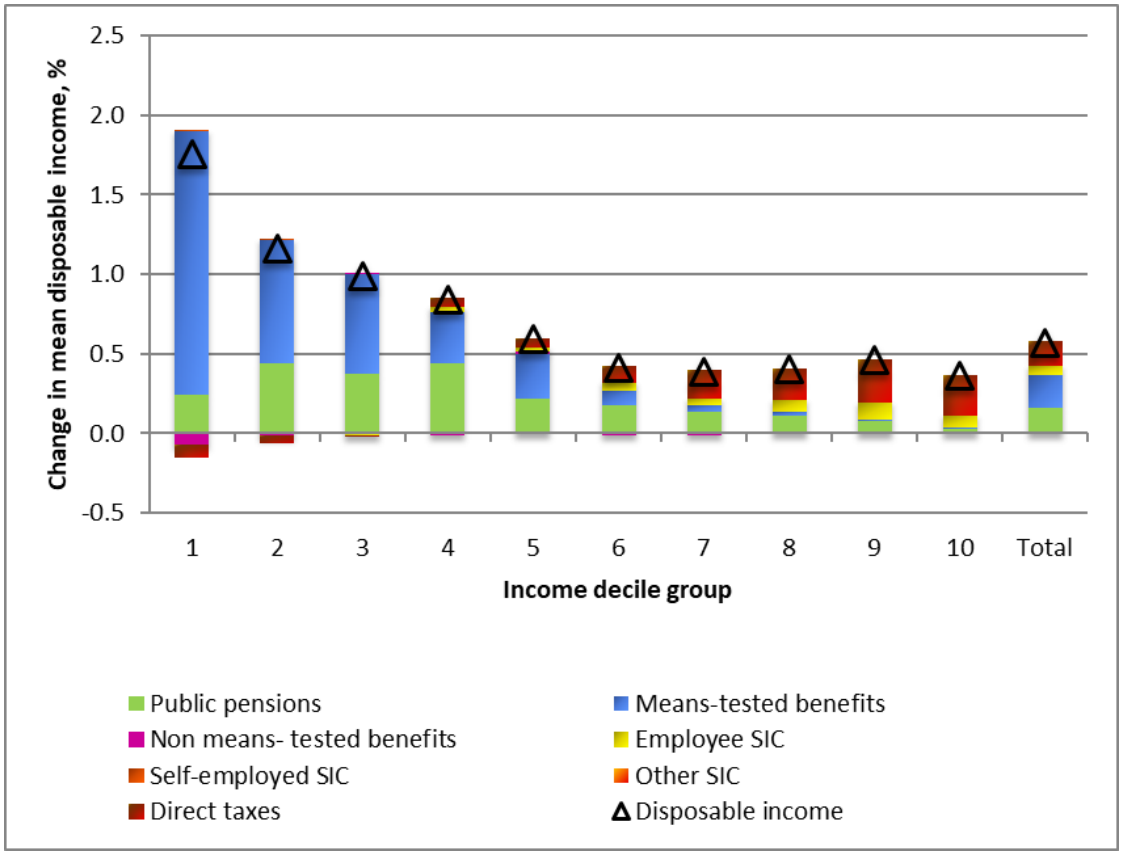
All other income components have only a small effect on average equivalised household disposable income.

Table 1 (Ireland): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.24	1.66	-0.07	0.00	0.00	0.00	-0.08	**1.75**
2	0.00	0.44	0.78	-0.01	0.00	0.00	0.00	-0.04	**1.16**
3	0.00	0.37	0.63	0.00	-0.01	0.00	0.00	-0.01	**0.99**
4	0.00	0.44	0.32	-0.02	0.04	0.00	0.00	0.06	**0.84**
5	0.00	0.22	0.28	0.02	0.02	0.00	0.00	0.06	**0.60**
6	0.00	0.18	0.09	-0.01	0.05	0.00	0.00	0.11	**0.41**
7	0.00	0.14	0.04	-0.01	0.04	0.00	0.00	0.18	**0.39**
8	0.00	0.11	0.02	0.00	0.07	0.00	0.00	0.20	**0.41**
9	0.00	0.08	0.01	-0.01	0.11	0.00	0.00	0.27	**0.46**
10	0.00	0.03	0.00	0.00	0.07	0.00	0.00	0.26	**0.37**
Total	**0.00**	**0.16**	**0.20**	**-0.01**	**0.05**	**0.00**	**0.00**	**0.16**	**0.57**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Ireland): Policy effects in 2018-2019, using the CPI-indexation, %



Greece

Policy changes in 2019 have had a regressive effect on the income distribution. Whilst the overall disposable income increases by 1.1%, it decreases for the poorest 20% of the population. This is mainly due to the fact that the social dividend was only provided in 2018 and its effect falls away in 2019 (at the time of writing, a dividend has not been provided in 2019). Another (relatively minor) reason is the further reduction in pensioner's social solidarity benefit (EKAS) that took place in 2018 (from €35 to €12 per month). The increase in disposable income caused by direct taxes is due to the 10-30% reduction in the Greek property tax (ENFIA). Increases in household disposable income driven by public pensions are mainly due to the provision of the thirteenth monthly pension installment and, to a much lesser extent, to the pensions' recalculation that took place in 2019. These two policy changes are indirectly causing the losses in disposable income due to the increased pensioners' SIC. The changes in self-employed SIC are causing income losses to self-employed paid on the minimum wage (because of the increase in the contribution base); for self-employed paid above the minimum wage, these losses are completely offset by the decrease in the SIC rate for pensions (which went down from 20% to 13.33%). Finally, moving to the impact of non means-tested benefits, the increase in the unemployment benefit is to be held responsible for the small increases in the disposable income of deciles 1-8.

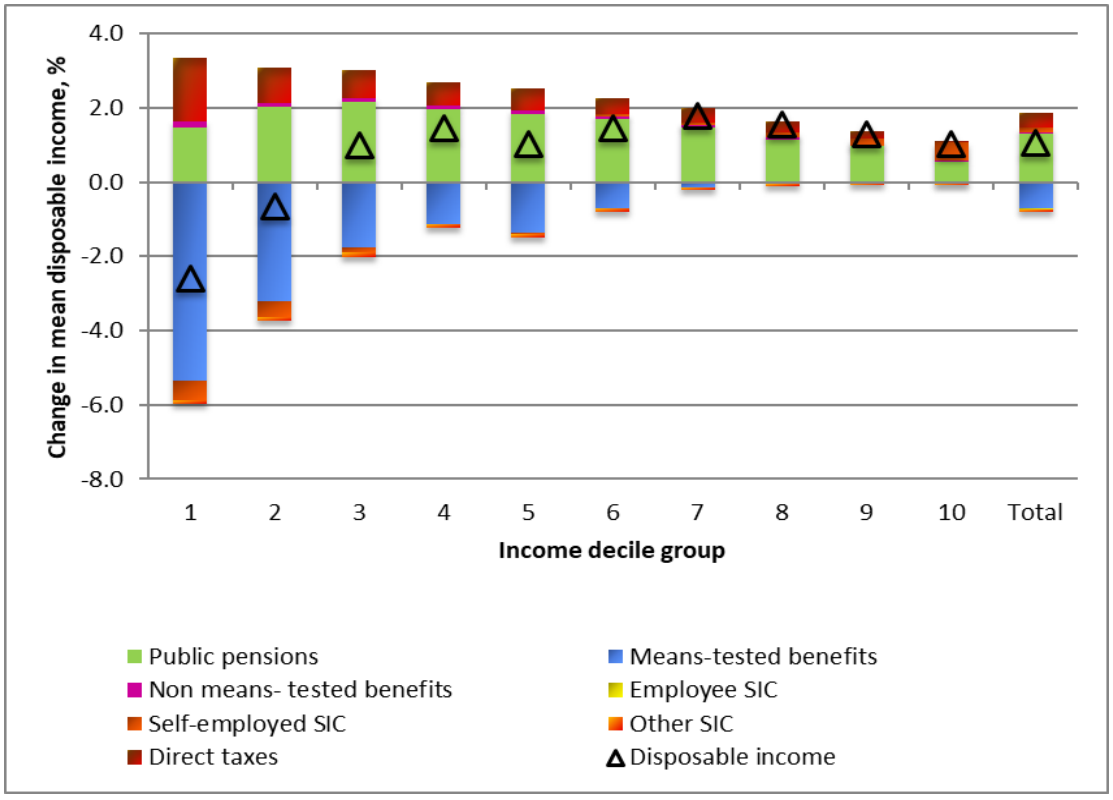
Note that the non-provision of the social dividend in 2019 casts a shadow over all other changes in means-tested benefits that took place in the same year. The situation changes drastically if this benefit is omitted from the analysis, as the introduction of the housing benefit had a highly progressive effect on the income distribution.

Table 1 (Greece): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	1.46	-5.35	0.18	0.00	-0.53	-0.08	1.72	**-2.61**
2	0.00	2.02	-3.21	0.11	0.00	-0.42	-0.12	0.95	**-0.67**
3	0.00	2.16	-1.76	0.09	0.00	-0.12	-0.13	0.76	**1.00**
4	0.00	1.97	-1.12	0.09	0.00	0.02	-0.11	0.62	**1.46**
5	0.00	1.84	-1.36	0.10	0.00	-0.04	-0.11	0.60	**1.03**
6	0.00	1.70	-0.71	0.08	0.00	0.04	-0.10	0.43	**1.45**
7	0.00	1.47	-0.13	0.05	0.01	0.09	-0.08	0.38	**1.78**
8	0.00	1.15	-0.03	0.05	0.00	0.15	-0.06	0.30	**1.56**
9	0.00	0.97	-0.04	0.01	0.00	0.20	-0.05	0.20	**1.29**
10	0.00	0.56	0.00	0.01	-0.04	0.49	-0.03	0.02	**1.01**
Total	**0.00**	**1.30**	**-0.72**	**0.05**	**-0.01**	**0.13**	**-0.07**	**0.40**	1.07

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Greece): Policy effects in 2018-2019, using the CPI-indexation, %



Spain

In 2018-2019, households experienced on average a disposable income growth of 0.10%. The increase was felt among the first six decile groups, with the first and second deciles gaining the most (2.15% and 0.88%, respectively). Conversely, the last four deciles experienced a slight decrease in their disposable incomes. Thus, taken as a whole, policy changes in the period 2018-2019 were pro-poor[7].

On one hand, the positive effects experienced by the bottom deciles were mainly driven by changes in means-tested benefits. These changes resulted in an average increase of disposable income of 0.32%. The increase was considerably remarkable in the first three deciles (2.99%, 1.34% and 1.07%, respectively). The aforemonetioned income gains are, essentially, the result of the changes to the main means-tested child benefit in Spain – the benefit amount was increased from €291 to €341 per year and up to €588 for the poorest households.

Along with the positive effects derived from changes in means-tested benefits, changes in non means-tested benefits and public pensions caused additional income gains. However, the positive effects were, on average, very small (of around 0.02% and 0.13%, respectively) and they can be explained by a higher uprating of pensions and non-means tested benefits than inflation (e.g. pensions were indexed by 1.6% in 2019 while inflation ran at around 1.1%). The effects are almost the same across the whole income distribution and where they differ they reflect, in general, the location of pensioners and non-means tested beneficiaries in the income distribution.

On the other hand, changes in social insurance contributions (SICs) and taxes had a negative effect on household disposable income. In this sense, changes in SICs paid by the employee and by the self-employed decreased average household disposable income by -0.16% and -0.06%, respectively. This is likely caused by significant increases in the cointribution bases for both groups. Moreover, changes in taxes resulted also in an average decrease of household disposable income (-0.14%). Although there were not significant changes to the personal income tax, the results reflect some potential fiscal drag, i.e. the fact wages increased substiantially while tax brackets remained unchanged leading, eventually, to higher average tax rates.

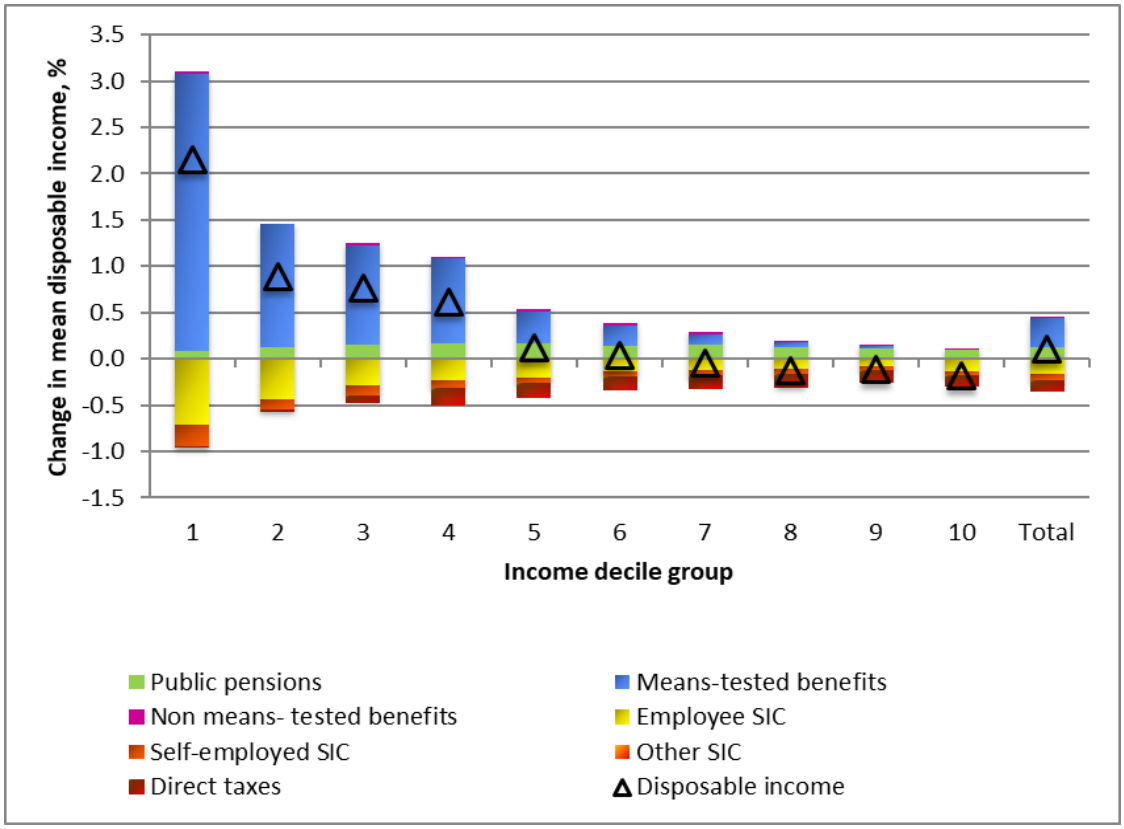
[7] Note also that, between 2018 and 2019, the minimum wage in Spain increased substiantially (from €735.9 to €900 per month). Although the minimum wage is not simulated in the baseline (i.e. its simulation is switched off) there might be some interactions arising from this increase. For example, the uprating of the employment income is expected to be higher. Morever, eligibility conditions for some benefits might become more generous as some benefits are conditioned to the minimum wage (as it's the case for the unemployment assistance benefit).

Table 1 (Spain): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.08	2.99	0.03	-0.71	-0.24	0.00	-0.01	**2.15**
2	0.00	0.13	1.34	-0.02	-0.42	-0.11	0.00	-0.04	**0.88**
3	0.00	0.16	1.07	0.02	-0.28	-0.11	0.00	-0.09	**0.77**
4	0.00	0.16	0.93	0.02	-0.24	-0.07	0.00	-0.19	**0.61**
5	0.00	0.16	0.35	0.03	-0.20	-0.06	0.00	-0.16	**0.12**
6	0.00	0.14	0.22	0.02	-0.13	-0.06	0.00	-0.16	**0.04**
7	0.00	0.15	0.11	0.02	-0.13	-0.05	0.00	-0.15	**-0.05**
8	0.00	0.12	0.05	0.01	-0.11	-0.05	0.00	-0.16	**-0.13**
9	0.00	0.11	0.03	0.01	-0.08	-0.04	0.00	-0.15	**-0.12**
10	0.00	0.09	0.01	0.01	-0.13	-0.05	0.00	-0.12	**-0.18**
Total	**0.00**	**0.13**	**0.32**	**0.02**	**-0.16**	**-0.06**	**0.00**	**-0.14**	**0.10**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Spain): Policy effects in 2018-2019, using the CPI-indexation, %



France

In 2019, policy changes delivered an increase in disposable income for all deciles. The highest increase in disposable income took place in the ninth decile. This rise is essentially due to a decrease in SIC (for employee and to a lesser extent for self employed), to a reduction of the direct taxes (CSG) and to the rise of means-tested benefits (activity allowance, ASPA and AAH). This increase in disposable income occurs despite a decrease in public pensions for all deciles and a slight decrease in the non means-tested benefits, particularly for the first three deciles.

After the decrease of employee SIC, the reduction in direct taxes is the main reason for the disposable income increase. Some measures were taken to reduce the tax burden, such as the cancellation of the 2018 increase in CSG for pensioners whose pension is less than 2000€ per month, or the increase of the "décote", or the exemption from income tax and employees SIC for overtime income up to 5000€. The largest effects of the tax cuts on disposable income are concentrated in the highest deciles and in the third decile, with the exception for the highest decile whose direct tax burden has led to a decline in disposable income even though the overall increase in disposable income for this decile is one of the highest. For the deciles at the bottom of the distribution, the reduction of direct tax contributes only marginally to the increase in disposable income.

If we look at disposable income through employee SIC, the 0.95% drop in unemployment insurance in the private sector leads to gains in disposable income for all deciles, with increases felt more strongly at the top end of the distribution

Public pensions decline because of the quasi-freeze of their revaluation rate. Pensions were revalued only by 0.3% which is too low to absorb the 1.3% of inflation in 2019.

The exceptional increase in social benefits like ASPA, AAH and Activity allowance leads to an increase in disposable incomes with regard to means-tested benefits, especially for the first decile. The lower than inflation increase in family and housing allowance leads to a smaller increase of the disposable income with regard to the means-tested benefits for deciles 3 to 5.

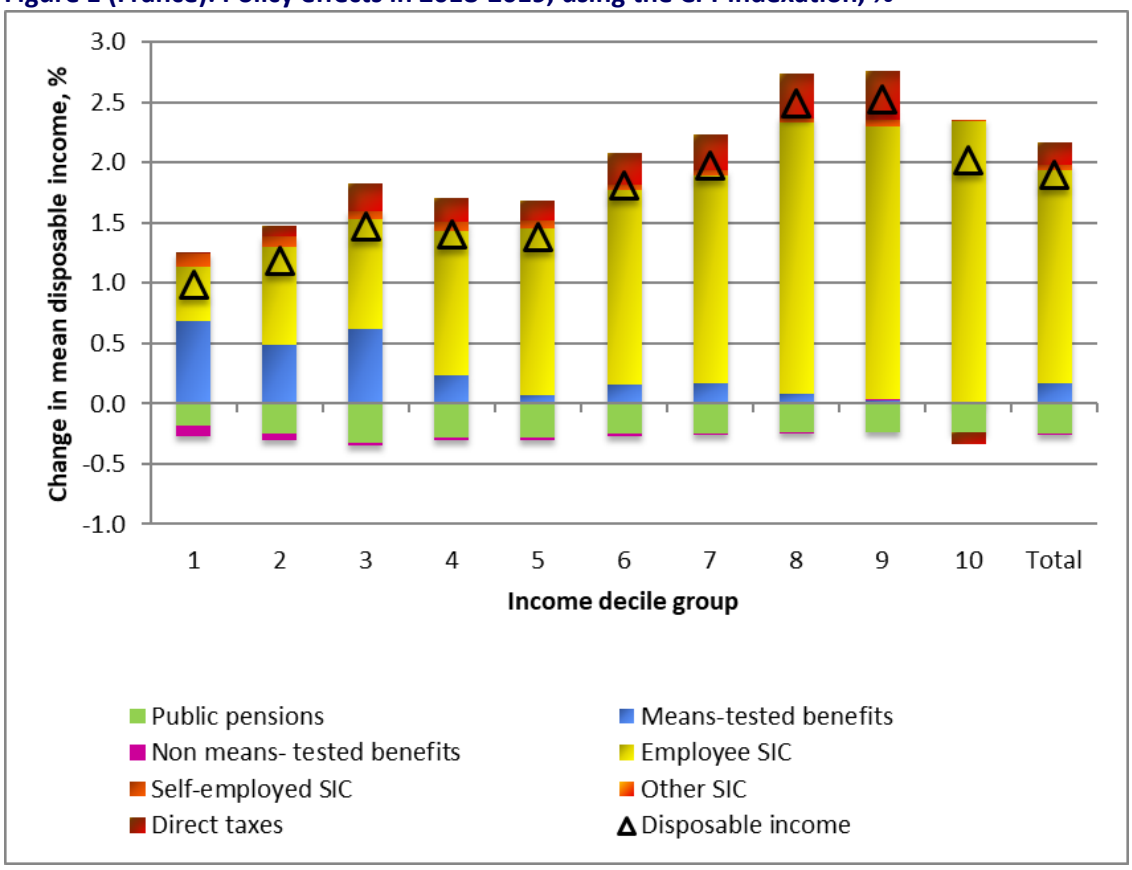
Non means-tested benefits decrease incomes also due to their lower than inflation increase (0.3% increase for the non means-tested benefit, while inflation increases by 1.3%).

Table 1 (France): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.18	0.69	-0.08	0.45	0.11	0.00	0.01	**0.99**
2	0.00	-0.25	0.48	-0.05	0.82	0.09	0.00	0.09	**1.18**
3	0.00	-0.32	0.62	-0.03	0.92	0.06	0.00	0.23	**1.47**
4	0.00	-0.28	0.24	-0.02	1.19	0.08	0.00	0.20	**1.40**
5	0.00	-0.29	0.07	-0.02	1.38	0.06	0.00	0.17	**1.38**
6	0.00	-0.25	0.16	-0.02	1.60	0.05	0.00	0.25	**1.81**
7	0.00	-0.25	0.17	-0.01	1.73	0.05	0.00	0.30	**1.98**
8	0.00	-0.24	0.08	-0.01	2.25	0.04	0.00	0.37	**2.50**
9	0.00	-0.24	0.03	0.00	2.26	0.06	0.00	0.40	**2.52**
10	0.00	-0.24	0.01	0.00	2.33	0.01	0.00	-0.09	**2.02**
Total	**0.00**	**-0.25**	**0.17**	**-0.01**	**1.77**	**0.05**	**0.00**	**0.18**	**1.90**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (France): Policy effects in 2018-2019, using the CPI-indexation, %



Croatia

Table 1 and Figure 1 show the policy effect measured in real terms by income component and income decile group.

First, HICP is projected to rise by 1.04% between 2018 and 2019. Public pensions are adjusted using the "current value of pension", which increases by about 3.7%, i.e., more than the HICP. Therefore, pension income increases in real terms for all groups: between 0.30% in the top decile group and 1.28% in the bottom decile group.

The only major policy change between 2018 and 2019 was the increase of the top threshold of Child benefit by 40%. Accordingly, we can notice an increase in disposable incomes attributed to the means-tested benefits, which is most pronounced for households in the fourth and fifth decile groups. The total effect across all deciles is a 0.29% increase. In contrast, a fall in means-tested benefits is observed for the first and the second decile groups, because these benefits (Child benefit and Subsistence benefit) are not inflation-adjusted, and their real value falls due to the increase in the price level. The largest fall, 0.34%, is felt by the first decile group, which is most dependent on means-tested benefits; the second decile loses 0.09%.

The tenth decile shows an increase of 0.35% attributed to direct taxes. This is due to the change in Personal income tax (PIT), wherein the upper monthly limit of the first income band is increased from HRK 17,500 to 30,000. The decile analysis presented here probably underestimates the effect of this change, because it affects the top income percentiles, and high-income earners are underrepresented in the SILC data.

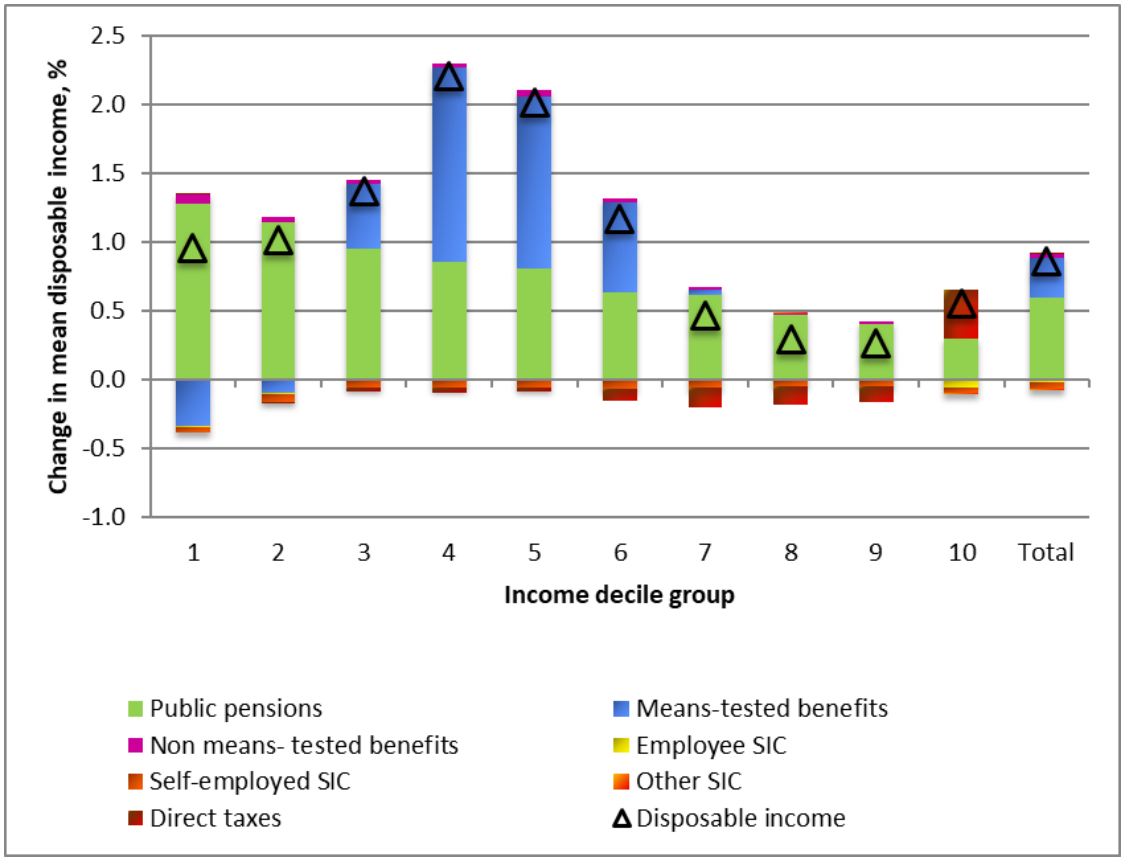
Overall, disposable income increases by 0.85% on average in real terms (1.21% in nominal terms), which is mainly due to the favourable indexation of pensions. The overall pattern mostly favours middle income groups, thanks to the changes in Child benefit, which were particularly beneficial for deciles 4 and 5 (they gain by about 2%). Thanks to the PIT changes, the top decile gains more than deciles 7, 8 and 9.

Table 1 (Croatia): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	1.28	-0.34	0.07	-0.01	-0.04	0.00	0.00	**0.96**
2	0.00	1.14	-0.09	0.04	-0.01	-0.06	0.00	0.00	**1.01**
3	0.00	0.95	0.47	0.03	-0.01	-0.05	0.00	-0.03	**1.37**
4	0.00	0.86	1.40	0.04	-0.01	-0.05	0.00	-0.04	**2.20**
5	0.00	0.81	1.25	0.05	-0.01	-0.04	0.00	-0.03	**2.01**
6	0.00	0.63	0.65	0.04	-0.02	-0.05	0.00	-0.09	**1.16**
7	0.00	0.61	0.04	0.01	-0.01	-0.04	0.00	-0.14	**0.47**
8	0.00	0.47	0.00	0.01	-0.01	-0.04	0.00	-0.14	**0.30**
9	0.00	0.41	0.00	0.02	-0.01	-0.04	0.00	-0.11	**0.26**
10	0.00	0.30	0.00	0.00	-0.06	-0.04	-0.01	0.35	**0.55**
Total	**0.00**	**0.60**	**0.29**	**0.02**	**-0.02**	**-0.04**	**0.00**	**0.01**	**0.85**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Croatia): Policy effects in 2018-2019, using the CPI-indexation, %



Italy

In 2019 the *Reddito di Cittadinanza (RdC)* was introduced as the new policy instrument to support family income, replacing the *Reddito di inclusion (REI)* – itself introduced a year before – as the guaranteed minimum income. The RdC has more potential beneficiaries and a larger allocated budget than the REI.

In 2019, the RdC was given only for 9 months (from April, 1st). The effect on disposable income (assuming full take-up) is made clear in Table and Figure 1 (blue bar) for those in the first income decile group who experience a positive change of around 23%. This measure dwarfs the effects of all other changes to the Italian tax-benefit system.

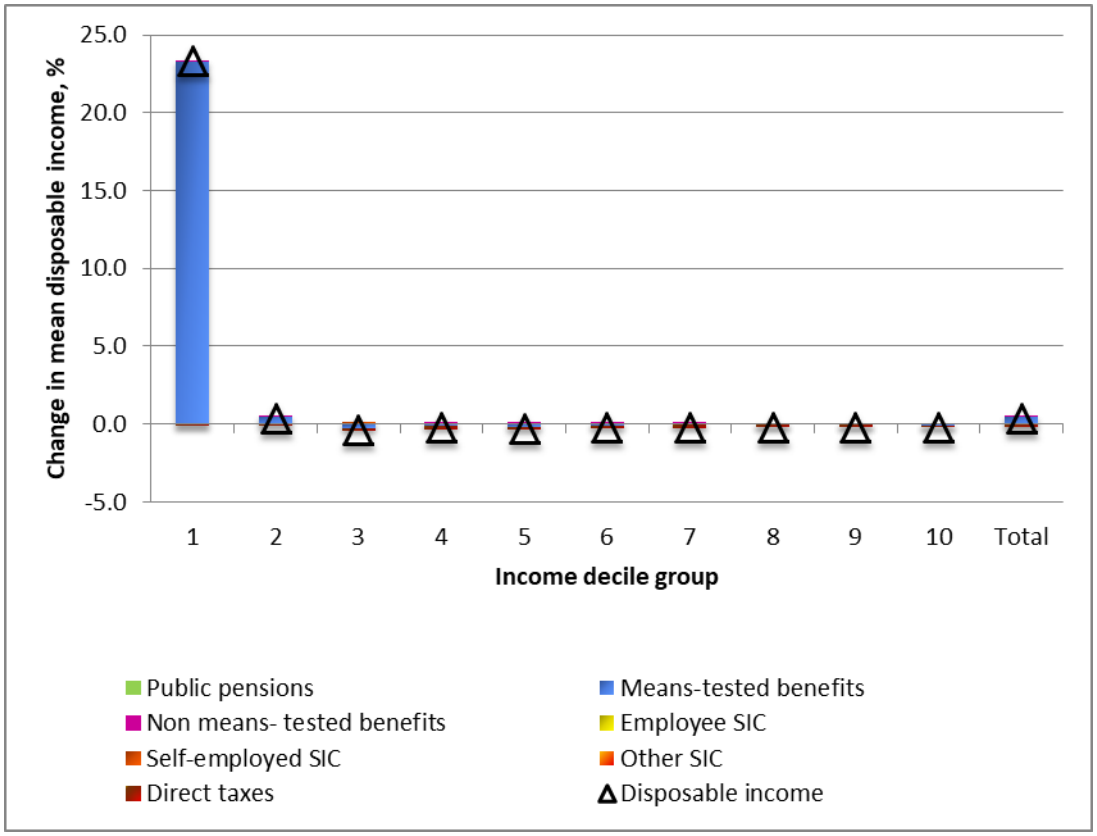
We assume full take-up of the RdC because at the time of writing there are no external statistics on take-up behaviour.

Table 1 (Italy): Policy effects in 2018-2019, using CPI indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.01	23.30	0.01	0.00	0.00	0.00	-0.01	**23.32**
2	0.00	0.05	0.38	0.01	0.00	0.00	0.00	-0.14	**0.30**
3	0.00	0.05	-0.29	0.01	0.00	0.00	0.00	-0.17	**-0.41**
4	0.00	0.05	-0.15	0.00	0.00	0.00	0.00	-0.17	**-0.26**
5	0.00	0.04	-0.18	0.00	0.00	0.00	0.00	-0.16	**-0.30**
6	0.00	0.03	-0.11	0.00	0.00	0.00	0.00	-0.18	**-0.25**
7	0.00	0.02	-0.05	0.00	0.00	0.00	0.00	-0.19	**-0.22**
8	0.00	0.01	-0.06	0.00	0.00	0.00	0.00	-0.17	**-0.22**
9	0.00	-0.01	-0.03	0.00	0.00	0.00	0.00	-0.16	**-0.20**
10	0.00	-0.06	-0.01	0.00	0.00	0.00	0.00	-0.14	**-0.21**
Total	**0.00**	**0.00**	**0.49**	**0.00**	**0.00**	**0.00**	**0.00**	**-0.16**	**0.34**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Italy): Policy effects in 2018-2019, using CPI indexation, %



Cyprus

The overall estimated effects of policy changes from 2018 to 2019 are larger than in previous years. In general, this can be explained by marginal changes in 2019 policy rules. Most benefit levels, income thresholds and tax rates have remained constant. The exception - and main driver of the 1% plus decrease in income levels - is the introduction of the General Health System and payment of contributions, which led to an overall decrease of disposable income by 1.67%. The negative effect on disposable income is estimated to be larger for the median income groups (above 2%). This can be explained by the way the GHS is designed where after a certain amount of income the obligation for paying contributions is stable.

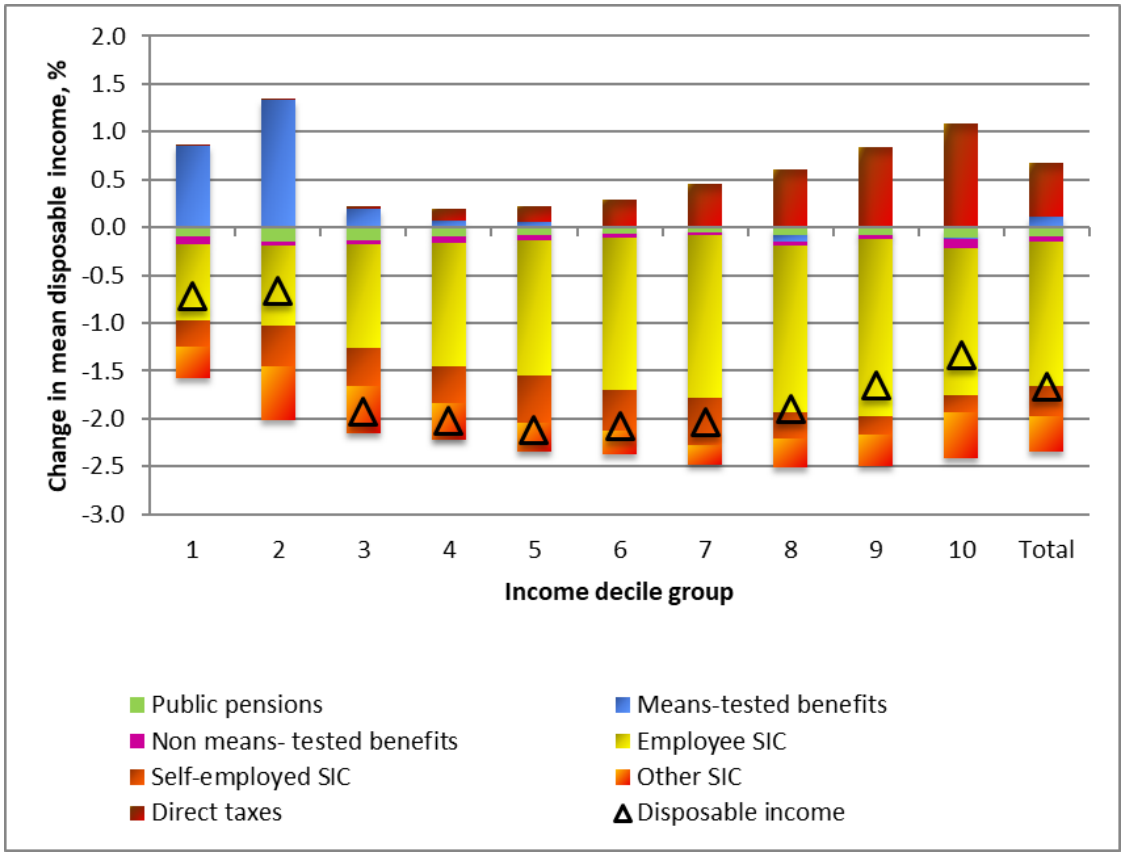
The decreases due to the new social insurance contributions are to some extent counterbalanced by lower taxes (at the top of the distribution) and higher means-tested benefits (at the bottom of the distribution). The contribution base for the calculation of the income tax is earnings after SIC, hence the lower taxes.

Table 1 (Cyprus): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.09	0.85	-0.08	-0.80	-0.27	-0.34	0.00	**-0.72**
2	0.00	-0.15	1.33	-0.04	-0.84	-0.43	-0.55	0.01	**-0.67**
3	0.00	-0.13	0.19	-0.05	-1.08	-0.40	-0.49	0.04	**-1.92**
4	0.00	-0.10	0.07	-0.06	-1.29	-0.40	-0.37	0.12	**-2.03**
5	0.00	-0.08	0.05	-0.05	-1.42	-0.49	-0.31	0.18	**-2.13**
6	0.00	-0.06	0.00	-0.05	-1.59	-0.43	-0.25	0.29	**-2.08**
7	0.00	-0.05	0.01	-0.04	-1.69	-0.49	-0.21	0.44	**-2.03**
8	0.00	-0.07	-0.07	-0.04	-1.75	-0.27	-0.30	0.60	**-1.90**
9	0.00	-0.08	-0.01	-0.04	-1.85	-0.19	-0.33	0.84	**-1.65**
10	0.00	-0.11	-0.01	-0.10	-1.53	-0.18	-0.48	1.08	**-1.33**
Total	**0.00**	**-0.09**	**0.11**	**-0.06**	**-1.51**	**-0.31**	**-0.37**	**0.56**	**-1.67**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Cyprus): Policy effects in 2018-2019, using the CPI-indexation, %



Latvia

Policies implemented in 2019 produced a strong progressive effect on disposable income – disposable income increased in all deciles but the increase was smaller in the top deciles. The main contribution to the increase in income came from public pensions and direct taxes. Like in previous years, changes in pensions had a progressive effect on income, mainly due to pension indexation rules, which imply a larger proportional increase in low pensions.

The basic allowance in 2019 was further increased for low wage earners, while the income level above which the basic allowance is not applied was increased, producing a positive and progressive impact on disposable income. The smaller effect of direct taxes in the bottom deciles is due to a smaller proportion of employed individuals, higher proportion of pensioners who are eligible for a higher non-taxable allowance, and due to the fact that for many low wage earners their income was fully covered by non-taxable allowances that were effective before the reform, hence they do not gain from changes in the PIT rules that came into force in 2019.

The effect of non-means-tested benefits in 2018-2019 was positive and was evenly distributed across income deciles, which mainly reflected growth in average earnings.

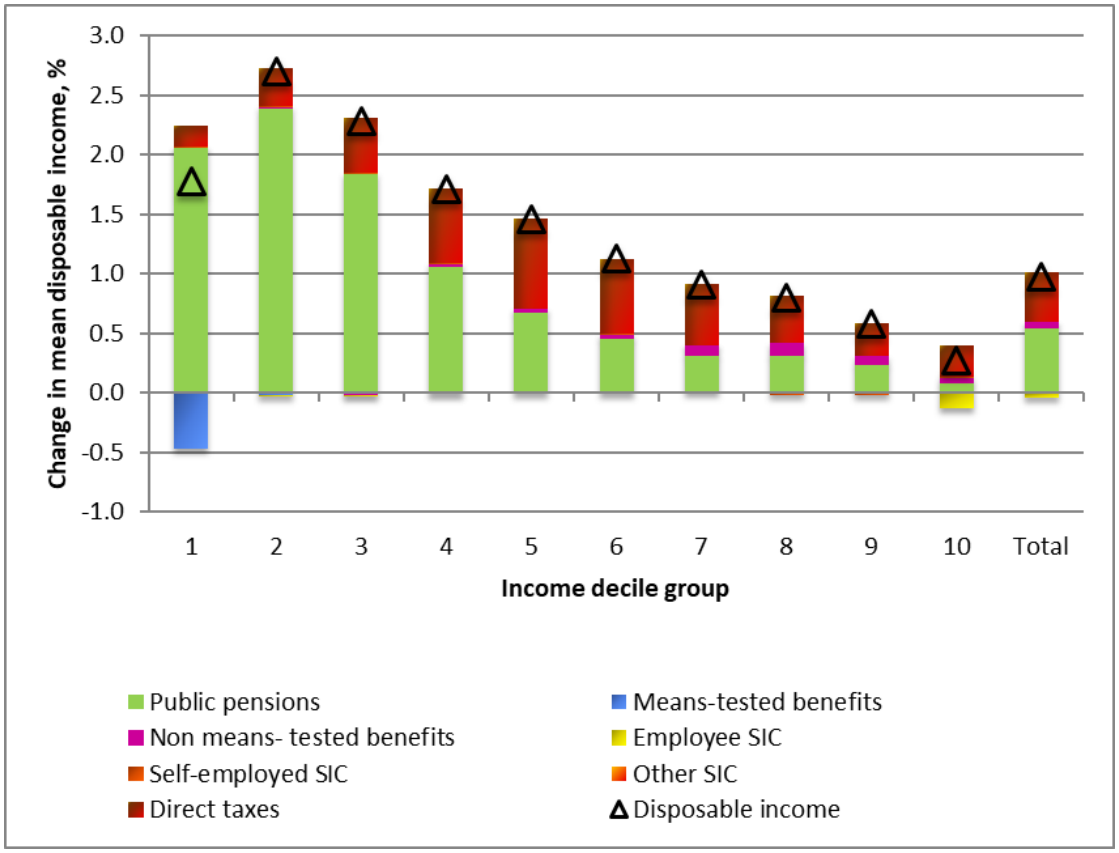
Despite no policy changes in means-tested benefits (GMI and housing benefit), these benefits had a negative effect on disposable income in the bottom decile, which was driven by changes in other policies that had a positive effect on low income households.

Table 1 (Latvia): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	2.05	-0.47	0.00	0.00	0.01	0.00	0.18	**1.77**
2	0.00	2.39	-0.02	0.01	0.00	0.00	0.00	0.32	**2.70**
3	0.00	1.84	0.00	-0.02	0.00	0.01	0.00	0.46	**2.29**
4	0.00	1.05	0.00	0.03	0.00	0.01	0.00	0.63	**1.71**
5	0.00	0.67	0.00	0.04	0.00	0.00	0.00	0.76	**1.46**
6	0.00	0.45	0.00	0.04	0.00	0.01	0.00	0.63	**1.13**
7	0.00	0.31	0.00	0.08	0.00	0.01	0.00	0.51	**0.91**
8	0.00	0.31	0.00	0.11	-0.01	-0.01	0.00	0.39	**0.80**
9	0.00	0.23	0.00	0.08	-0.01	-0.01	0.00	0.28	**0.57**
10	0.00	0.08	0.00	0.05	-0.13	0.00	0.00	0.27	**0.27**
Total	**0.00**	**0.54**	**-0.01**	**0.05**	**-0.03**	**0.00**	**0.00**	**0.42**	**0.97**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Latvia): Policy effects in 2018-2019, using the CPI-indexation, %



Lithuania

In general, we see progressive change to incomes due to policy reforms between 2018-2019.[8] The positive effect is the highest for lower income deciles and amounts to around 10% for the first decile. The effect declines for higher income deciles and only amounts for 0.42% for the tenth decile. On average, policy reforms increased disposable income by 3.19% in real terms between 2018-2019.

The largest positive effect to the lower income deciles is due to increases in public pensions. This change can be associated with newly introduced pension bonuses for low pensions. Increased amounts of assistance pensions base, basic monthly pension and pension indexation have also resulted in a positive change in public pensions for all income decile groups.

We also see a positive effect of non-means-tested benefits to the lowest income deciles of around 2-3%. Such changes are associated with more generous universal child benefits and the introduction of additional amounts for disabled children. The effect is the highest where larger families with children are located in the distribution.

Changes in means-tested programmes included more generous additional child benefits, whose size was extended and equalised irrespective of child age. On the other hand, the amount of state-supported income (SSI) used in the system of social assistance was not increased between 2018-2019. Hence, the total real effect for the lowest two income deciles is marginally negative.

The changes in direct taxes have slightly positive results on mean disposable income. While the nominal PIT rate was increased, so too did tax allowances and gross wages (which were recalculated using a factor of 1.289). The effect shown in Table 1 and Figure 1 is in line with the general aim of the tax reform - to decrease tax burden across the population. The negative effect in the tenth income decile is in line with an introduction of a second marginal tax bracket of 27% since 2019, albeit EUROMOD only reflects this reform partially due to a high income threshold for application of the second marginal tax rate and censoring of the SILC data.

There were also changes in employee and self-employed social insurance contributions. While the nominal rate of the employee SIC increased due to tax and SIC reform, it is applied on the higher income base. Also, the rate was increased less than increase of the recalculated gross income as a fraction of pension funding for the basic pension part was transferred from the Social Insurance Fund's budget to the general budget. Also the SIC rate applied on recalculated gross income is lower as contributions to the II pillar pensions are now paid in addition to SIC on an opt-out basis. All these changes generated positive effects on income with a slightly progressive pattern. Speaking of the self-employed persons, we see marginal negative results as there was no obligations to recalculate self-employment income as it was the case for wages. Hence the higher PIT and SIC rates apply on this income type.

[8] It should be noted, that these estimations are adjusted. In reality, policy reform has delivered a large increase in original incomes that we do not show here. This is due to the most recent tax reform: changes in PIT and recalculation of social insurance contributions, which resulted in recalculation of all the gross wages in Lithuania using a coefficient of 1.289. These reforms resulted in substantially higher gross original income, which is shown in the Country Report for Lithuania. Nevertheless, the change was absorbed by the changes in PIT and SIC. To adjust for this - and treat original incomes as holding steady as we do for other countries - we allocate the effect of the change in original income proportionally to the change in SIC and PIT. Again, for a fuller description, see the Country Report.

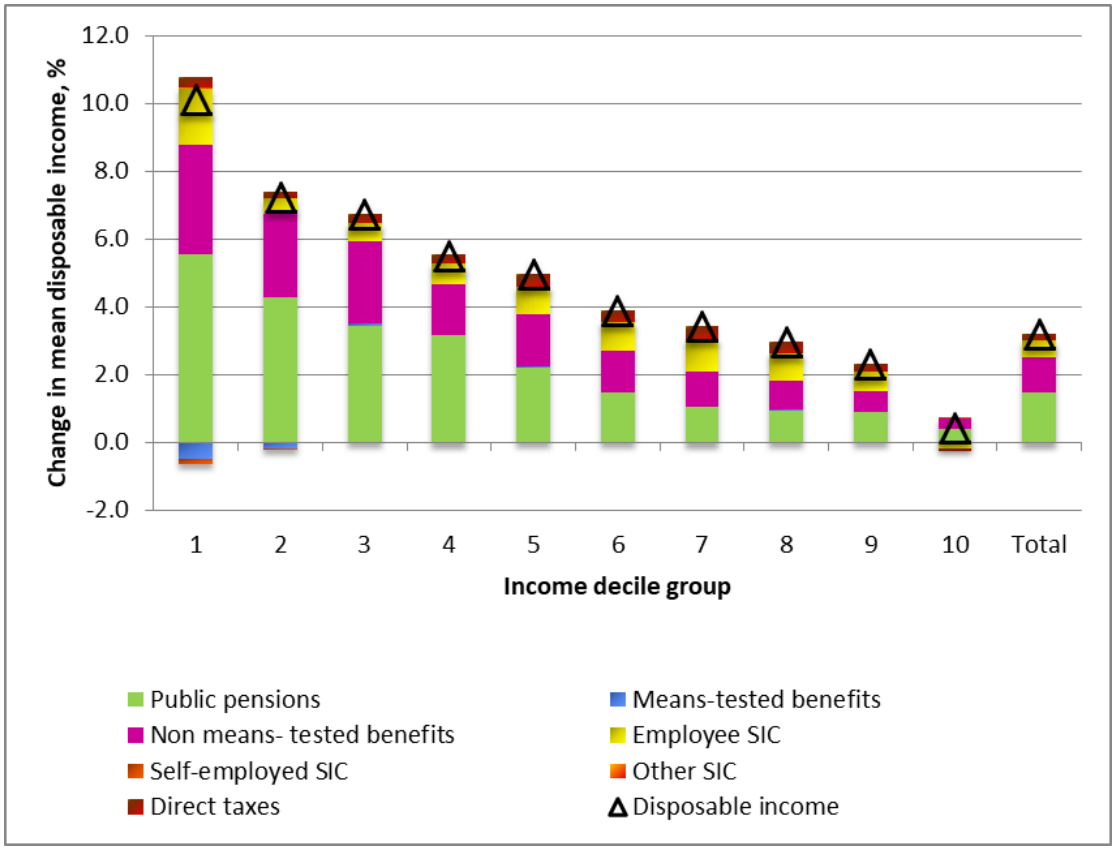
Overall the changes in the abovementioned policies between 2018 and 2019 have had a positive impact throughout the distribution, especially so for the first three income deciles. Hence it can be concluded that policy reform between 2018-2019 was progressive and had a pro-poor orientation. It should be noted, though, that the adjusted policy reform results should be treated with some caution, especially for PIT and SIC components due to the assumption of applying the effect to original income.

Table 1 (Lithuania): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	5.55	-0.48	3.21	1.67	-0.19	0.04	0.30	**10.10**
2	0.00	4.29	-0.17	2.45	0.48	-0.01	0.00	0.20	**7.22**
3	0.00	3.42	0.09	2.43	0.55	-0.01	0.00	0.24	**6.71**
4	0.00	3.15	-0.01	1.53	0.59	-0.01	0.00	0.25	**5.50**
5	0.00	2.21	0.04	1.54	0.82	-0.02	0.00	0.36	**4.94**
6	0.00	1.46	0.02	1.20	0.85	-0.01	0.00	0.37	**3.89**
7	0.00	1.05	0.00	1.02	0.94	-0.02	0.00	0.42	**3.42**
8	0.00	0.94	0.00	0.86	0.80	-0.02	0.00	0.37	**2.96**
9	0.00	0.88	0.01	0.64	0.54	-0.01	0.00	0.26	**2.31**
10	0.00	0.38	0.00	0.31	-0.18	0.00	0.00	-0.10	**0.42**
Total	**0.00**	**1.47**	**-0.01**	**1.03**	**0.48**	**-0.01**	**0.00**	**0.23**	**3.19**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Lithuania): Policy effects in 2018-2019, using the CPI-indexation, %



Luxembourg

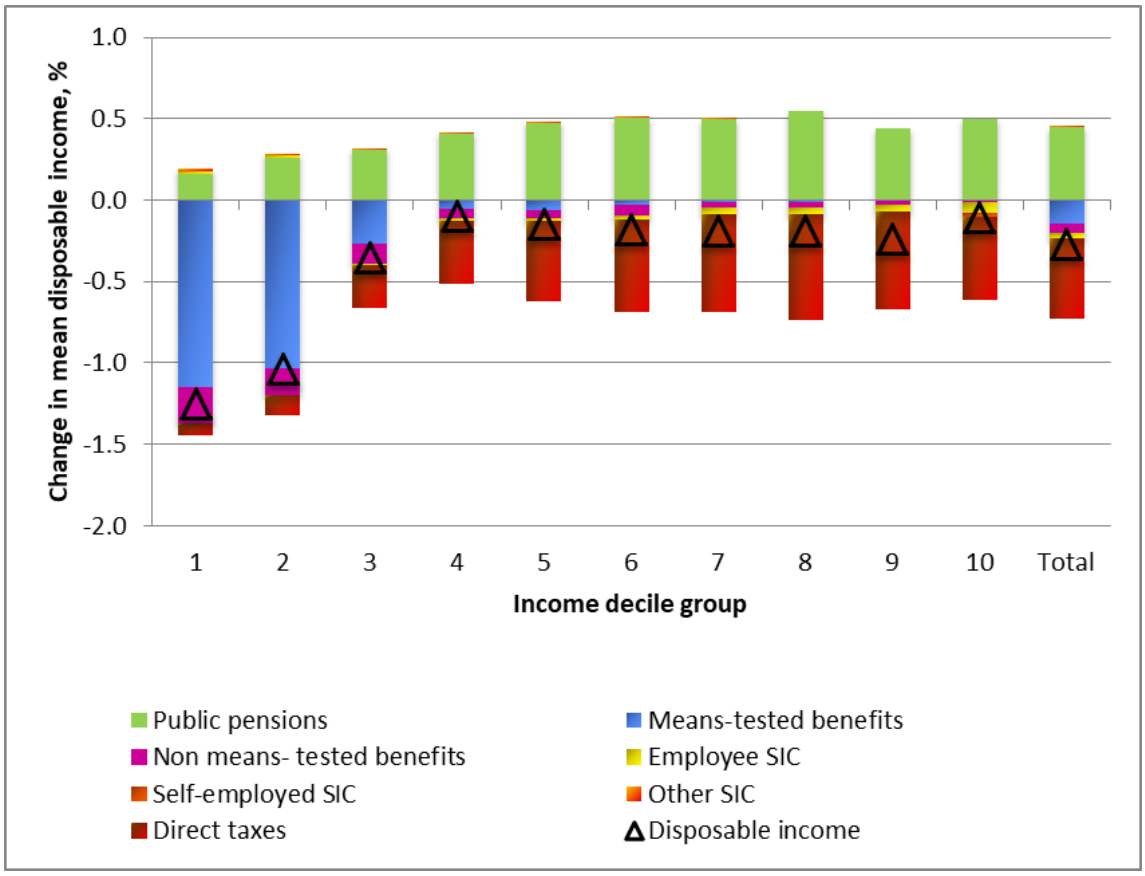
The analysis of the effects of policy changes between 2018 and 2019 shows that overall policy effects were very modest - mean disposable income has decreased by just 0.27%. Notably, there were decreases attributable to direct taxes at the higher end of the income distribution and losses attributable to means-tested benefits for the lowest income deciles, resulting in decreases in average household disposable income. Gains attributable to public pensions partly offset these losses. The effect from all the other components was negligible.

Table 1 (Luxembourg): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.16	-1.15	-0.22	0.02	0.00	0.01	-0.08	**-1.25**
2	0.00	0.26	-1.03	-0.16	0.01	0.00	0.01	-0.13	**-1.04**
3	0.00	0.31	-0.27	-0.12	-0.01	0.00	0.00	-0.27	**-0.36**
4	0.00	0.41	-0.05	-0.06	-0.01	0.00	0.00	-0.39	**-0.10**
5	0.00	0.47	-0.06	-0.05	-0.02	0.00	0.00	-0.49	**-0.15**
6	0.00	0.51	-0.03	-0.07	-0.03	0.00	0.00	-0.57	**-0.18**
7	0.00	0.50	-0.01	-0.04	-0.04	0.00	0.00	-0.60	**-0.19**
8	0.00	0.55	-0.01	-0.04	-0.04	0.00	0.00	-0.65	**-0.19**
9	0.00	0.44	0.00	-0.02	-0.04	0.00	0.00	-0.61	**-0.24**
10	0.00	0.50	-0.01	-0.01	-0.07	-0.02	0.00	-0.51	**-0.11**
Total	**0.00**	**0.45**	**-0.14**	**-0.06**	**-0.03**	**-0.01**	**0.00**	**-0.49**	**-0.27**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Luxembourg): Policy effects in 2018-2019, using the CPI-indexation, %



Hungary

The analysis shows that changes in the tax-benefits system between 2018 and 2019 yield an average overall negative effect of just 0.06% in equivalised disposable income. This was driven by reductions in real terms of non means-tested benefits (-0.11%), means-tested benefits (-0.05), an increase of self-employed social insurance contribution (SIC) (-0.02%) and a reduction of direct taxes (0.12%) and employee SIC (0.02).

Overall the largest contribution to the decrease in disposable income is due to non means-tested benefits. Although there were no structural changes to benefits calculations between 2018 and 2019, amounts of non means-tested benefits - such as social assistance for old age, the regular social assistance benefit and the stand-by allowance – and amounts of non means-tested benefits - such as child care allowance, child raising support, family allowance and maternity grant - depend on the National Minimum Pension value. National Minimum Pension has remained unchanged in nominal terms over time, resulting in a cut in real terms of any benefit linked to it (although almost negligible considering the very small changes in the price index). On the other hand, the National Minimum Wage, used as a base value for the calculation of selected benefits - such as unemployment benefits and job seekers allowance – has increased. Such increase is much higher than the increase registered by the consumer price index, hence balancing out the negative effects due to freezing of National Minimum Pension. On the other hand, this also means that self-employed SIC for those on National Minimum Wage (or under) increased faster than inflation, hence the negative effect on household income observed between 2018 to 2019.

Across the income distribution the effects are the most negative in the first decile (-0.27%) whilst other decile groups gradually lose less of their income.

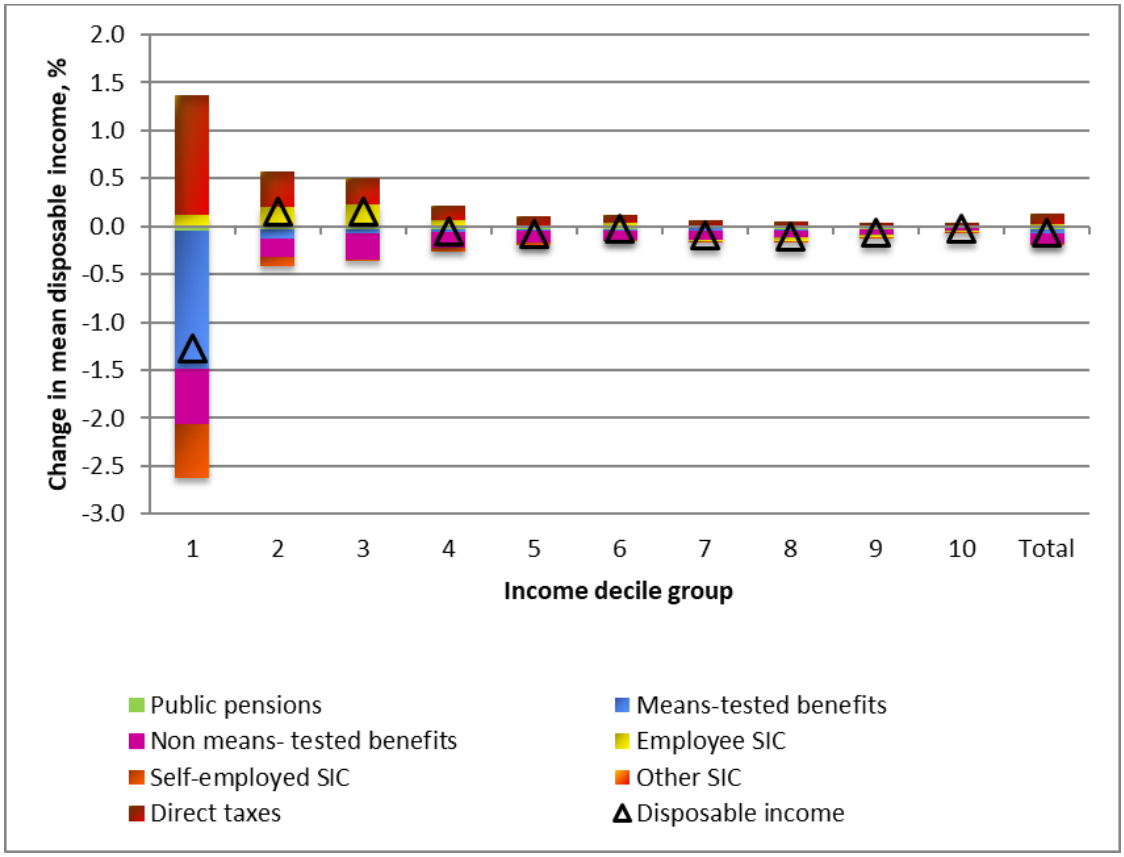
The policy changes implemented between 2018 and 2019 have positive effects only for the second and third income decile groups who gain respectively 0.16% and 0.15% on average. Most negatively impacted was the bottom decile, who in fact lost on average 1.27% of their disposable income against the 0.02% lost by the top decile.

Table 1 (Hungary): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.04	-1.44	-0.58	0.12	-0.57	0.00	1.24	**-1.27**
2	0.00	-0.04	-0.09	-0.19	0.20	-0.10	0.00	0.38	**0.16**
3	0.00	-0.03	-0.05	-0.27	0.23	-0.01	0.00	0.27	**0.15**
4	0.00	-0.03	-0.02	-0.17	0.06	-0.04	0.00	0.15	**-0.05**
5	0.00	-0.03	-0.02	-0.12	-0.01	-0.02	0.00	0.10	**-0.09**
6	0.00	-0.03	-0.02	-0.09	0.03	0.00	0.00	0.09	**-0.02**
7	0.00	-0.02	-0.02	-0.10	-0.02	0.00	0.00	0.07	**-0.09**
8	0.00	-0.03	-0.02	-0.08	-0.04	0.00	0.00	0.06	**-0.11**
9	0.00	-0.03	0.00	-0.06	-0.02	0.00	0.00	0.04	**-0.07**
10	0.00	-0.01	0.00	-0.03	0.00	0.00	0.00	0.03	**-0.02**
Total	**0.00**	**-0.03**	**-0.05**	**-0.11**	**0.02**	**-0.02**	**0.00**	**0.12**	**-0.06**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Hungary): Policy effects in 2018-2019, using the CPI-indexation, %



Malta

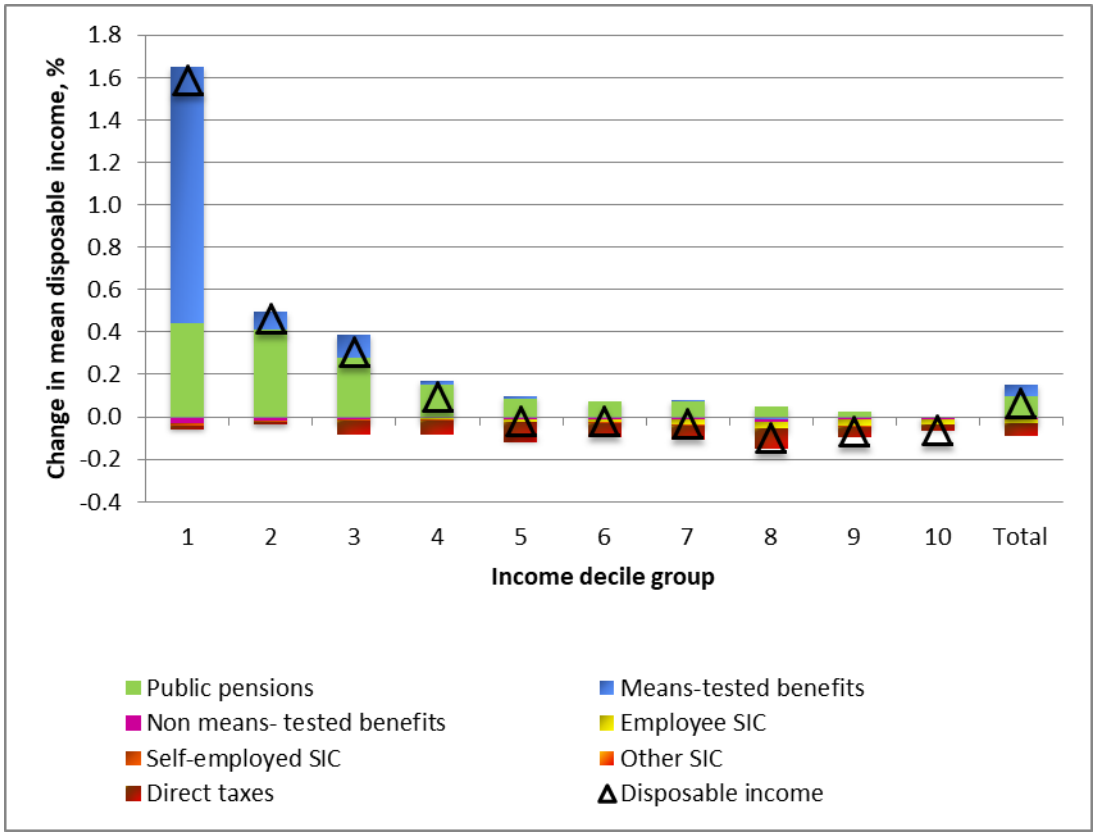
Measured in real terms, policy changes between 2018 and 2019 led to an overall increase in the average household disposable income by around 0.06%. The policy effects for the lower deciles are estimated to be positive, with the largest increase of 1.59% occurring for the lowest decile. The increase amongst the lower-income groups is mainly attributed to an increase in public pensions and means-tested benefits, because of the discretionary increase in public pensions, tax rebates, revisions in the in-work benefit, and rent subsidisation. Rent subsidisation is simulated for 2019 to capture major changes in the benefit rules in that year, even though this results in double-counting as rent subsidisation is also included in the energy benefit variable (2016 values). Moreover, the positive contribution of public pensions to the overall change in disposable income for households above the median income was approximately cancelled by direct taxes. This is because in this scenario the taxation parameters are indexed with the HICP. Overall the mean policy effects of different components were very small and staying mainly within the range of -0.06% to 0.1%. Nominally there were some positive gains but non means-tested benefits, employee SIC and direct taxes were adjusted in most cases below the rate of inflation and therefore resulted in a loss in real terms.

Table 1 (Malta): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.44	1.21	-0.03	0.00	-0.01	0.00	-0.02	**1.59**
2	0.00	0.41	0.09	-0.02	0.00	-0.01	0.00	-0.01	**0.46**
3	0.00	0.28	0.11	-0.01	0.00	-0.01	0.00	-0.06	**0.30**
4	0.00	0.15	0.02	-0.01	0.00	0.00	0.00	-0.06	**0.09**
5	0.00	0.09	0.01	-0.01	-0.01	0.00	0.00	-0.09	**-0.02**
6	0.00	0.07	0.00	-0.01	-0.01	0.00	0.00	-0.07	**-0.02**
7	0.00	0.07	0.00	-0.01	-0.02	-0.01	0.00	-0.06	**-0.03**
8	0.00	0.05	-0.01	-0.01	-0.03	0.00	0.00	-0.10	**-0.10**
9	0.00	0.03	-0.01	-0.01	-0.03	0.00	0.00	-0.05	**-0.07**
10	0.00	0.00	0.00	0.00	-0.02	0.00	0.00	-0.03	**-0.06**
Total	**0.00**	**0.10**	**0.06**	**-0.01**	**-0.02**	**0.00**	**0.00**	**-0.06**	**0.06**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Malta): Policy effects in 2018-2019, using the CPI-indexation, %



The Netherlands

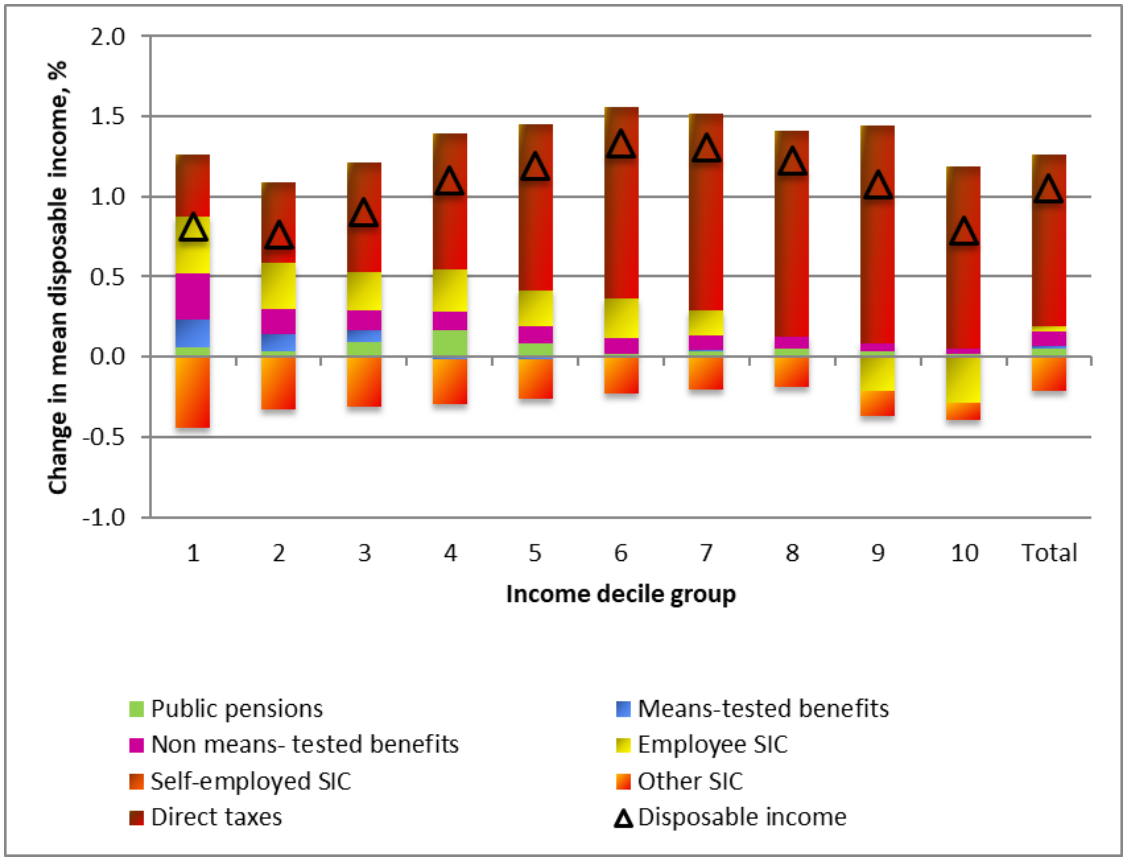
The total effect of (deflated) 2019 policies is an increase in disposable income of 1.05%. This is mainly driven by a decrease in direct taxes (providing a real terms income boost of 1.07%). Although the overall policy effect across the income distribution is positive for all decile groups, the increase in disposable income varies in a range between 0.76% and 1.33%, with the second decile seeing the lowest increase and the sixth decile the highest. For most decile groups, the increase in disposable income driven by a decrease in direct income tax is only partly offset by higher other SICs (in particular health insurance contributions). In the lowest deciles, next to the lower income tax, a slight decrease in employee SICs and a slight increase in non means-tested benefits also make up part of the increase in disposable income.

Table 1 (Netherlands): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.06	0.17	0.29	0.36	0.00	-0.45	0.38	**0.81**
2	0.00	0.04	0.10	0.16	0.29	0.00	-0.33	0.51	**0.76**
3	0.00	0.09	0.08	0.12	0.24	0.00	-0.31	0.69	**0.90**
4	0.00	0.16	-0.02	0.12	0.26	0.00	-0.28	0.85	**1.10**
5	0.00	0.08	-0.01	0.11	0.22	0.00	-0.25	1.04	**1.19**
6	0.00	0.02	0.00	0.10	0.24	0.00	-0.23	1.20	**1.33**
7	0.00	0.04	0.01	0.09	0.16	0.00	-0.20	1.22	**1.31**
8	0.00	0.05	0.01	0.07	0.00	0.00	-0.19	1.29	**1.22**
9	0.00	0.03	0.01	0.05	-0.21	0.00	-0.16	1.36	**1.07**
10	0.00	0.02	0.00	0.03	-0.29	0.00	-0.11	1.13	**0.79**
Total	**0.00**	**0.05**	**0.02**	**0.09**	**0.04**	**0.00**	**-0.21**	**1.07**	**1.05**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Netherlands): Policy effects in 2018-2019, using the CPI-indexation, %



Austria

In 2018-19, households experienced on average a real terms increase of around 0.9% in their disposable incomes. The policy effect was strongest for the third decile with an increase of just under 2.4% while the highest income group experienced no change in incomes.

The income increase in all decile groups (except for the highest decile) was to a large extent driven by the introduction of the family tax credit “Familienbonus Plus” including an additional amount qualifying for negative tax for single earners and single parents with low incomes.

The small gains in each decile related to employee’s social insurance contributions seem to be due to the increase of the lower and upper contribution limits below the CPI (used for EUROMOD).

The increase in terms of means-tested benefits especially in the first and third decile could be due to the indexation of minimum income benefits according to the indexation of minimum pension top-up which was slightly higher than changes in prices.

On average, public pensions have been increased by a slightly lower rate than the rate of price growth (in EUROMOD related to the period from June 2018 to June 2019), which resulted in income losses along the entire income distribution.

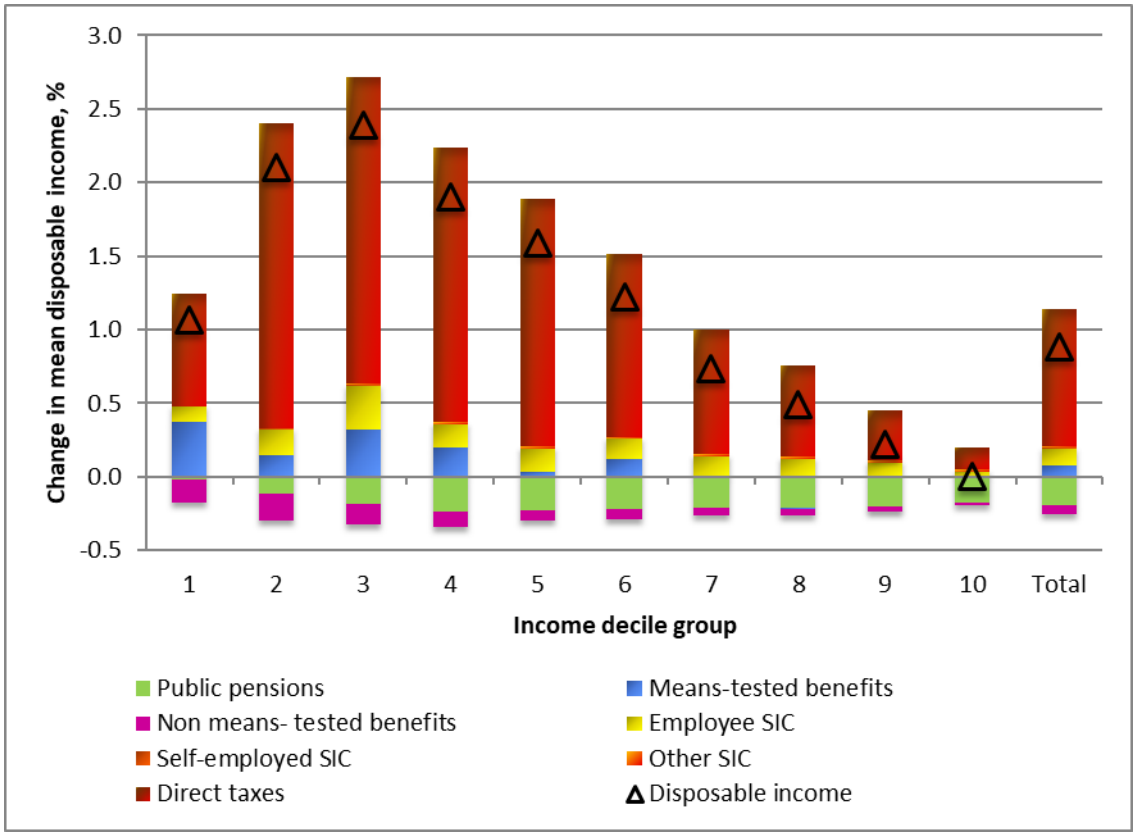
The small loss in terms of non means-tested benefits relates to the non-indexation of universal family benefits with a higher number of children in households at the bottom of the income distribution.

Table 1 (Austria): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.02	0.38	-0.16	0.10	0.00	0.00	0.76	**1.06**
2	0.00	-0.12	0.15	-0.18	0.17	0.00	0.01	2.07	**2.11**
3	0.00	-0.18	0.32	-0.15	0.30	0.00	0.01	2.08	**2.39**
4	0.00	-0.24	0.20	-0.10	0.16	0.00	0.02	1.87	**1.90**
5	0.00	-0.23	0.03	-0.08	0.16	0.00	0.02	1.69	**1.59**
6	0.00	-0.22	0.12	-0.07	0.13	0.00	0.01	1.24	**1.23**
7	0.00	-0.21	0.00	-0.06	0.14	0.00	0.02	0.84	**0.73**
8	0.00	-0.21	-0.01	-0.05	0.12	0.00	0.02	0.62	**0.49**
9	0.00	-0.20	0.00	-0.03	0.09	0.00	0.02	0.34	**0.22**
10	0.00	-0.18	0.00	-0.02	0.03	0.00	0.02	0.14	**0.00**
Total	**0.00**	**-0.19**	**0.07**	**-0.07**	**0.12**	**0.00**	**0.02**	**0.93**	**0.88**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Austria): Policy effects in 2018-2019, using the CPI-indexation, %



Poland

Table 1 and Figure 1 show that between 2018-2019 the average equivalised household disposable income (HDI) – as impacted by changes to the tax-benefit policy system and measured in real values - increased by 0.58%. This change was mainly driven by an increase attributable to non means-tested benefits. Although the effect is positive for the whole distribution, the change for this income component was most pronounced in the lowest deciles. The income group which gained the most was the first income decile with an average increase of equivalised HDI of 4.09%.

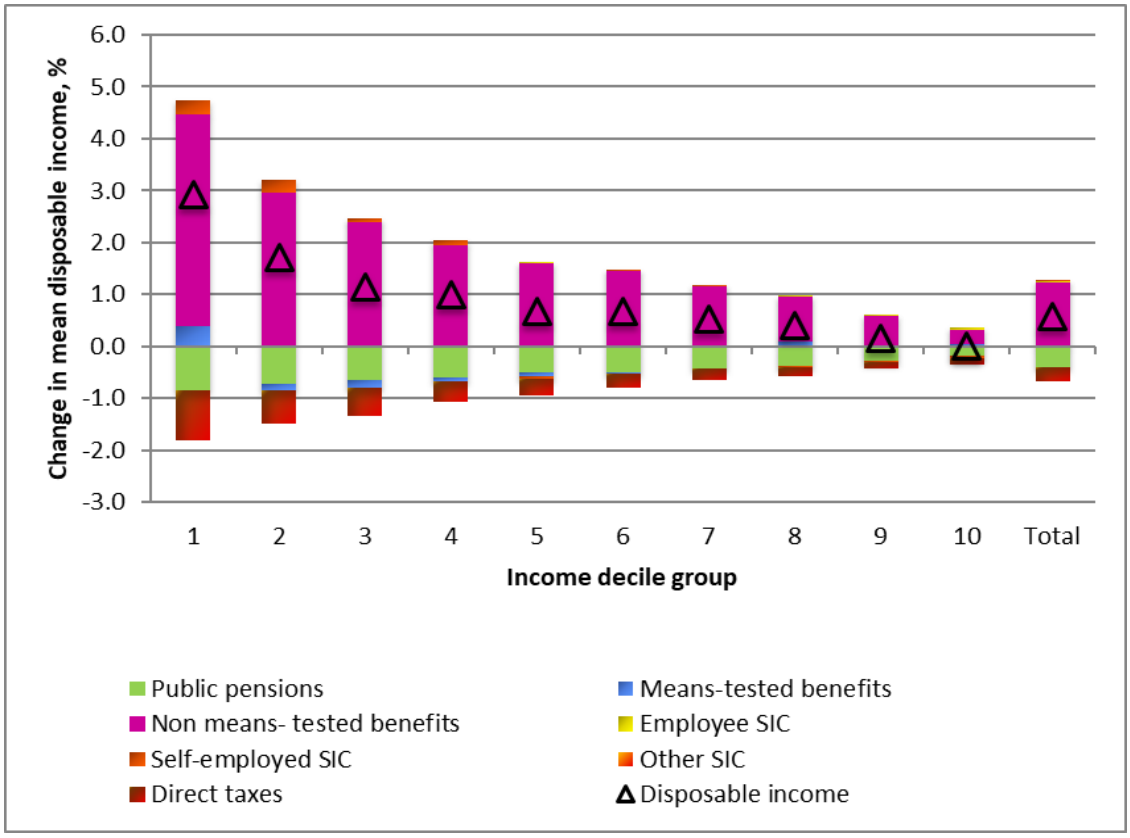
Although smaller, the most visible negative changes in mean equivalised HDI are associated with changes in public pensions and direct taxes. On average public pensions decreased household incomes by 0.41%, reflecting that pension indexation was lower than growth in CPI. For its part, an increasing tax burden reduced equivalised HDI – on average by 0.28%. This is partially explained by the lack of tax parameter indexation to accommodate for inflation. Furthermore, lower income groups had the greatest proportional benefit from increasing non means-tested benefits, especially the one-time thirteenth minimum pension, so they also encountered a more significant increase in their tax burden.

Table 1 (Poland): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.84	0.39	4.09	0.00	0.26	0.00	-0.98	**2.92**
2	0.00	-0.72	-0.12	2.96	0.00	0.24	0.00	-0.66	**1.70**
3	0.00	-0.65	-0.16	2.40	0.00	0.07	0.00	-0.52	**1.14**
4	0.00	-0.60	-0.07	1.95	0.00	0.10	0.00	-0.39	**0.99**
5	0.00	-0.51	-0.07	1.61	0.00	-0.05	0.00	-0.32	**0.67**
6	0.00	-0.51	-0.01	1.46	0.00	0.01	0.00	-0.28	**0.67**
7	0.00	-0.43	0.01	1.15	0.00	0.01	0.00	-0.22	**0.53**
8	0.00	-0.37	0.09	0.86	0.00	-0.04	0.00	-0.16	**0.39**
9	0.00	-0.27	0.01	0.58	0.00	-0.02	0.00	-0.13	**0.17**
10	0.00	-0.17	0.03	0.29	0.04	-0.06	0.00	-0.14	**0.00**
Total	**0.00**	**-0.41**	**0.01**	**1.23**	**0.01**	**0.01**	**0.00**	**-0.28**	**0.58**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Poland): Policy effects in 2018-2019, using the CPI-indexation, %



Portugal

On average, policy changes in 2019 have had almost no effect on household incomes. In general, households' disposable income is increased by 0.18%, with the bottom income deciles recording a greater increment (increase in the first decile of 0.84%). Still, when looking at the changes in income broken down by decile, there are some results that reflect the impact of policies. For instance, the effect attributable to means-tested benefits was larger in the first deciles (0.93% and 0.56% in the first two deciles compared to an overall 0.19%) – this is the expected outcome of increasing child benefits for toddlers, especially in the lower income families, or of increasing in real terms the social integration income amount.

Besides this, changes in social insurance contributions (SICs) paid by the self-employed had, on average, a slightly positive effect (0.05%) on households' disposable income. The self-employed SICs scheme experienced significant changes in 2019 such as the implementation of a new base of incidence based on an actual income, the removal of the exemption for low self-employment income and the decrease in the contributory rate. These changes had, however, different effects along the income distribution: household disposable income decreased at the bottom, most likely due to the abolition of the exemption for low self-employment income; whilst the top decile groups gained on average, mainly due to the decrease in the contributory rate.

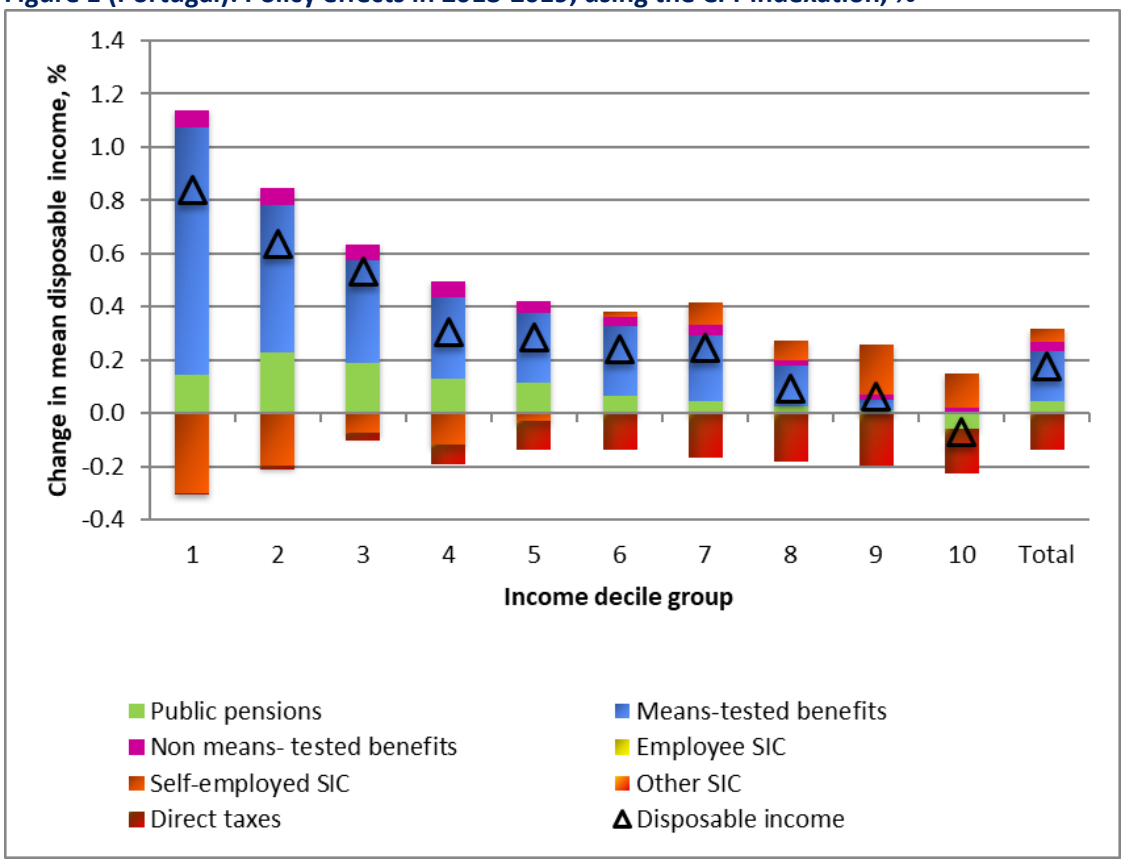
Conversely, the effect of direct taxes on mean household disposable income was negative (-0.14%). The main explanation driving the income losses might be the "bracket creep", i.e. the fact tax brackets did not change along with inflation while wages increased leading, eventually, to higher average tax rates. In this regard, the top income deciles were the ones experiencing the higher income losses in relative terms (from -0.14 to -0.19%).

Table 1 (Portugal): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.14	0.93	0.07	0.00	-0.30	0.00	0.00	**0.84**
2	0.00	0.23	0.56	0.06	0.00	-0.20	0.00	-0.01	**0.63**
3	0.00	0.19	0.39	0.06	0.00	-0.07	0.00	-0.03	**0.53**
4	0.00	0.13	0.30	0.06	0.00	-0.12	0.00	-0.07	**0.30**
5	0.00	0.12	0.26	0.05	0.00	-0.03	0.00	-0.11	**0.28**
6	0.00	0.07	0.26	0.04	0.00	0.02	0.00	-0.14	**0.24**
7	0.00	0.05	0.24	0.04	0.00	0.08	0.00	-0.17	**0.25**
8	0.00	0.03	0.15	0.02	0.00	0.07	0.00	-0.18	**0.09**
9	0.00	0.01	0.04	0.02	0.00	0.19	0.00	-0.19	**0.06**
10	0.00	-0.06	0.01	0.01	0.00	0.13	0.00	-0.16	**-0.07**
Total	**0.00**	**0.04**	**0.19**	**0.03**	**0.00**	**0.05**	**0.00**	**-0.14**	**0.18**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Portugal): Policy effects in 2018-2019, using the CPI-indexation, %



Romania

As a result of policy changes between 2018 and 2019 the disposable income of households has increased on average by approximately 3%. By decile, the income changes are noticeably different with the poorest deciles experiencing a very large increase compared to the richer deciles.

The relatively large effects that we observe for disposable income in the case of the poorest deciles are more likely the consequence of a combination of an increase in the state allowance for children, its amount growing by 50% for children under two years and by 79% for other children. Changes in self-employment income contributions between 2018 and 2019 and an increase by 9.5% on the national minimum wage, well above the consumer prices index used for monetary parameters deflation, might also have also had an effect, especially for the poorest deciles (on average around 6.2% for the lowest three deciles).

The effects are noticeable in the increase of income from non means-tested benefits, by 1.62% overall, but also for the poorest decile, by 12.23%, where most of the families with more than one children are situated.

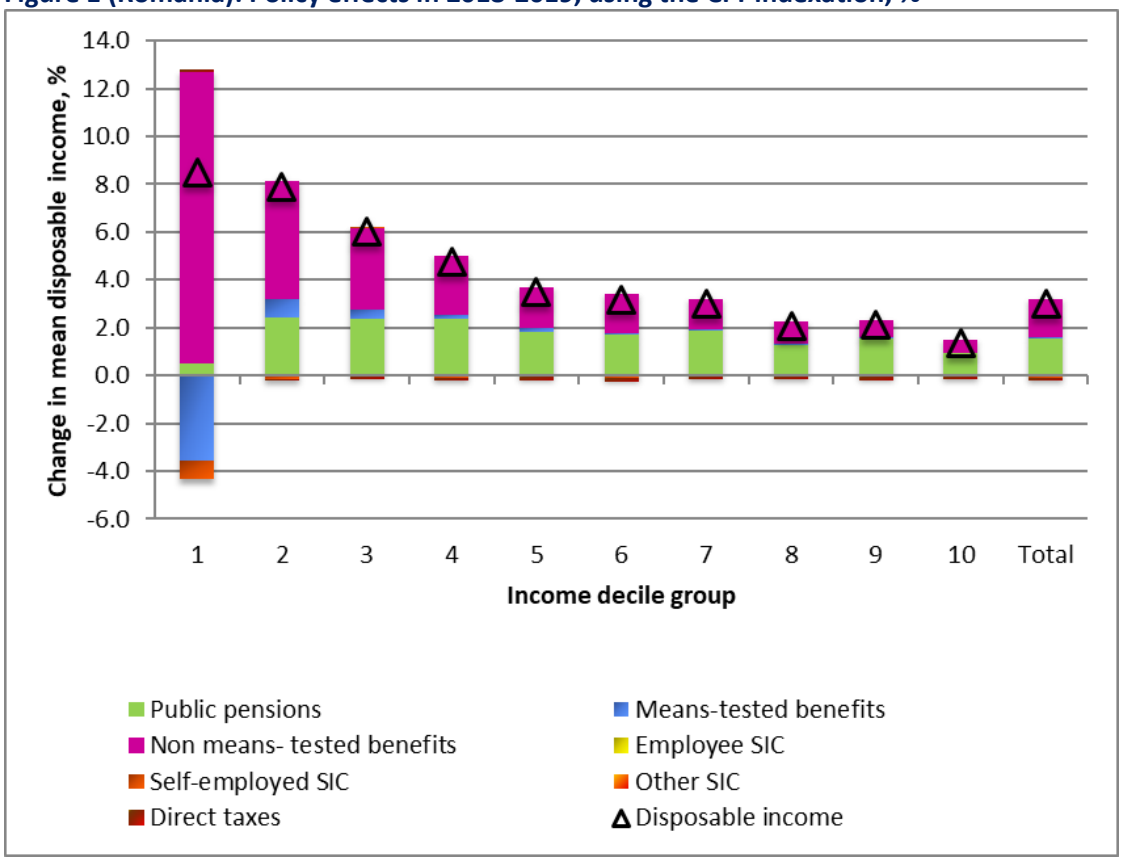
On the other hand, in the area of means-tested benefits, there have been two major changes with large income effects. One of the changes is related to the educational allowance for high-school students, which increased by 39%, but also its threshold for income testing has been multiplied 3.3 times (from 150 Lei to 500 Lei per family member). This change is manifested with a decrease of 3.58% reported for means-tested benefits in the poorest decile, but seems to have increased for the second decile (0.80%).

Table 1 (Romania): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.48	-3.58	12.23	0.00	-0.77	0.00	0.12	**8.47**
2	0.00	2.41	0.80	4.91	0.00	-0.18	0.00	-0.04	**7.90**
3	0.00	2.34	0.40	3.41	0.00	0.03	0.00	-0.15	**6.04**
4	0.00	2.36	0.16	2.50	0.00	-0.12	0.00	-0.12	**4.78**
5	0.00	1.84	0.15	1.69	0.00	-0.05	0.00	-0.14	**3.49**
6	0.00	1.70	0.08	1.62	0.00	-0.12	0.00	-0.13	**3.15**
7	0.00	1.87	0.06	1.27	0.00	-0.04	0.00	-0.14	**3.02**
8	0.00	1.28	0.07	0.89	0.00	-0.05	0.00	-0.13	**2.06**
9	0.00	1.57	0.02	0.72	0.00	-0.06	0.00	-0.14	**2.11**
10	0.00	0.94	0.01	0.56	0.00	-0.06	0.00	-0.10	**1.35**
Total	**0.00**	**1.56**	**0.03**	**1.62**	**0.00**	**-0.08**	**0.00**	**-0.12**	**3.01**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Romania): Policy effects in 2018-2019, using the CPI-indexation, %



Slovenia

Table 1 and Figure 1 show the effects of policy changes in 2018-2019 on mean equivalised household disposable income by income component and income decile group in Slovenia. As can be seen there are no significant changes in 2019 compared to 2108. Disposable income for the total population increases only by 0.03% and the effects of tax/benefits changes are also very small, however quite heterogeneous along the distribution of disposable income. In fact, the lowest and the middle deciles experience a slight increase in disposable income from 0.33% to 0.02%, while the highest deciles experience a mild decrease in disposable income, between -0.03% and zero.

All deciles experienced a decrease of disposable income due to means-tested benefits, direct taxes, employee social insurance contributions, self-employed social insurance contributions, and other social insurance contributions. The decrease in disposable income due to means-tested benefits ranges between -0,01% and -0.27% across deciles. Direct taxes, mainly personal income taxes, represent the factors driving the highest decrease in disposable income between 2018 and 2019, with an annual growth of -0.22% for the total population but with different experience by deciles. The poorest three deciles experienced the lowest decrease in disposable income due to direct taxes. Disposable income also decreased by 0.02% in 2019 due to slightly higher self-employed contributions as well as higher other social insurance contributions. The effect of employee's social insurance contributions on disposable income growth is negative but almost negligible, across all income deciles.

Public pensions represent factors driving the increase in disposable income for all deciles between 2018 and 2019, with an annual growth of 0.2% for the total population and with very slightly higher growth experienced by the poorest deciles. These results can be explained mostly by indexation, which make public pensions increase in real terms, especially for the lowest deciles, where the share of pensions in disposable income is larger.

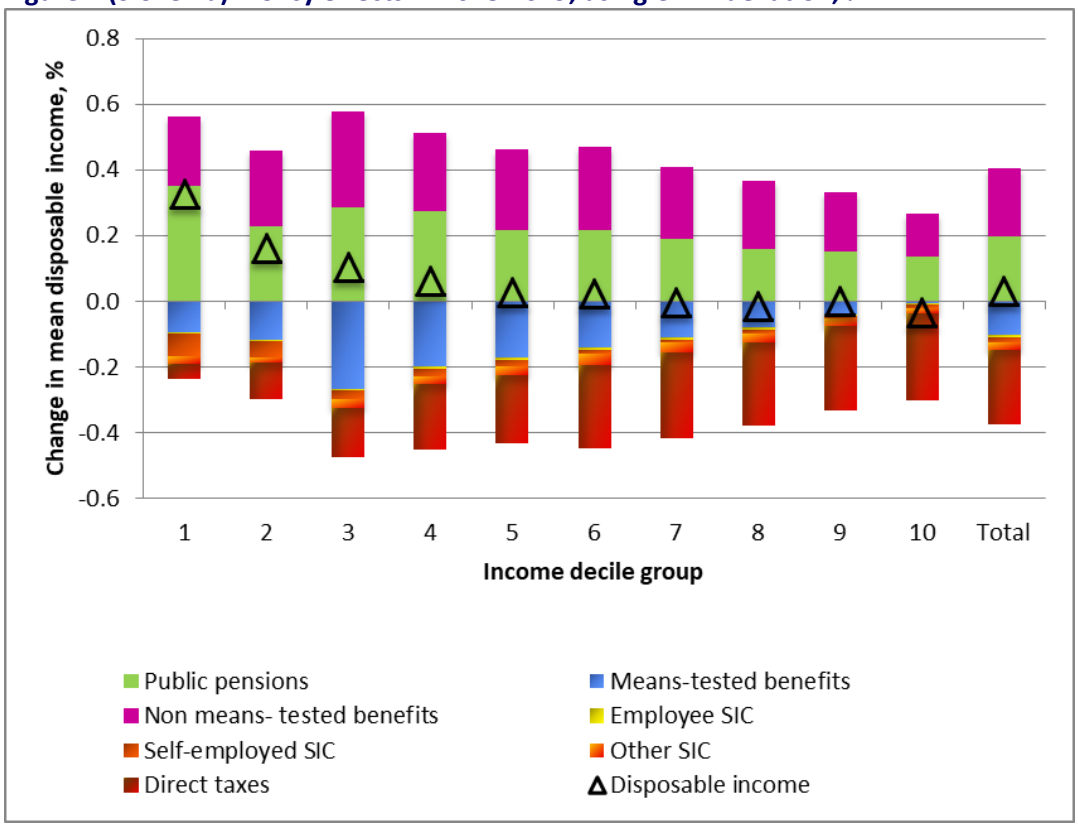
Finally, non means-tested benefits are also factors contributing to disposable income across all income deciles. In total, the disposable income rise attributable to this component is 0.21% on average for the total population.

Table 1 (Slovenia): Policy effects in 2018-2019, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.35	-0.10	0.21	0.00	-0.07	-0.02	-0.05	**0.33**
2	0.00	0.23	-0.12	0.23	-0.01	-0.05	-0.02	-0.11	**0.16**
3	0.00	0.29	-0.27	0.29	-0.01	-0.03	-0.02	-0.15	**0.10**
4	0.00	0.27	-0.20	0.24	-0.01	-0.02	-0.02	-0.20	**0.06**
5	0.00	0.22	-0.17	0.24	-0.01	-0.02	-0.03	-0.21	**0.03**
6	0.00	0.22	-0.14	0.25	-0.01	-0.01	-0.03	-0.26	**0.02**
7	0.00	0.19	-0.11	0.22	-0.01	-0.01	-0.03	-0.26	**-0.01**
8	0.00	0.16	-0.08	0.21	-0.01	-0.01	-0.03	-0.26	**-0.02**
9	0.00	0.15	-0.04	0.18	-0.01	-0.01	-0.02	-0.26	**0.00**
10	0.00	0.14	-0.01	0.13	-0.01	-0.01	-0.02	-0.26	**-0.03**
Total	**0.00**	**0.20**	**-0.10**	**0.21**	**-0.01**	**-0.02**	**-0.02**	**-0.22**	**0.03**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Slovenia): Policy effects in 2018-2019, using CPI-indexation, %



Slovak Republic

In comparison to 2018 policies, (deflated) 2019 policies increased mean household disposable income by approximately 0.43% in total. The change in household disposable income by deciles shows a progressive pattern, i.e., lower income groups gain more in relative terms. Households located in the first income decile experience the highest increase in disposable income across the income distribution (1.17%). The total increase of mean household disposable income is mainly due to changes in means-tested benefits and public pensions along with a decrease of paid taxes.

First, changes in means-tested and non means-tested benefits accounted for an increase in household disposable income of 0.13% and 0.03% respectively. The effect is most likely driven by more generous amounts for these benefits in comparison with the smaller growth of CPI. In this regard, the Minimum Subsistence Level, on which tax allowances and social benefits eligibility depend, increased by 2.8% in 2019, from €199 to €205 per month for single-person households, compared to inflation of 2.3%. Moreover, the amounts of social assistance benefits rose by 5%. Given where the recipients of social assistance benefits are located, it was the first and second deciles which gained the most from the changes in means-tested benefits.

Second, changes in public pensions also contributed to the increase in disposable income as the real value of public pensions increased. The indexation of pensions, of around 2.8%, was higher than the inflation of 2.3%. The distribution of gains across income deciles reflects where recipients of public pensions are located.

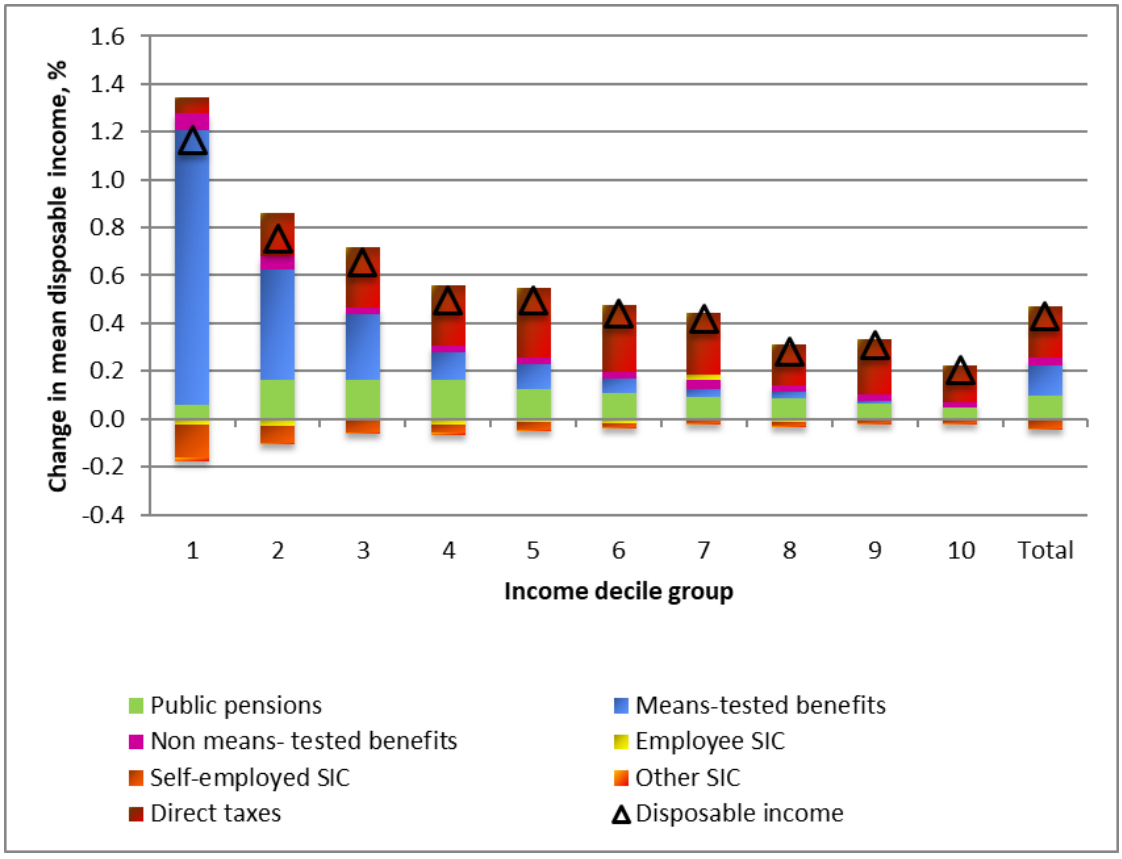
Finally, on one hand, changes in social insurance contributions caused income losses of -0.01% for employees and -0.03% for self-employed. This was most likely due to the increase in the average wage in the economy (lagged 2 years) which is used to calculate the maximum assessment base for social insurance contributions. On the other hand, the increase in 2019 in the amount of the tax credit on dependent children for each child below 6 years old resulted in less taxes being paid. As a result of changes in direct taxes, household disposable income rose across all deciles (on average by 0.22%) accounting for about half of the total income gain between 2018-2019.

Table 1 (Slovak Republic): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.06	1.15	0.07	-0.02	-0.13	-0.02	0.07	**1.17**
2	0.00	0.16	0.46	0.05	-0.03	-0.07	-0.01	0.18	**0.75**
3	0.00	0.16	0.28	0.03	-0.01	-0.05	-0.01	0.25	**0.66**
4	0.00	0.16	0.11	0.03	-0.02	-0.03	-0.01	0.26	**0.50**
5	0.00	0.13	0.11	0.03	-0.01	-0.03	0.00	0.29	**0.50**
6	0.00	0.11	0.06	0.03	-0.02	-0.02	0.00	0.28	**0.44**
7	0.00	0.09	0.03	0.04	0.02	-0.02	0.00	0.26	**0.42**
8	0.00	0.08	0.03	0.03	-0.01	-0.02	0.00	0.17	**0.28**
9	0.00	0.06	0.01	0.03	0.00	-0.02	0.00	0.23	**0.31**
10	0.00	0.05	0.00	0.02	0.00	-0.01	0.00	0.15	**0.21**
Total	**0.00**	**0.10**	**0.13**	**0.03**	**-0.01**	**-0.03**	**0.00**	**0.22**	**0.43**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Slovak Republic): Policy effects in 2018-2019, using the CPI-indexation, %



Finland

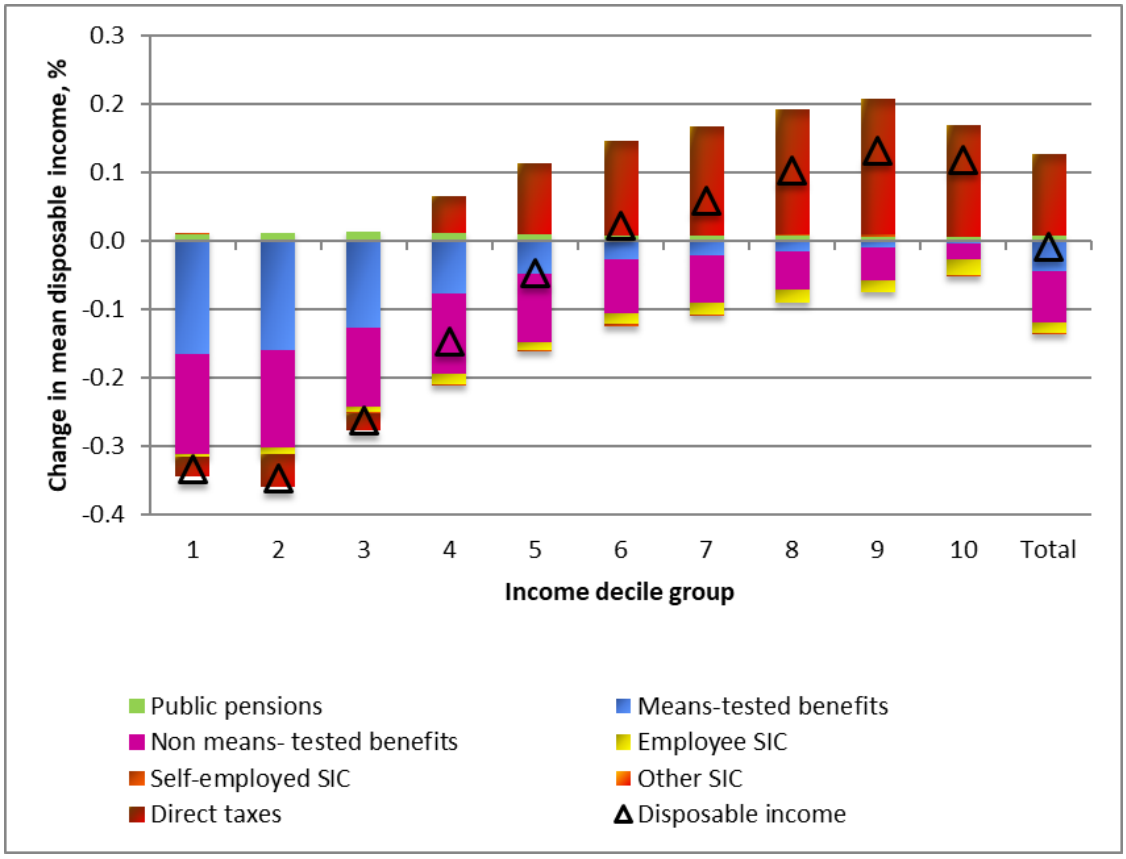
In 2019 policy changes had a clear regressive effect on disposable incomes. The lowest five income deciles experienced a decrease whereas as incomes grew in the top half of the distribution. However, the magnitudes of the changes are relatively small. Taken across the board, the average mean disposable income remains almost completely unaffected. The strongest negative effects are experienced by the first three deciles. The changes in means-tested and non means-tested benefits are the main drivers of this decrease. The positive effect to the top part of the distribution is instead caused by changes in direct taxation that have benefitted higher earners.

Table 1 (Finland): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.01	-0.16	-0.15	0.00	0.00	0.00	-0.03	**-0.33**
2	0.00	0.01	-0.16	-0.14	-0.01	0.00	0.00	-0.05	**-0.35**
3	0.00	0.01	-0.13	-0.11	-0.01	0.00	0.00	-0.03	**-0.26**
4	0.00	0.01	-0.08	-0.12	-0.02	0.00	0.00	0.05	**-0.15**
5	0.00	0.01	-0.05	-0.10	-0.01	0.00	0.00	0.10	**-0.05**
6	0.00	0.01	-0.03	-0.08	-0.01	0.00	0.00	0.14	**0.02**
7	0.00	0.01	-0.02	-0.07	-0.02	0.00	0.00	0.16	**0.06**
8	0.00	0.01	-0.01	-0.06	-0.02	0.00	0.00	0.18	**0.10**
9	0.00	0.01	-0.01	-0.05	-0.02	0.00	0.00	0.20	**0.13**
10	0.00	0.01	0.00	-0.02	-0.02	0.00	0.00	0.16	**0.12**
Total	**0.00**	**0.01**	**-0.04**	**-0.07**	**-0.02**	**0.00**	**0.00**	**0.12**	**-0.01**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Finland): Policy effects in 2018-2019, using the CPI-indexation, %



Sweden

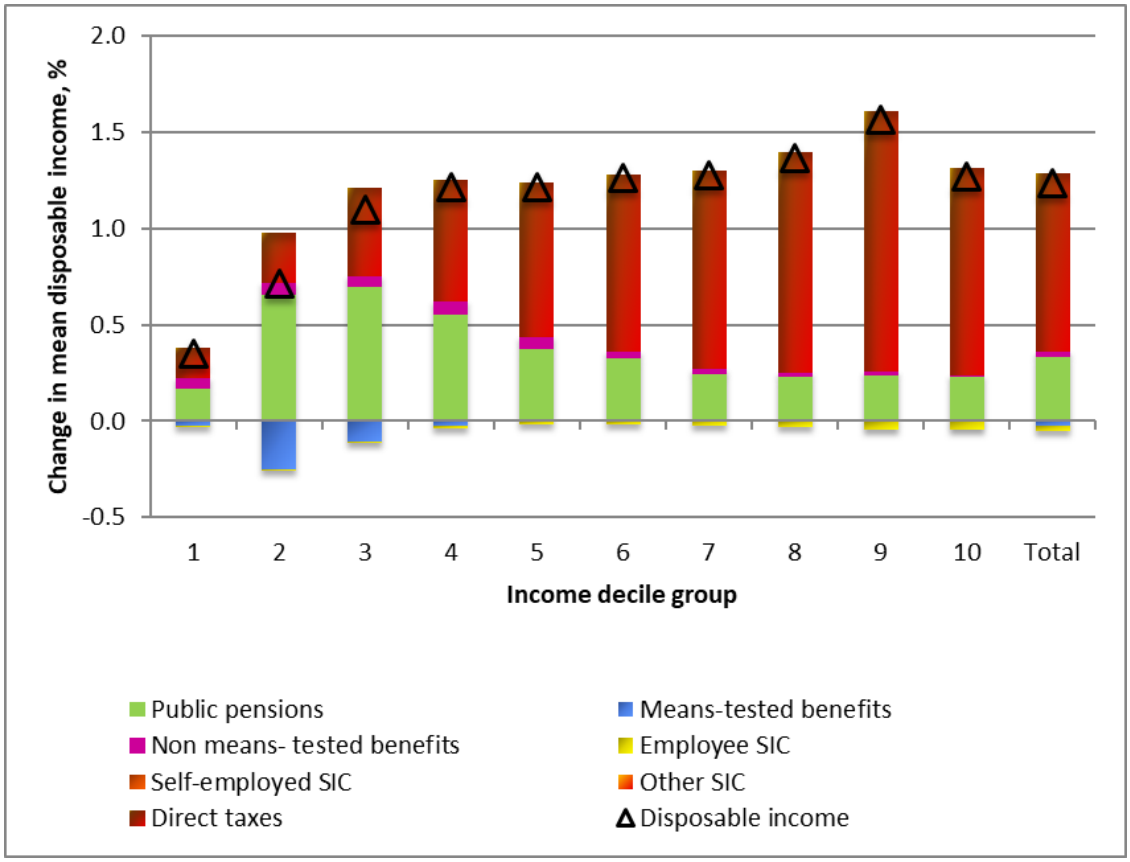
In comparison to 2018 policies, (deflated) 2019 policies increase mean household income by 1.24% in total. This total increase was regressive, with higher income deciles gaining most. Changes in direct taxes accounted for most of the increase in household disposable income (0.93%). The total effect of these changes occurred along the whole distribution but was stronger in the middle and top. Changes in public pensions were also significant (0.33%), reflecting that pension indexation was higher than growth in CPI and reflecting the position of pensioners in the income distribution. Changes in means-tested benefits negatively affected the second and third deciles in particular, which also contributed to the regressivity of the overall impact of the changes. All other tax and benefit instruments have only a very minor distributional impact.

Table 1 (Sweden): Policy effects in 2018-2019, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.16	-0.03	0.06	-0.01	0.00	0.00	0.16	**0.35**
2	0.00	0.65	-0.25	0.06	-0.01	0.00	0.00	0.26	**0.71**
3	0.00	0.70	-0.10	0.05	-0.01	0.00	0.00	0.46	**1.10**
4	0.00	0.55	-0.03	0.06	-0.01	0.00	0.00	0.64	**1.21**
5	0.00	0.38	-0.01	0.06	-0.01	0.00	0.00	0.80	**1.22**
6	0.00	0.32	0.00	0.03	-0.01	0.00	0.00	0.93	**1.26**
7	0.00	0.24	0.00	0.03	-0.02	0.00	0.00	1.03	**1.28**
8	0.00	0.23	0.00	0.02	-0.03	0.00	0.00	1.15	**1.36**
9	0.00	0.24	0.00	0.02	-0.04	0.00	0.00	1.36	**1.57**
10	0.00	0.23	0.00	0.00	-0.05	0.00	0.00	1.08	**1.27**
Total	**0.00**	**0.33**	**-0.03**	**0.03**	**-0.03**	**0.00**	**0.00**	**0.93**	**1.24**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (Sweden): Policy effects in 2018-2019, using the CPI-indexation, %



United Kingdom

The total effect of (deflated) 2019 policies on mean household income is an increase of 0.15%. This is mainly the result of lower direct taxes (contributing a 0.35% increase to the average household's income) and slightly higher public pensions (contributing 0.03%). These effects are only partly offset by lower (in real terms) benefits (-0.12% attributable to means-tested benefits and -0.02% for non means-tested benefits) and slightly higher social insurance contributions.

Despite these modest average changes, the distributional pattern of policy effects between 2018 and 2019 shows a clear regressive effect with the bottom two deciles losing around 0.75% of income and the top four deciles gaining 0.3% of income on average. The bottom part of the income distribution loses from frozen (in nominal value) means-tested and non means-tested benefits and higher Council Tax (in real terms).

Apart from the negative effect for the first decile group, direct taxes are shown by Table 1 to have a positive impact on household disposable income between 2018 and 2019. This is mainly driven by reforms to Personal Income Tax Allowance that has increased faster than inflation, having an average positive effect on disposable household income for households from the third decile group onward.

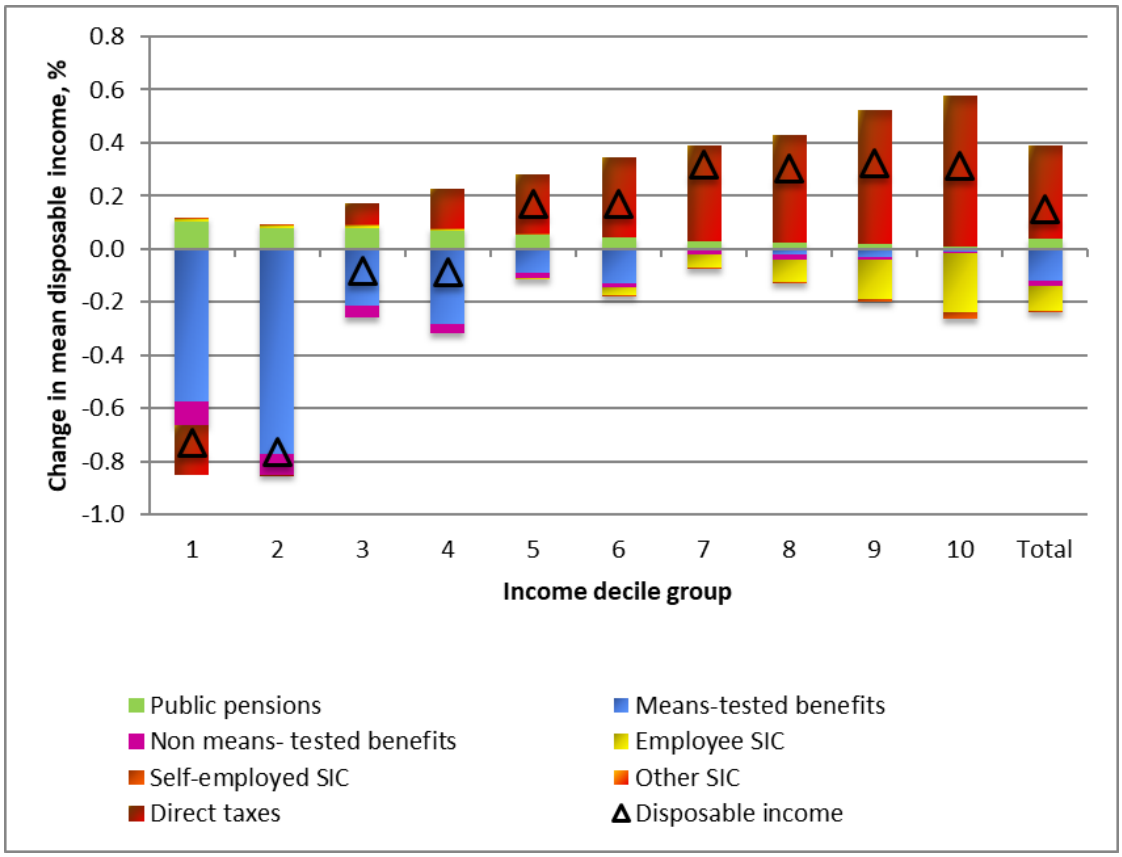
Finally, state pensions rose slightly more than inflation thanks to the triple-lock indexation, meaning that there are small but positive real changes to to this income component across the income distribution.

Table 1 (United Kingdom): Policy effects in 2017-18, using CPI indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.10	-0.57	-0.09	0.01	0.01	0.00	-0.19	**-0.73**
2	0.00	0.08	-0.77	-0.08	0.01	0.00	0.00	0.00	**-0.76**
3	0.00	0.08	-0.21	-0.04	0.01	0.00	0.00	0.08	**-0.08**
4	0.00	0.07	-0.28	-0.03	0.01	0.00	0.00	0.15	**-0.09**
5	0.00	0.06	-0.09	-0.02	0.00	0.00	0.00	0.22	**0.17**
6	0.00	0.04	-0.13	-0.01	-0.03	0.00	0.00	0.30	**0.17**
7	0.00	0.03	0.00	-0.02	-0.05	0.00	0.00	0.36	**0.32**
8	0.00	0.02	-0.02	-0.02	-0.09	-0.01	0.00	0.41	**0.30**
9	0.00	0.02	-0.03	-0.01	-0.15	-0.01	0.00	0.50	**0.32**
10	0.00	0.01	-0.01	0.00	-0.22	-0.02	0.00	0.57	**0.31**
Total	**0.00**	**0.04**	**-0.12**	**-0.02**	**-0.09**	**-0.01**	**0.00**	**0.35**	**0.15**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).
Key (shaded cells): 1.00 represents increase in income >= 1%; 3.00 represents increase >= 3%; 1.00 represents reduction in income >=1%; 3.00 represents reduction >=3%.

Figure 1 (United Kingdom): Policy effects in 2017-18, using CPI indexation, %



References

De Agostini, P., A. Paulus and I. Tasseva, 2016, "The effect of changes in tax-benefit policies on the income distribution in 2008-2015" *EUROMOD Working Paper EM6/16* Colchester: ISER, University of Essex.

Paulus, A. and I. Tasseva, 2018, "Europe Through the Crisis: Discretionary Policy Changes and Automatic Stabilisers", EUROMOD Working Paper EM 16/18, Colchester: ISER, University of Essex.

Tammik M., 2019, "Baseline results from the EU28 EUROMOD: 2015-2018" *EUROMOD Working Paper EM6/19* Colchester: ISER, University of Essex.

Sutherland H. and F. Figari, 2013, "EUROMOD: the European Union tax-benefit microsimulation model" *International Journal of Microsimulation,* 6(1) 4-26.