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Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2015-2016

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Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2015-2016*

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For Belgium, Bulgaria, Denmark, Germany, Spain, Ireland, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, the Netherlands, Portugal, Romania and Sweden we make use of micro-data from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat (59/2013-EU-SILC-LFS). For Czech Republic, Estonia, Greece, Luxembourg, Poland, Slovenia and Finland we use the Eurostat EU-SILC together with national variables provided by respective national statistical offices. For France, Italy, Austria and the Slovak Republic we use the national EU-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 Archive. The usual disclaimers apply.

Contents

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 and pension policy changes between 2015 and 2016. It follows the initial publication last year of a similar analysis covering policy changes between 2013 and 2014 and 2014 and 2015 which has been updated to account for the availability of more recent input micro-data, model extensions and corrections and finalised HICP values for 2015.[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 2016 tax-benefit policies (deflating the tax-benefit monetary parameters by Eurostat's Harmonized Index of Consumer Prices, HICP) and household disposable incomes simulated under 2015 policies. The difference is expressed as a percentage of mean household disposable income in 2015. The population is ranked into decile groups based on their equivalised household disposable income in 2015 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 Eurostat's HICP are shown in Table A below.[4] This indicates how low inflation was in almost all countries and negative in some. Thus we would not expect large policy effects to arise due to lack of indexation of tax thresholds, benefit levels or pensions payments. Nevertheless, given that the values are projections and were calculated before statistics on the whole year were available, an annex will be added to this paper once relevant statistics become available which will include updated tables and figures run on finalised HICP values. While unlikely to make a big difference in times of low inflation, the provisional nature of the indexes is something that the reader should bear in mind.

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

[2] EUROMOD (updated 2017) "Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2013-14 and 2014-15", Institute for Social and Economic Research, 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.

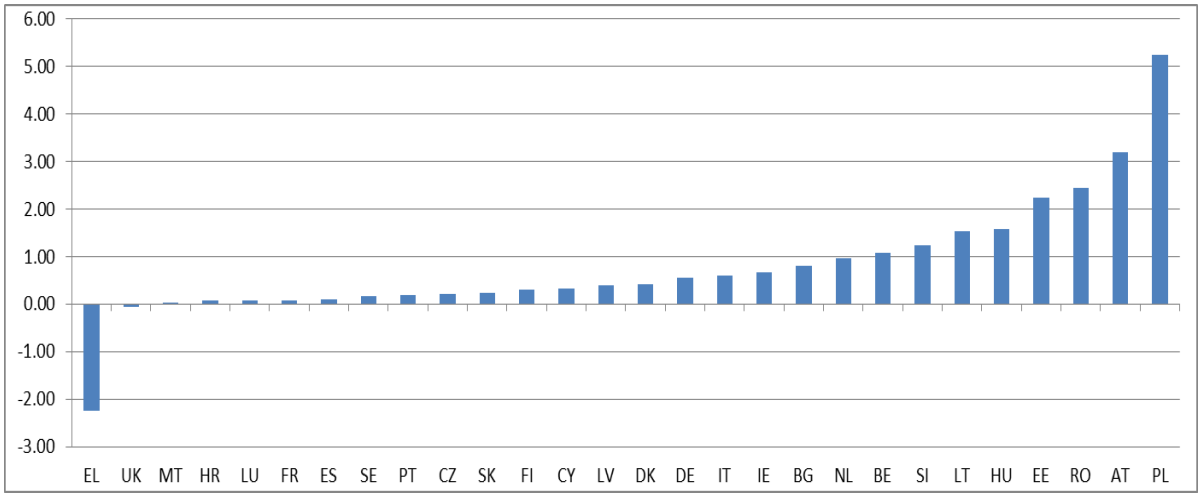
[4] The information in the table also explains how 2016 values were calculated given that the analysis was done before statistics on the whole year were available. While not making a big difference in times of low inflation, this is an aspect of this analysis that needs further harmonisation.

For most countries, the analysis makes use of micro-data from the EU Statistics on Income and Living Conditions (EU-SILC) for 2014 (some countries use 2012 data, Latvia uses 2015 data) with market incomes updated to the starting year in each analysis – 2015. For the UK we make use of data from the Family Resources Survey (FRS) for 2013-2014 with incomes updated to 2015.

Results and a cross-country summary

Figure A summarises the average policy effect on average household disposable income across all EU-28 countries. The effect ranges from a decrease of 2.24% of household income in Greece to an increase of 5.25% of household income in Poland.

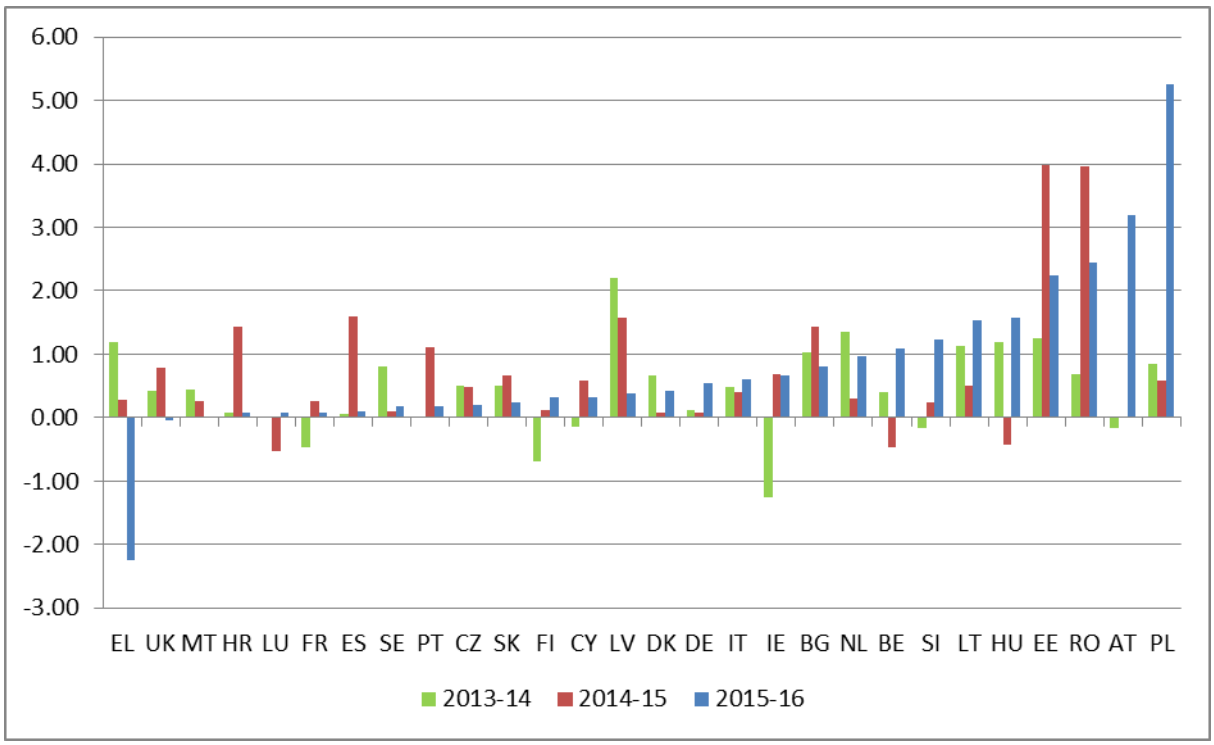
Figure A: Change in household disposable income (%) as a result of policy effects 2015-2016, using HICP indexation



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 (roughly 7.5 % points) and the individual figures for Greece and Poland in the context of recent years, Figure B provides the equivalent information for each of 2013-2014, 2014-2015 and 2015-2016.

Of the three periods analysed, 2015-2016 provides the largest range in effect across the EU-28. Both the decrease in incomes in Greece and the increase in incomes in Poland that can be attributed to policy change are higher than their equivalents in the two previous periods (for 2014-2015 we see a range of roughly 4.5 % points (from -0.52% LU through 3.98% EE) and, for 2013-2014, a range of around 3.5 % points (from -1.25% IE through 2.2% LV). In Poland, the magnitude of the increase is due in large part to the implementation of the means-tested Parental Allowance, especially the Childcare Allowance. In Greece, losses in income stemmed mainly from increases to both social insurance contributions and the solidarity contribution, plus the introduction of an upper limit to public pensions – these changes impacting most heavily on the highest income deciles.

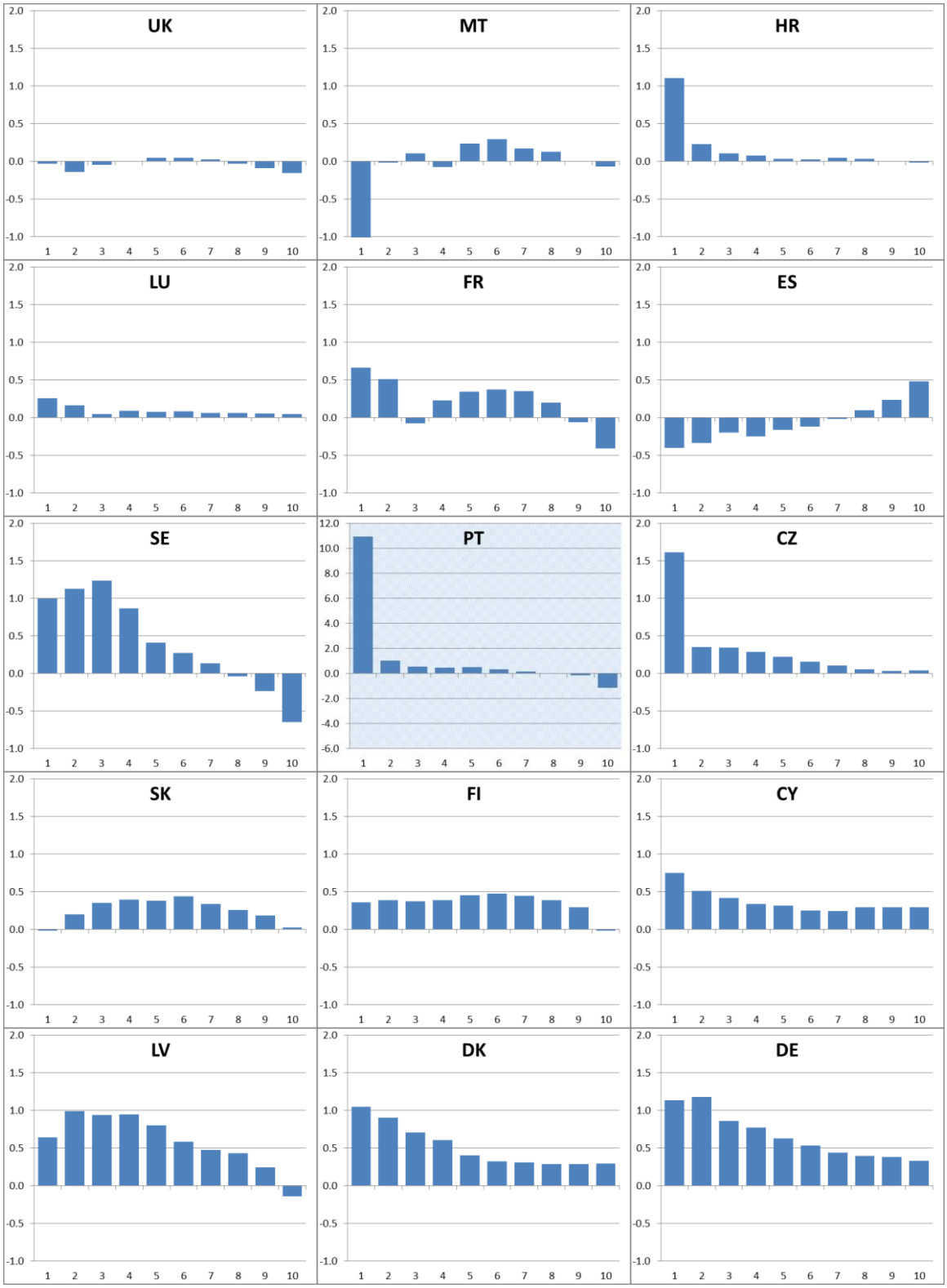
Figure B: Change in household disposable income (%) as a result of policy effects 2013-2014, 2014-2015 and 2015-2016, using HICP indexation

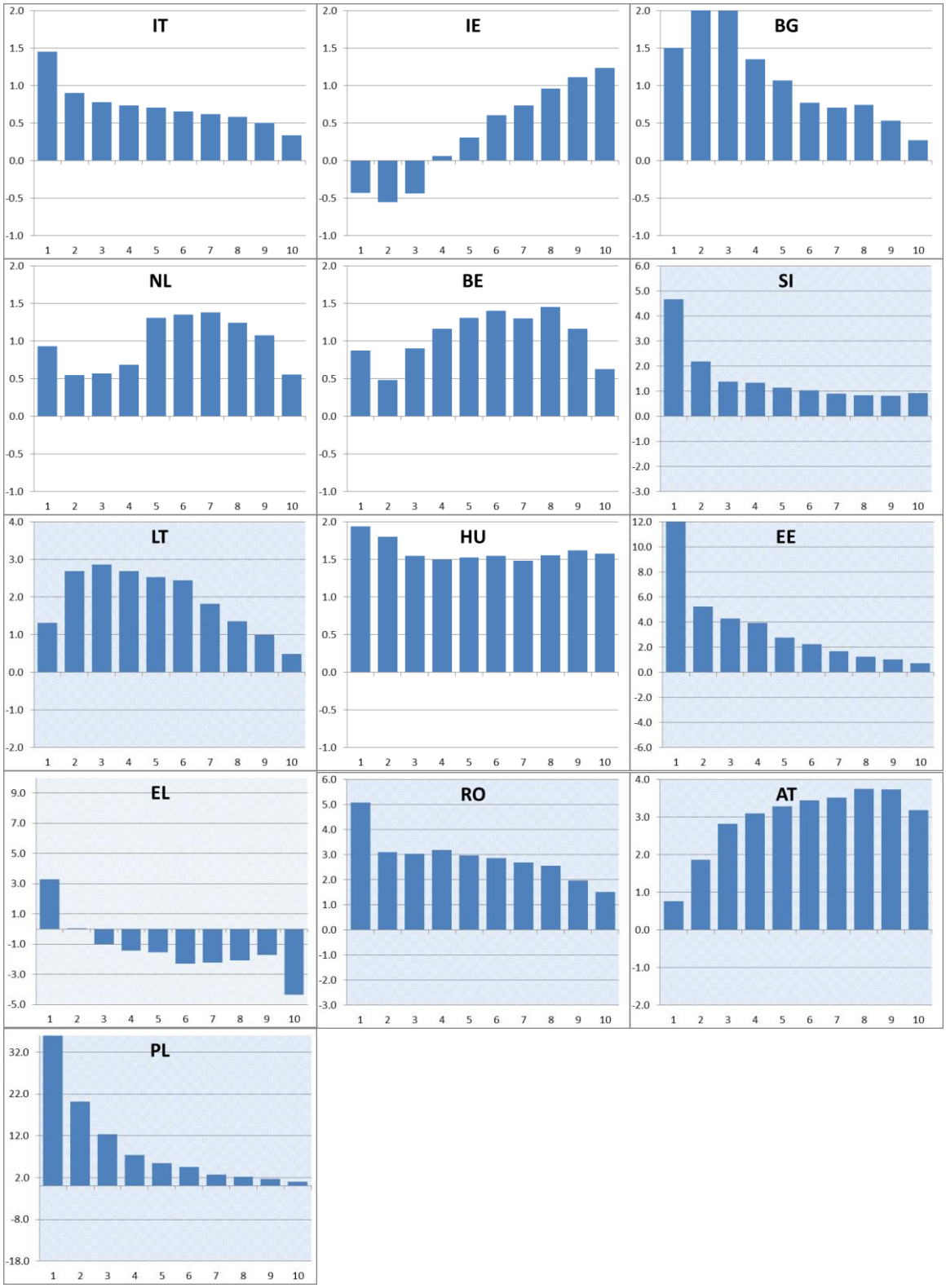


The distributional effects across all the EU-28 countries due to policy changes between 2015-2016 are summarised in Figure C, breaking down the change into that for each decile group. It shows countries ordered by the magnitude of the average change in income. In line with previous years, the effects were progressive (increases in income worth more, or decreases worth less, as a % of household income at lower incomes than at higher incomes) in most countries.

Whilst a progressive effect is discernible in the majority of countries, the effect is clearly regressive in Ireland, Spain and Austria. Ireland stands alone as the only country to show a regressive effect in each of the periods that this series of reports covers (2013-2014 onwards). In another set of countries – Belgium, Malta, Netherlands, Slovak Republic and the United Kingdom – gains are focused mainly in the middle deciles of the income range, providing an inverted U shaped distribution. In some countries the net effects were broadly distributional neutral, Hungary being the clearest example.

Figure C: Change in household disposable income (%) by income decile group as a result of policy effects 2015-2016, using HICP indexation





Notes: countries ordered smallest to largest average change in income; shaded plot area denotes country-specific scale used due to size of effects

Interpreting the results

First, the reader is reminded of two 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.

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 some 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.[5] It is not possible to simulate all policies because of 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, 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 may result in 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 contributory benefits (e.g. to cover sickness, unemployment or maternity) have been assumed to rise in line with earnings in the previous year. 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]

[5] See Makovec and Tammik (2017).
[6] https://www.euromod.ac.uk/using-euromod/country-reports

Change in prices 2015-2016

Table A shows the value of the change in HICP. It also explains how 2016 values have been calculated, before the end of the year.

Table A: Eurostat's Harmonized Index of Consumer Prices (HICP), 2016

Country	HICP	Notes, sources and methods of projection
Belgium	1.012	Eurostat monthly data averaged for the first 6 months
Bulgaria	0.992	Ministry of Finance forecast (http://www.minfin.bg/document/17897:2)
Czech Republic	1.005	Ministry of Finance forecast (http://www.mfcr.cz/cs/verejny-sektor/prognozy/makroekonomicka-predikce)
Denmark	1.000	AMECO projections [ZCPIH]
Germany	0.996	Eurostat monthly data averaged for the first 3 months
Estonia	1.009	Ministry of Finance forecast
Ireland	1.013	Eurostat monthly data averaged for the first 5 months
Greece	0.989	ElStat monthly data averaged for the first 8 months
Spain	1.009	AMECO projections [ZCPIH]
France	0.999	Eurostat monthly data averaged for the first 5 months
Croatia	1.003	EC forecast
Italy	0.997	Eurostat monthly data averaged for the first 6 months
Cyprus	0.989	AMECO projections [ZCPIH]
Latvia	1.002	AMECO projections [ZCPIH]
Lithuania	1.005	Eurostat monthly data averaged for the first 6 months
Luxembourg	1.001	STATEC
Hungary	1.004	AMECO projections [ZCPIH]
Malta	1.010	Eurostat
The Netherlands	1.000	Provisional figures based on statline.cbs.nl (Statistics Netherlands)
Austria	1.001	AMECO projections [ZCPIH]
Poland	0.997	
Portugal	1.005	CPI growth forecast. PT Central Bank, Economic Projections
Romania	0.992	Eurostat monthly data averaged for the first 5 months
Slovak Republic	0.999	Eurostat monthly data averaged for the first 5 months
Slovenia	0.984	Eurostat
Finland	0.998	AMECO projections [ZCPIH]
Sweden	1.016	Eurostat
United Kingdom	1.009	Projections use Office for Budget Responsibility CPI forecast

Belgium

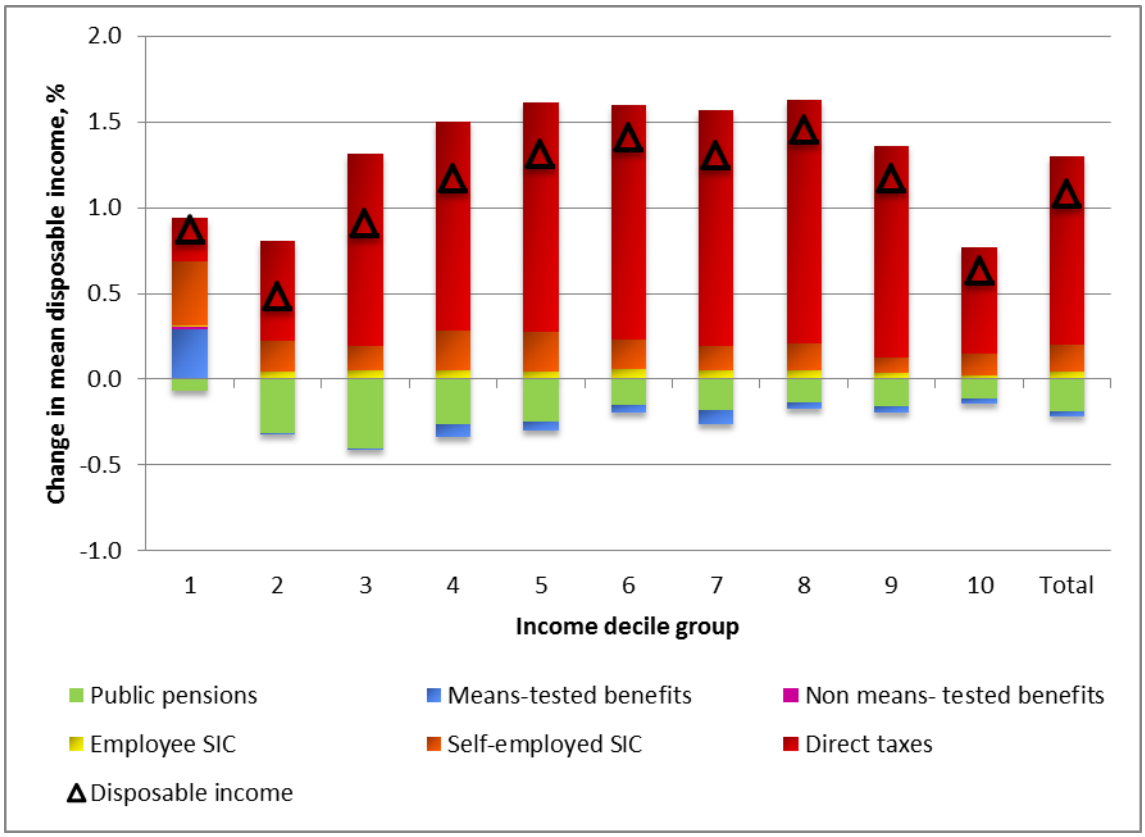
The average increase in disposable income due to policy changes is 1.08%. Incomes have grown throughout the distribution, with the fifth to the eighth deciles having the highest gains compared to the rest. The changes are mainly driven by the reduction in direct taxes which resulted in a 1.09% growth in disposable income on average. This was reinforced by reductions in social insurance contributions for the self-employed due to the tax shift. The rate for the self-employed social contributions will be systematically reduced in the coming years. In 2016, the rate was reduced from 22% to 21.5%. In 2017 and 2018 it will be further reduced to 21% and 20.5%, respectively. These positive changes in incomes due to the fiscal system were partially off-set by reductions in the real value of pension benefits (by -0.19% on average), with the highest losses in the second and third deciles of income distribution.

Table 1 (Belgium): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.07	0.29	0.01	0.01	0.37	0.26	0.87
2	0.00	-0.31	-0.01	0.00	0.04	0.18	0.58	0.48
3	0.00	-0.41	0.00	0.00	0.05	0.15	1.12	0.91
4	0.00	-0.26	-0.07	0.00	0.04	0.23	1.22	1.17
5	0.00	-0.25	-0.05	0.00	0.04	0.24	1.33	1.31
6	0.00	-0.15	-0.04	0.01	0.05	0.17	1.37	1.40
7	0.00	-0.18	-0.08	0.01	0.04	0.14	1.37	1.30
8	0.00	-0.14	-0.04	0.01	0.05	0.15	1.42	1.46
9	0.00	-0.16	-0.03	0.01	0.03	0.08	1.23	1.17
10	0.00	-0.11	-0.03	0.00	0.02	0.12	0.62	0.63
Total	**0.00**	**-0.19**	**-0.03**	**0.00**	**0.04**	**0.16**	**1.09**	**1.08**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Belgium): Policy effects in 2015-2016, using the CPI-indexation, %



Bulgaria

In 2015-16, household disposable income increased on average by 0.81% in real terms. The increase affected all decile groups, but in the bottom three groups the effect was most considerable – a 1.5% increase for the first decile, 2.08% for the second and 2% for the third group.

Public pensions were indexed between 2015 and 2016 and their nominal value increased by about 2 percentage points. Additionally, a lump-sum supplement was given for the pensioners with lowest pensions in April 2016. This increase affected all decile groups, but contributed mostly at the bottom of the income distribution. The increase in household disposable income due to the indexation of the pension is 0.76% on average, and between 1.28% and 2.19% in the first three groups. The indexation had a minor income-increasing effect in the two highest income deciles – less than 0.5%.

There is very slight pro-poor policy effect in the first (0.2%) and third decile group (0.32%) due to means-tested benefits. This was mostly driven by the small increase in the means-tested child benefit for families with one and three children. However, there was no change in the benefit for two-child families and a decrease in the child benefit for families with four and more children.

There was a negligible increase in the household disposable income due to non means-tested benefits. The lack of new policies in the employee and self–employed SIC, and in direct taxation is reflected in the lack of change in disposable income due to these sources. The upper contributory limit for the calculation of SICs was kept nominally constant. As a result, in real terms (due to deflation) there was a very small increase in SIC liabilities which contributed to in a tiny income loss for the top decile group. Although tax allowances were also kept nominally the same between 2015 and 2016, we do not find any effect on household incomes in real terms.

Table 1 (Bulgaria): Policy effects in 2015-16, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	1.28	0.20	0.02	0.00	0.00	0.00	1.50
2	0.00	2.19	-0.12	0.01	0.00	0.00	0.00	2.08
3	0.00	1.68	0.32	0.00	0.00	0.00	0.00	2.00
4	0.00	1.29	0.06	0.01	0.00	0.00	0.00	1.36
5	0.00	0.99	0.04	0.04	0.00	0.00	0.00	1.07
6	0.00	0.82	-0.08	0.04	0.00	0.00	0.00	0.78
7	0.00	0.67	0.01	0.03	0.00	0.00	0.00	0.71
8	0.00	0.69	0.00	0.06	0.00	0.00	0.00	0.75
9	0.00	0.49	0.00	0.04	0.00	0.00	0.00	0.53
10	0.00	0.26	0.00	0.03	-0.01	-0.01	0.00	0.27
Total	**0.00**	**0.76**	**0.02**	**0.03**	**0.00**	**0.00**	**0.00**	**0.81**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Bulgaria): Policy effects in 2015-16, using CPI-indexation, %

Czech Republic

Overall, the real disposable income of the population has increased by 0.2% between 2015 and 2016. Similar to the 2014-2015 trend, changes in disposable income were of a progressive character. By far the highest increase in disposable income has been observed for the first decile (1.61%). Disposable income of the second to fifth decile has grown by around 0.3%. For the highest five deciles much lower rates of growth were experienced (0.16% and below).

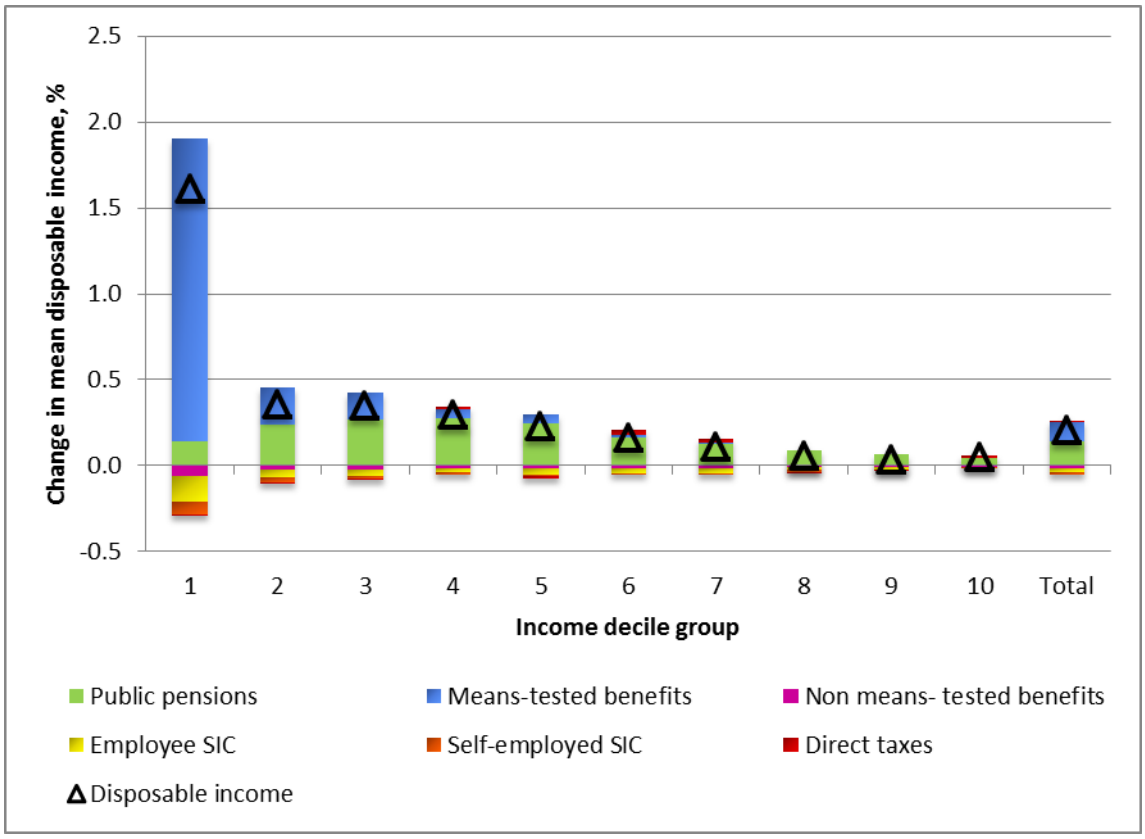
The substantial increase in the income of the bottom decile in 2016 was mostly driven by changes in means-tested benefits, specifically by the changes in housing benefit related to the assessment of housing costs, which were beneficial for tenants. Another important factor which promoted income growth in the bottom half of the income distribution was an increase in public pensions. A further increase in the minimum wage enlarged the social insurance contributions base, which had a negative effect on disposable incomes of families at the bottom of the income distribution (lower incomes due to higher employee SIC).

Table 1 (Czech Republic): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.14	1.76	-0.06	-0.15	-0.07	-0.01	1.61
2	0.00	0.24	0.22	-0.02	-0.05	-0.03	-0.01	0.35
3	0.00	0.27	0.15	-0.03	-0.04	-0.01	0.00	0.35
4	0.00	0.27	0.06	-0.01	-0.03	-0.01	0.02	0.29
5	0.00	0.25	0.05	-0.02	-0.03	-0.01	-0.01	0.23
6	0.00	0.16	0.02	-0.02	-0.03	-0.01	0.03	0.16
7	0.00	0.13	0.01	-0.02	-0.03	-0.01	0.02	0.10
8	0.00	0.09	0.00	-0.01	-0.01	-0.01	0.00	0.06
9	0.00	0.07	0.00	-0.01	-0.01	-0.01	-0.01	0.04
10	0.00	0.04	0.00	-0.01	0.00	-0.01	0.02	0.05
Total	**0.00**	**0.14**	**0.11**	**-0.02**	**-0.03**	**-0.01**	**0.01**	**0.20**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Czech Republic): Policy effects in 2015-2016, using the CPI-indexation, %



Denmark

The total effect of (deflated) 2016 policies on mean income is relatively small (0.42%). No major reforms have taken place from 2015 to 2016. Thus, increases in income are mostly due to the annual increase of benefit and pension payments as well as tax allowances. Overall, only the increase in monthly amounts of the supplementary labour market contribution (ATP-bidrag) has led to a small decrease in overall income.

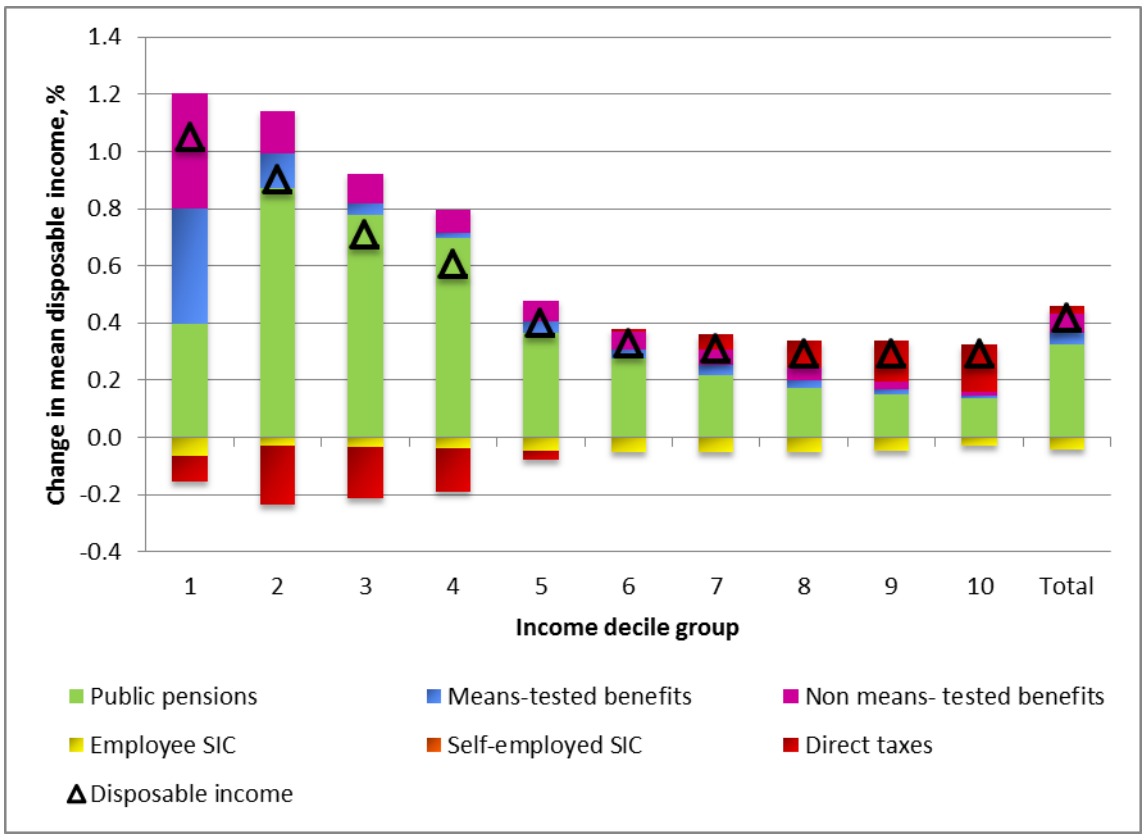
Changes by income groups show a progressive pattern with households at the bottom of the income distribution experiencing a higher increase in disposable income than households at the top. The increase in income of the bottom decile group is based on an increase in means-tested and non-means tested benefits, as well as increase in public pensions. The increase of all other income groups is mostly based on an increase in public pensions.

Table 1 (Denmark): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.40	0.40	0.41	-0.06	0.00	-0.09	1.05
2	0.00	0.87	0.12	0.15	-0.03	0.00	-0.21	0.90
3	0.00	0.78	0.04	0.10	-0.03	0.00	-0.18	0.71
4	0.00	0.70	0.02	0.08	-0.04	0.00	-0.15	0.61
5	0.00	0.37	0.04	0.07	-0.05	0.00	-0.03	0.40
6	0.00	0.28	0.03	0.06	-0.05	0.00	0.01	0.33
7	0.00	0.22	0.04	0.05	-0.05	0.00	0.06	0.31
8	0.00	0.17	0.03	0.04	-0.05	0.00	0.09	0.29
9	0.00	0.15	0.02	0.03	-0.05	0.00	0.14	0.29
10	0.00	0.14	0.01	0.01	-0.03	0.00	0.16	0.29
Total	**0.00**	**0.33**	**0.04**	**0.06**	**-0.04**	**0.00**	**0.03**	**0.42**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure1 (Denmark): Policy effects in 2015-2016, using the CPI-indexation, %



Germany

In 2015-16, households experienced on average a real income gain of 0.55%. Similar to the two previous years, the policy effect in the period 2015-16 was also progressive and had a small income-increasing effect: the income gain was larger at the bottom of the distribution (1.14% in the first decile group) than at the top (0.34% in the tenth decile group). The main effect in the bottom two decile groups was driven by an increase in means-tested benefits and in public pensions. Within the means-tested benefits, the strongest effect was due to an increase of housing benefits (Wohngeld) as well as a slight increase in the basic rate and means-test value for Unemployment benefit II (Arbeitslosengeld II), old-age social assistance (Grundsicherung im Alter und bei Erwerbsminderung) and basic social assistance (Sozialhilfe). Non-means-tested benefits such as the child benefit (Kindergeld) and the long-term care benefits from statutory insurance (Pflegegeld) also increased slightly which led to very small income gains for all households.

Public pensions increased both in nominal and real terms, yielding a small income gain for all households, especially for those in the lower half of the income distribution.

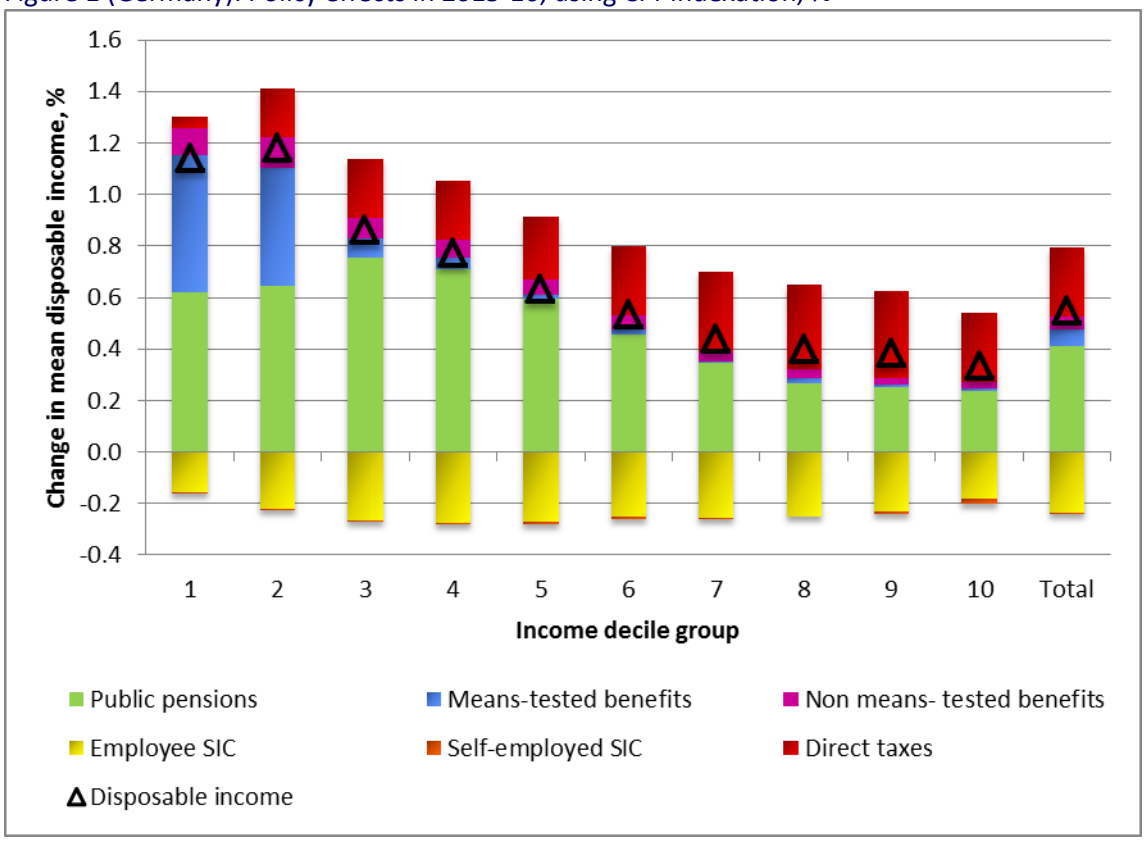
Between 2015 and 2016 the health insurance contribution rate increased from 8.2% to 8.4% for employees, self-employed and pensioners. As a result, households from all decile groups experienced a minor income loss. However, the loss due to increased SIC for employees, self-employed and pensioners was partially offset by a decrease in income tax liabilities. There was an increase in the level of the basic tax free allowance from 8,472 to 8,652 euros. Furthermore, the tax allowance for children increased from 3,576 to 3,624 euros and the tax allowance for lone parents increased from 1,608 to 1,908 euros. All these changes led to an overall decrease in direct taxes which translated into household income gains.

Table 1 (Germany): Policy effects in 2015-16, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.62	0.53	0.10	-0.16	-0.01	0.04	1.14
2	0.00	0.65	0.46	0.12	-0.22	-0.01	0.19	1.18
3	0.00	0.76	0.08	0.08	-0.27	-0.01	0.23	0.86
4	0.00	0.71	0.04	0.07	-0.27	-0.01	0.23	0.77
5	0.00	0.59	0.02	0.06	-0.27	-0.01	0.24	0.63
6	0.00	0.45	0.02	0.06	-0.25	-0.01	0.27	0.53
7	0.00	0.35	0.00	0.04	-0.26	0.00	0.31	0.44
8	0.00	0.27	0.02	0.03	-0.25	0.00	0.33	0.40
9	0.00	0.25	0.01	0.03	-0.23	-0.01	0.34	0.38
10	0.00	0.24	0.01	0.03	-0.18	-0.02	0.27	0.34
Total	**0.00**	**0.41**	**0.06**	**0.05**	**-0.23**	**-0.01**	**0.27**	**0.55**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Germany): Policy effects in 2015-16, using CPI-indexation, %



Estonia

In comparison to 2015 policies, (deflated) 2016 policies increase mean household income by 2.23% in total and the overall pattern is strongly progressive. About one third of the total gain is due to increased public pensions which were indexed by 5.7% in 2016 compared to an annual inflation rate of just 0.9%.[7] The distribution of gains of pension increase across income groups largely reflects where public pensioners are located in the income distribution (i.e. primarily in the first four decile groups). The second largest contributor in overall terms, also about one third of the total gain, was the reduction of the direct taxes, stemming both from the increased income tax basic allowance and annual tax refund for low-paid workers. (Note that the refund will take place in 2017 in practice, but as it relates to 2016 earnings it is added to 2016 disposable income in our simulations). The distribution of these gains favours lower income deciles in relative terms, but middle income deciles in absolute terms.

The third largest contributor was an increase in non-means tested benefits, mainly child benefits and an above-inflation increase in parental benefits. The distributional impact of non-means tested benefits is neutral. There are also notable gains from means-tested benefits for the first decile group (8.32%) due to an above-inflation increase in the base amount of the social assistance benefit (*toimetulekutoetus*) (from €90 to €130). The social assistance benefit contributes 70% of the income increase for the bottom decile group. Finally, there is a small income-decreasing effect from social insurance contributions of self-employed, related to an increase in the minimum base of contributions.

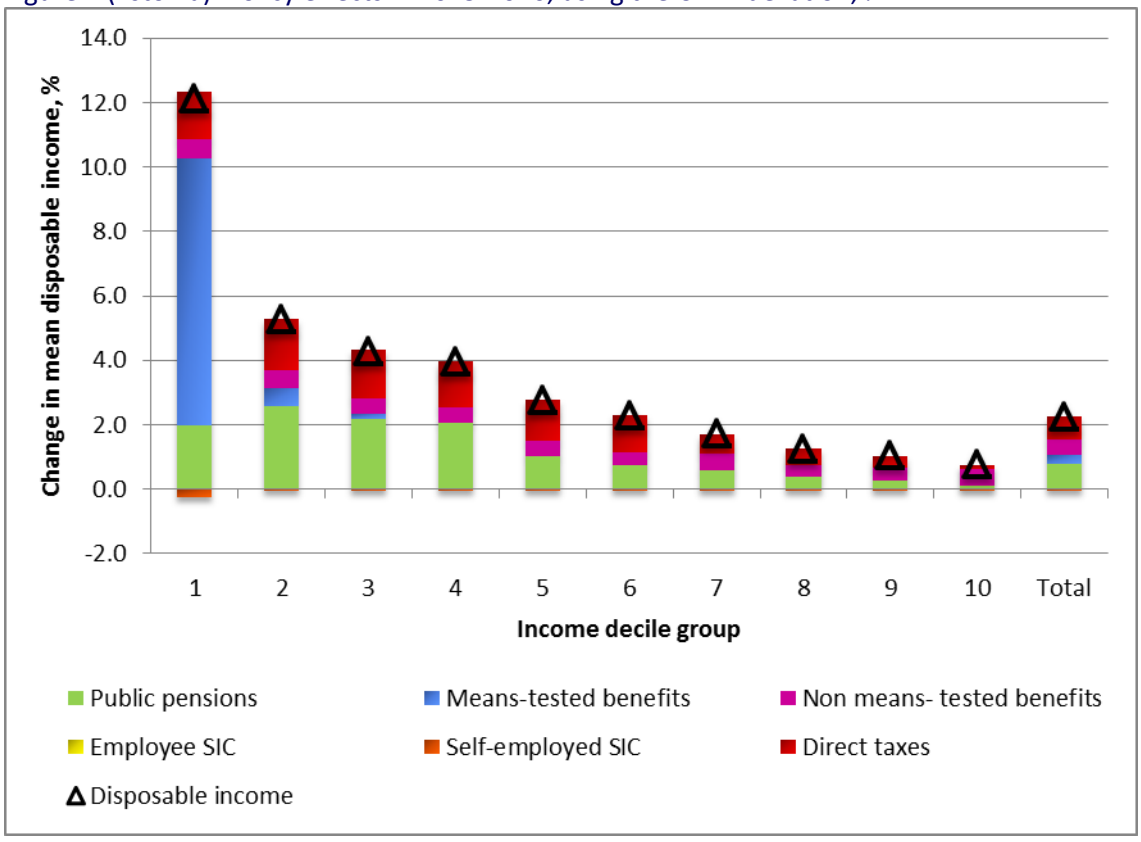
[7] The indexation of public pensions is largely based on the change in total pension social insurance contributions paid in the previous calendar year.

Table 1 (Estonia): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	1.97	8.29	0.61	0.00	-0.24	1.46	12.10
2	0.00	2.58	0.57	0.56	0.00	-0.03	1.59	5.27
3	0.00	2.20	0.13	0.47	0.00	-0.03	1.52	4.28
4	0.00	2.04	0.00	0.49	0.00	-0.02	1.44	3.94
5	0.00	1.03	0.00	0.49	0.00	-0.02	1.27	2.77
6	0.00	0.73	0.00	0.42	0.00	-0.01	1.12	2.27
7	0.00	0.58	0.00	0.51	0.00	0.00	0.62	1.70
8	0.00	0.37	0.00	0.36	0.00	-0.01	0.52	1.24
9	0.00	0.27	0.00	0.40	0.00	-0.01	0.36	1.03
10	0.00	0.12	0.00	0.51	0.00	0.00	0.12	0.76
Total	**0.00**	**0.77**	**0.29**	**0.47**	**0.00**	**-0.02**	**0.72**	**2.23**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Estonia): Policy effects in 2015-2016, using the CPI-indexation, %



Ireland

In comparison to 2015 policies, (deflated) 2016 policies increase mean household income by 0.66% in total.

Decreases in direct taxes have accounted for an increase in average equivalised household disposable income of 0.90%. The changes benefited the upper part of the income distribution most. The effect might be driven by the introduction of the Earned Income Tax Credit, which is calculated at 20% of an individual's earned income excluding the earned income taken into account for the PAYE employee tax credit. Additionally, the threshold for reduction of home carer tax credit was increased from 5,080 to 7,200 euros per year.

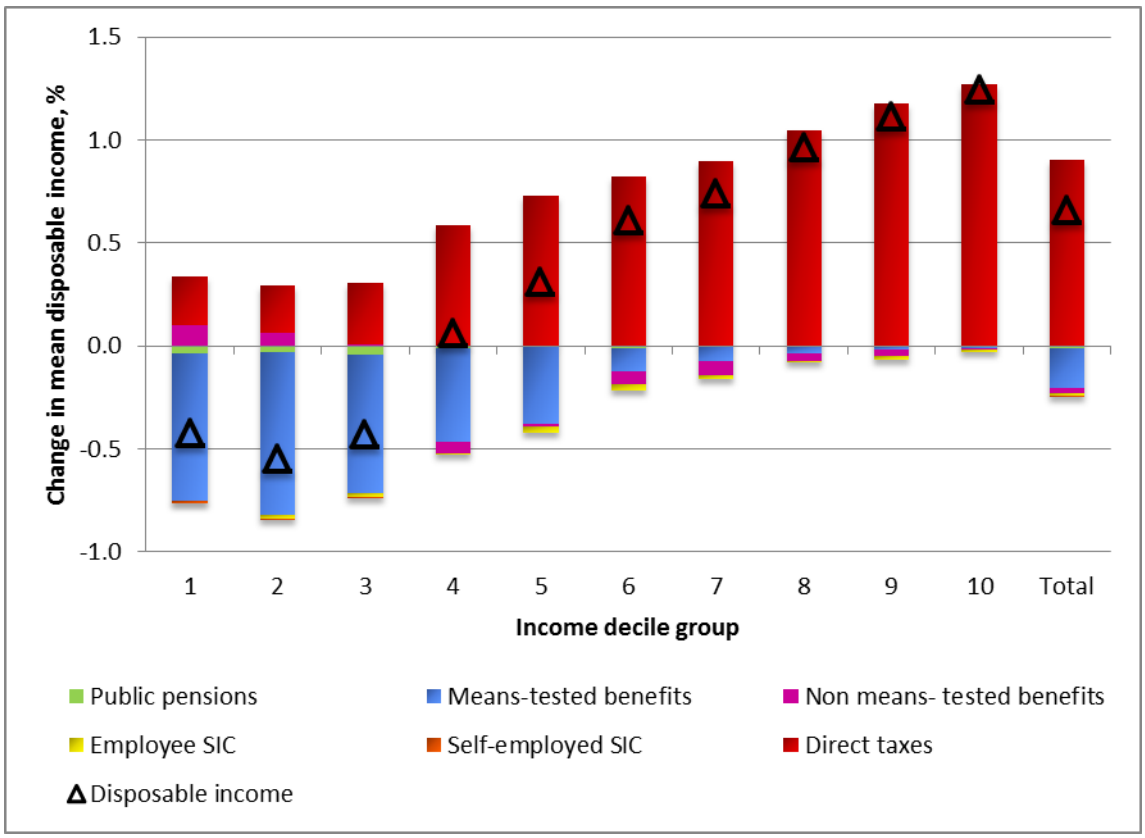
All other income components have only a small effect on average equivalised household disposable income. Changes in means-tested benefits accounted for a small decrease in average equivalised household disposable income of 0.19%. The changes reflect the fact that means-tested benefit amounts have been kept unchanged (no indexation), compared to growth in CPI. The distribution of losses across income deciles reflects where recipients of means-tested benefits are located.

Table 1 (Ireland): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.04	-0.72	0.10	0.00	-0.01	0.24	-0.43
2	0.00	-0.03	-0.79	0.06	-0.02	0.00	0.23	-0.55
3	0.00	-0.04	-0.68	0.01	-0.02	-0.01	0.30	-0.43
4	0.00	-0.01	-0.46	-0.05	0.00	0.00	0.59	0.06
5	0.00	-0.01	-0.37	-0.01	-0.03	0.00	0.73	0.31
6	0.00	-0.01	-0.11	-0.07	-0.03	0.00	0.82	0.61
7	0.00	-0.01	-0.07	-0.07	-0.02	0.00	0.90	0.74
8	0.00	-0.01	-0.03	-0.04	-0.01	0.00	1.05	0.96
9	0.00	0.00	-0.01	-0.03	-0.02	0.00	1.18	1.11
10	0.00	0.00	0.00	-0.01	-0.01	0.00	1.27	1.24
Total	**0.00**	**-0.01**	**-0.19**	**-0.02**	**-0.02**	**0.00**	**0.90**	**0.66**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Ireland): Policy effects in 2015-2016, using the CPI-indexation, %



Greece

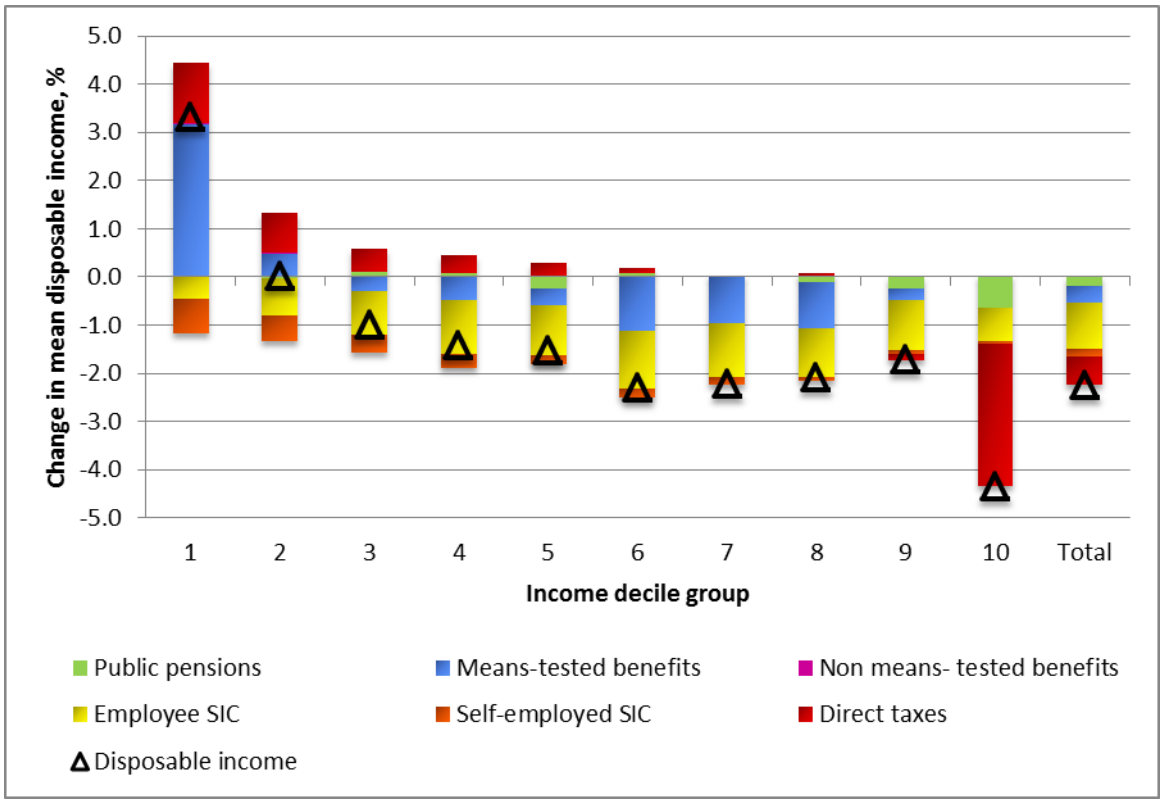
Policy changes in 2016 had a progressive effect on the income distribution. Although households in general saw an overall decrease of 2.24% in their disposable income, the lowest income decile reported gains equal to 3.3% of disposable income. This increase was mainly driven by the two means-tested benefits that were introduced in April 2015, food stamps and housing allowance; these were provided for a period of 9 months in 2015 whereas in 2016 they were provided for the whole year. The important tax reform that took place in May 2016 changing the income brackets and tax rates of the personal income tax schedule also had a positive effect on the income of the poorest income deciles. On the other hand, changes in pensioners', employees' and self-employed social insurance contributions (SIC) had a negative impact throughout the income distribution due to increases in the SIC paid by pensioners for health (from 4% to 6%), the increase in the rate of employees' SIC for supplementary pensions (from 3% to 3.5%) and the increase in the amounts of farmers' SIC. The stricter eligibility rules that were applied in 2016 in the provision of the means-tested pensioners' social solidarity benefit (EKAS) also had a negative impact on the disposable income of households belonging to deciles three to nine. Finally, households located in the top income decile were negatively affected (a) by the increase in the rates of the solidarity contribution, a tax which only applies to individuals with taxable incomes exceeding €12,000 per year and (b) by the introduction of an upper limit of €2,000 per month which was set on every gross pension received by existing pensioners.

Table 1 (Greece): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.01	3.15	0.02	-0.46	-0.70	1.26	3.30
2	0.00	-0.02	0.49	0.01	-0.77	-0.53	0.82	0.01
3	0.00	0.10	-0.30	0.00	-0.91	-0.37	0.49	-0.99
4	0.00	0.07	-0.48	0.00	-1.11	-0.31	0.38	-1.43
5	0.00	-0.25	-0.34	0.01	-1.03	-0.19	0.27	-1.53
6	0.00	0.09	-1.13	0.00	-1.20	-0.18	0.10	-2.31
7	0.00	0.01	-0.97	0.00	-1.11	-0.16	0.00	-2.23
8	0.00	-0.11	-0.96	0.01	-1.00	-0.08	0.08	-2.08
9	0.00	-0.23	-0.26	0.00	-1.04	-0.07	-0.12	-1.72
10	0.00	-0.63	0.00	0.00	-0.71	-0.04	-2.97	-4.35
Total	**0.00**	**-0.20**	**-0.34**	**0.00**	**-0.94**	**-0.16**	**-0.60**	**-2.24**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Greece): Policy effects in 2015-2016, using the CPI-indexation, %



Spain

The table shows the policy effects on the disposable income of changes in policies from 2015 to 2016. In 2015-16, households experienced on average a real income loss of 0.09%. Income dropped in the first to the seventh deciles and increased in the eighth to the tenth deciles. The policy effect in the period 2015-2016 was regressive.

The major factor driving negative effects was the changes in public pensions. The changes in public pensions bring about the decrease in disposable income across all the income distribution on a similar scale, although the decrease is considerably weaker in the first decile: 0.05% as compared to the average of 0.14%. The decrease in disposable income due to public pensions is because the vast majority of public pensions remained frozen between 2015 and 2016 while prices increased.

Another effect that is worth highlighting is the effect of means-tested benefits and non means-tested benefits. On the one hand, changes in means-tested benefits have a small effect in overall figures (0.03% decrease), but they have a bigger effect in the disposable income of the first deciles: 0.30% decrease in the first decile and 0.17% in the second. On the other hand, changes in non means-tested benefits lowered disposable income across all the income distribution but only slightly. The changes reflect the fact that mean-tested benefits and non means-tested benefits amounts have been kept unchanged as IPREM (the index generally used for adjusting benefit amounts over time) remained frozen between 2015 and 2016 compared to the growth in prices.

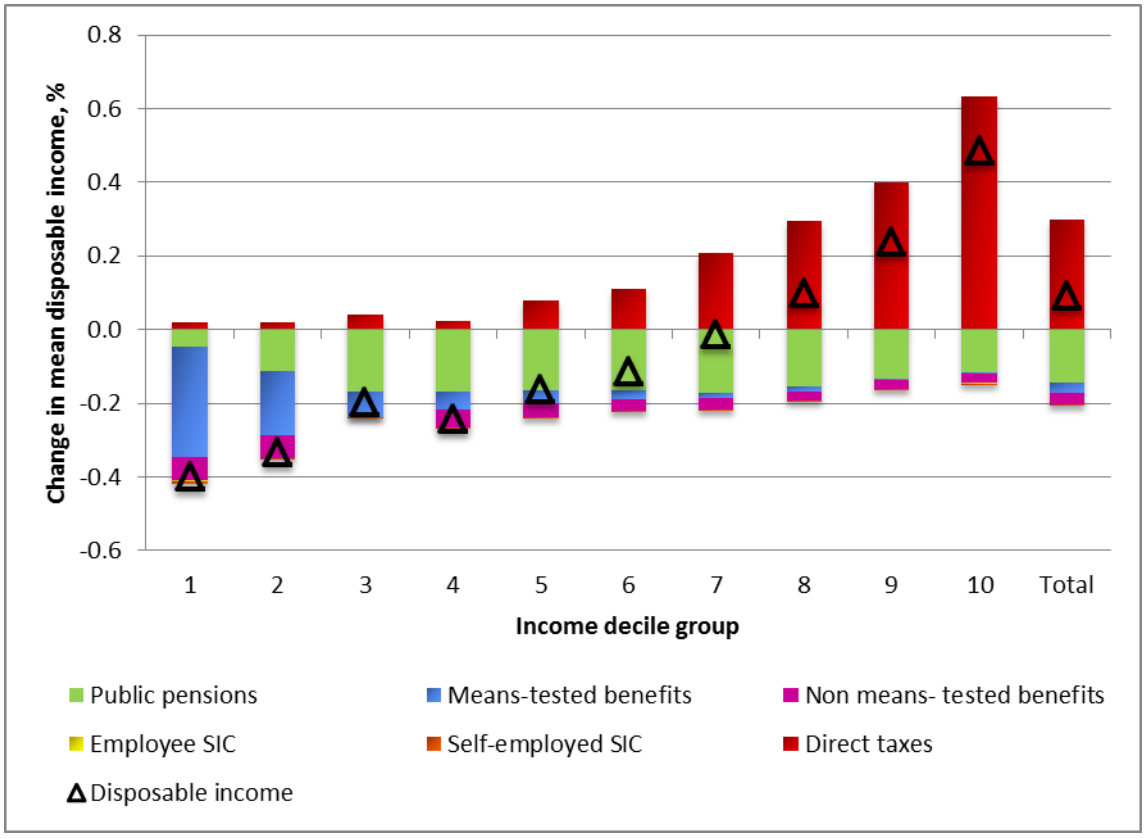
Finally, direct taxes affect the disposable income increasing it in all the deciles, although the rise is hardly noticeable in the first deciles. The effect is concentrated mainly in the fifth to the tenth deciles, and increases as we move towards the upper part of the income distribution, ranging from 0.08% increase in the fifth decile to 0.63% in the tenth decile. This is mainly due to a decrease in personal income tax rates. Rates on capital income decreased, which we expect to affect the top part of the distribution most. State rates also decreased, but the reduction was stronger for top income brackets. Social insurance contributions had no significant effect between 2015 and 2016.

Table 1 (Spain): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.05	-0.30	-0.06	0.00	-0.01	0.02	-0.40
2	0.00	-0.11	-0.17	-0.06	0.00	0.00	0.02	-0.33
3	0.00	-0.17	-0.07	0.00	0.00	0.00	0.04	-0.20
4	0.00	-0.17	-0.05	-0.05	0.00	0.00	0.02	-0.24
5	0.00	-0.17	-0.04	-0.04	0.00	0.00	0.08	-0.16
6	0.00	-0.16	-0.02	-0.03	0.00	0.00	0.11	-0.11
7	0.00	-0.17	-0.02	-0.03	0.00	0.00	0.21	-0.01
8	0.00	-0.15	-0.01	-0.02	0.00	0.00	0.29	0.10
9	0.00	-0.13	0.00	-0.03	0.00	0.00	0.40	0.24
10	0.00	-0.12	0.00	-0.03	0.00	0.00	0.63	0.49
Total	**0.00**	**-0.14**	**-0.03**	**-0.03**	**0.00**	**0.00**	**0.30**	**0.09**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Spain): Policy effects in 2015-2016, using the CPI-indexation, %



France

In 2016, the disposable income increased for all deciles except for the third and the two top ones. Several changes in policy can explain this fact. First, the tax burden decreased for all income deciles except for the top. The decrease was highest for the middle deciles. This change can be explained by the increase in the tax rebate (decote) which has been made more generous for couples.

Social insurance contributions for the self-employed have decreased slightly, probably due to a decrease of the farmers' sickness contributions. This policy reform has resulted in higher disposable income for all deciles.

Employee SICs increased in 2016 for all deciles because of the rise in the old age contributions. Means-tested benefits have increased substantially for the first two deciles probably due to the introduction of a new benefit - the activity allowance (PA). They decreased for the third decile and have not changed for the other deciles which is probably attributable to the lowering of the income thresholds for eligibility to the means-tested allowance for young children (PAJE). This reform has been passed in 2014 but due to grandfathering of benefits for existing recipients it is fully implemented only in 2016.

Non-means tested benefits have decreased substantially for the highest two deciles. This is due to the introduction of income thresholds that reduce the amount of family allowance (AF) that may be received by high-income families.

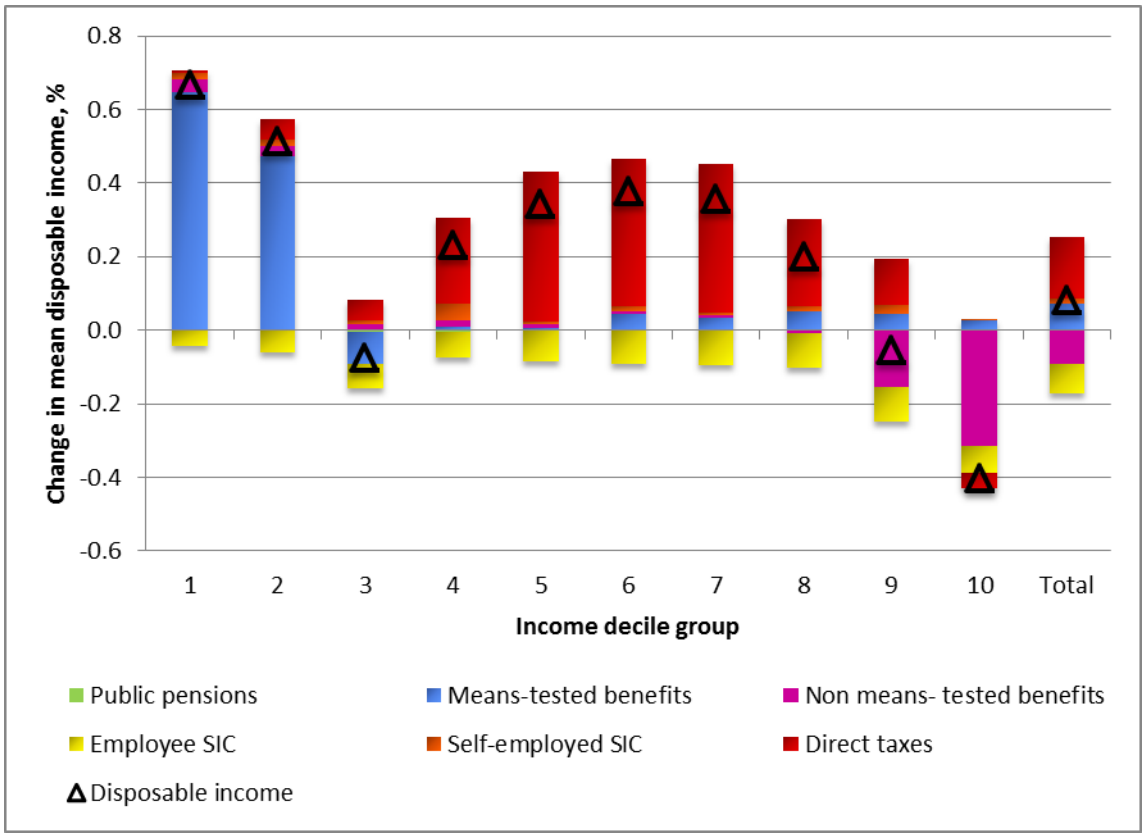
Public pensions have virtually no effect on the change in incomes because of the freeze on the revalorization rate and because inflation is assumed to be close to zero.

Table 1 (France): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.00	0.65	0.04	-0.04	0.02	0.01	0.66
2	0.00	0.00	0.47	0.03	-0.06	0.02	0.06	0.51
3	0.00	0.00	-0.09	0.02	-0.07	0.01	0.06	-0.08
4	0.00	0.00	0.01	0.02	-0.07	0.04	0.23	0.23
5	0.00	0.00	0.00	0.01	-0.08	0.01	0.40	0.34
6	0.00	0.00	0.04	0.01	-0.09	0.01	0.40	0.38
7	0.00	0.00	0.03	0.01	-0.09	0.01	0.40	0.36
8	0.00	0.00	0.05	0.00	-0.09	0.01	0.24	0.20
9	0.00	0.00	0.05	-0.15	-0.09	0.02	0.12	-0.06
10	0.00	0.00	0.03	-0.31	-0.08	0.00	-0.04	-0.40
Total	**0.00**	**0.00**	**0.07**	**-0.09**	**-0.08**	**0.01**	**0.17**	**0.08**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (France): Policy effects in 2015-2016, using the CPI-indexation, %



Croatia

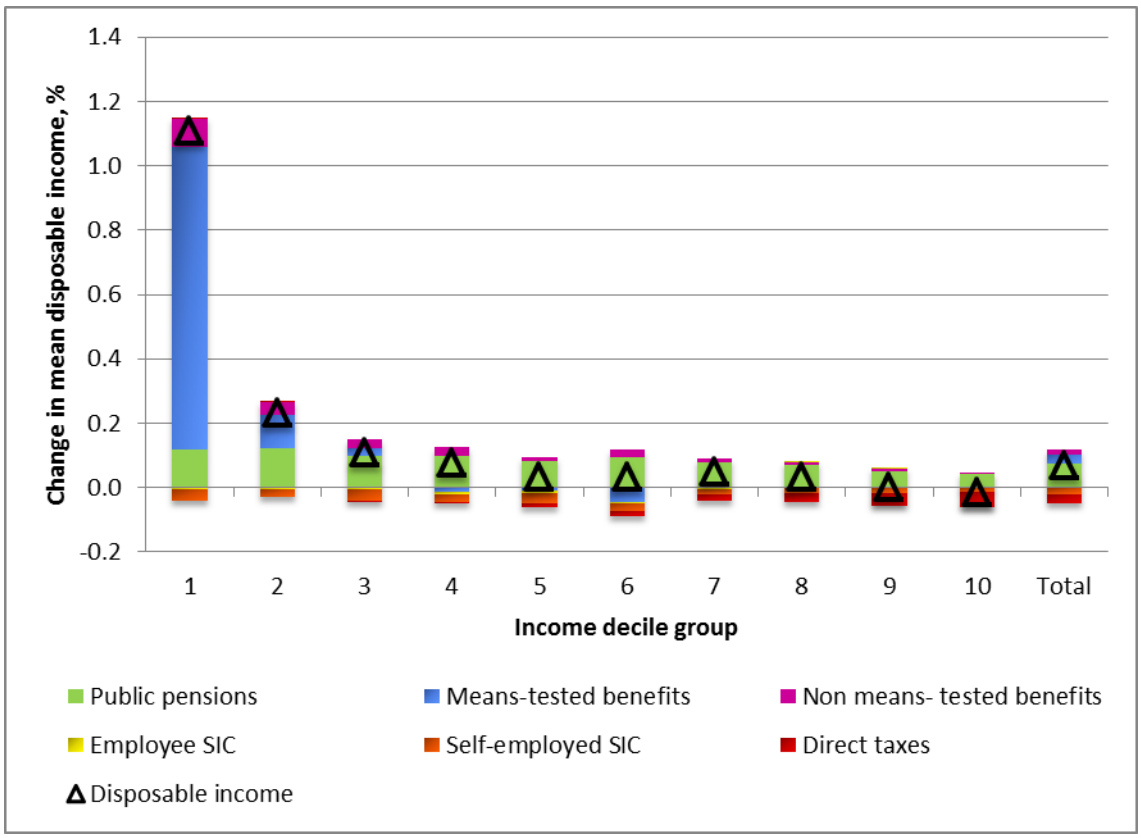
In comparison to 2015 policies, (deflated) 2016 policies only had a minor impact on average equivalised household disposable income, but with a clearly progressive distributional pattern. The poorest decile seems to have benefited the most from changes in means-tested benefits, and in particular from the increase in the Subsistence benefit levels (for adults in one-member households who are unable to work and for children of single parents). Indexation of public pension benefits led to an overall increase in average household disposable income by around 0.07%. The distribution of gains across income groups largely reflects where pensioners are located in the income distribution.

Table 1 (Croatia): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.12	0.94	0.09	-0.01	-0.03	0.00	1.11
2	0.00	0.12	0.10	0.04	-0.01	-0.02	0.00	0.23
3	0.00	0.10	0.02	0.03	-0.01	-0.03	0.00	0.11
4	0.00	0.10	-0.01	0.03	-0.01	-0.02	0.00	0.08
5	0.00	0.08	-0.01	0.01	-0.01	-0.03	-0.01	0.03
6	0.00	0.09	-0.05	0.02	0.00	-0.02	-0.02	0.03
7	0.00	0.08	0.00	0.01	0.00	-0.02	-0.02	0.05
8	0.00	0.07	0.00	0.01	0.00	-0.02	-0.03	0.03
9	0.00	0.05	0.00	0.01	0.00	-0.02	-0.04	0.00
10	0.00	0.04	0.00	0.00	0.00	-0.01	-0.05	-0.02
Total	**0.00**	**0.07**	**0.03**	**0.01**	**0.00**	**-0.02**	**-0.02**	**0.07**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Croatia): Policy effects in 2015-2016, using the CPI-indexation, %



Italy

The total effect of (deflated) 2016 policies on mean income is +0.60%. Between 2015 and 2016, people mainly gain from the abolition of the property tax on the house of residence. The changes in other tax-benefit instruments do not have a significant effect but it is worth mentioning the impact of the (non) indexation of public pensions which are kept at the nominal level of the previous year (while the change in HICP is below 1) and the increases in the social insurance contributions paid by the self-employed.

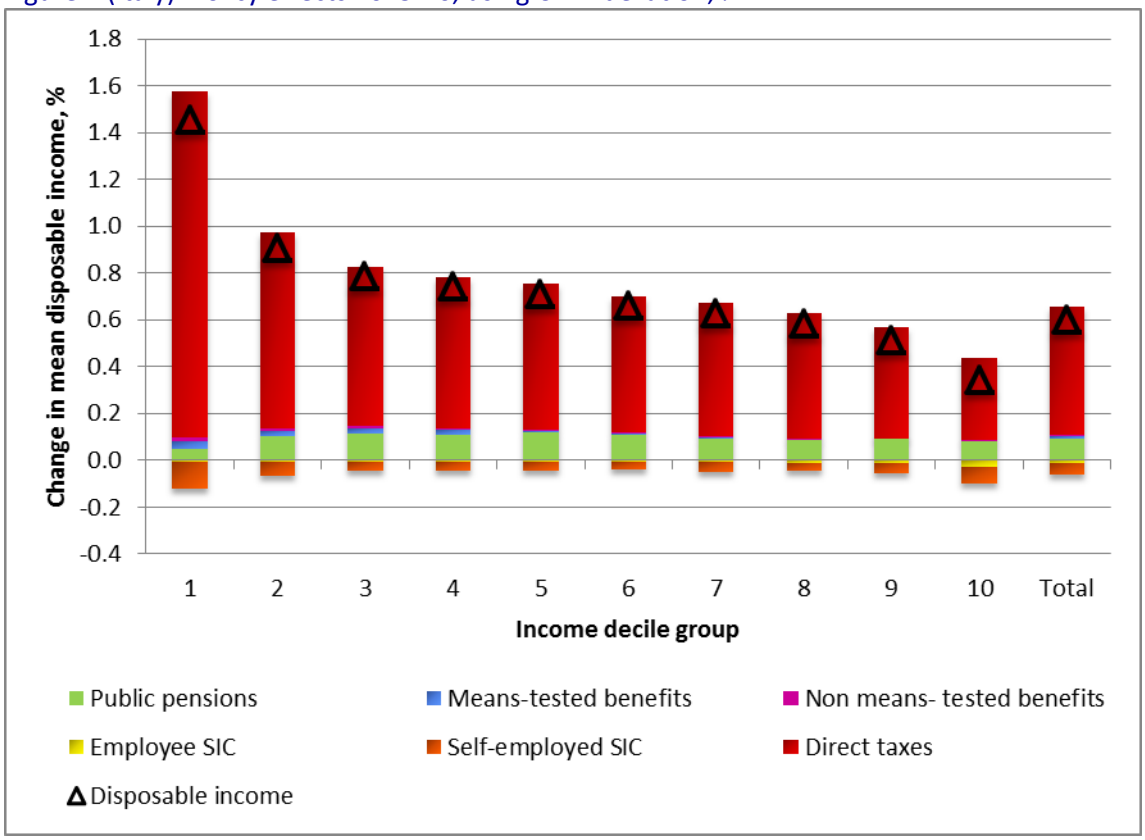
The distributional pattern shows a larger increase of disposable income at the bottom of the income distribution with the first decile group gaining around 1.5% per cent of income on average. The average gain decreases up to +0.34% for those at the top of the income distribution.

Table 1 (Italy): Policy effects 2015-16, using CPI indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.05	0.03	0.02	-0.01	-0.11	1.47	1.45
2	0.00	0.10	0.02	0.01	0.00	-0.06	0.84	0.91
3	0.00	0.11	0.02	0.01	0.00	-0.04	0.68	0.78
4	0.00	0.11	0.02	0.01	0.00	-0.04	0.65	0.74
5	0.00	0.12	0.01	0.01	-0.01	-0.04	0.62	0.71
6	0.00	0.11	0.01	0.00	-0.01	-0.04	0.58	0.66
7	0.00	0.09	0.00	0.01	-0.01	-0.04	0.57	0.62
8	0.00	0.08	0.00	0.00	-0.01	-0.03	0.54	0.58
9	0.00	0.09	0.00	0.00	-0.01	-0.05	0.47	0.51
10	0.00	0.08	0.00	0.00	-0.03	-0.07	0.35	0.34
Total	**0.00**	**0.09**	**0.01**	**0.00**	**-0.01**	**-0.05**	**0.55**	**0.60**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Italy): Policy effects 2015-16, using CPI indexation, %



Cyprus

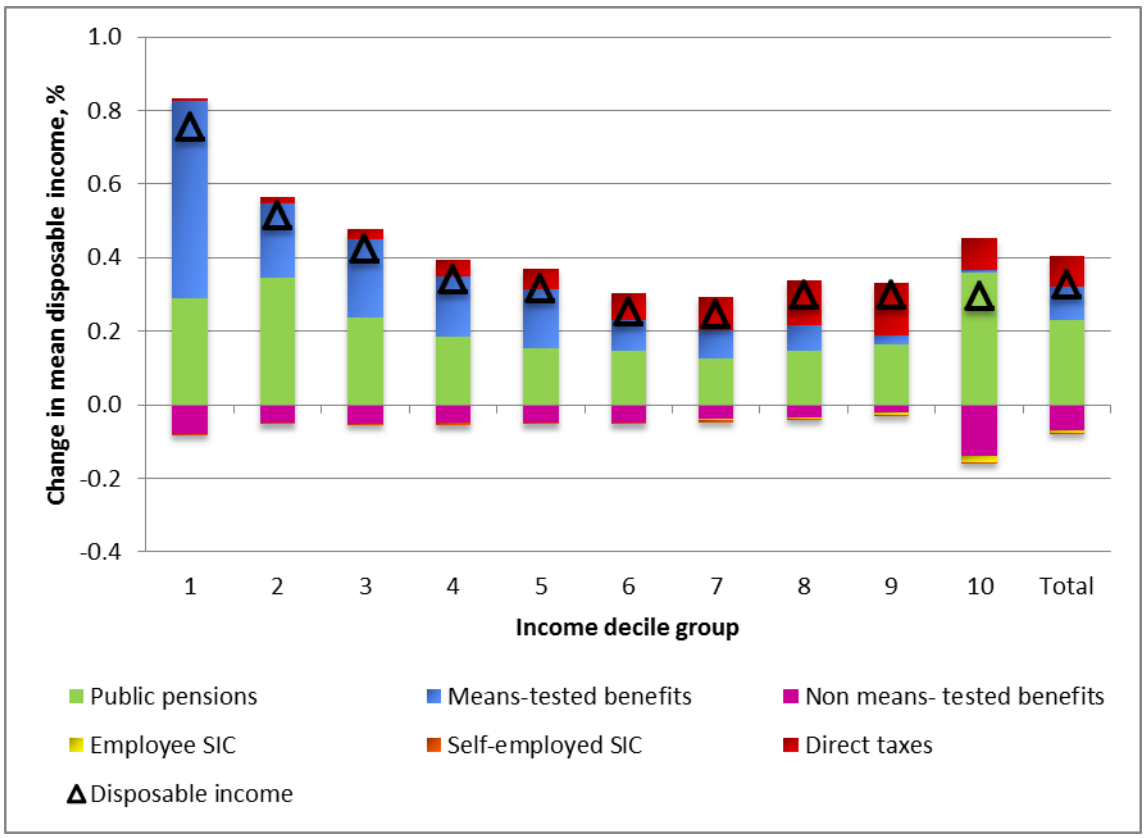
It should be noted that there were very marginal changes in 2016 policy rules, therefore the observed changes should be mostly attributed to income uprating (and the assumptions underlying it). In comparison to the 2015 system, (deflated) 2016 microsimulation outcomes show an increase in mean household income by 0.33%. Again, this increase is driven by the effect of uprating on pensions (0.23% increase in average pension), but also by means-tested benefits which increased on average by 0.09%, (but by 0.54% for the poorest decile). The latter might be due to the fact that several income components, which are taken into account in the means-testing, were deflated (CPI dropped from 2015 to 2016).

Table 1 (Cyprus): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.29	0.54	-0.08	0.00	0.00	0.01	0.75
2	0.00	0.35	0.20	-0.05	0.00	0.00	0.02	0.51
3	0.00	0.24	0.21	-0.05	0.00	0.00	0.03	0.42
4	0.00	0.18	0.16	-0.05	0.00	-0.01	0.05	0.34
5	0.00	0.15	0.16	-0.05	0.00	-0.01	0.06	0.32
6	0.00	0.15	0.09	-0.05	0.00	0.00	0.07	0.25
7	0.00	0.13	0.08	-0.04	0.00	-0.01	0.09	0.25
8	0.00	0.15	0.07	-0.04	0.00	0.00	0.12	0.30
9	0.00	0.17	0.02	-0.02	-0.01	0.00	0.14	0.30
10	0.00	0.36	0.01	-0.14	-0.02	0.00	0.09	0.30
Total	**0.00**	**0.23**	**0.09**	**-0.07**	**-0.01**	**0.00**	**0.08**	**0.33**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Cyprus): Policy effects in 2015-2016, using the CPI-indexation, %



Latvia

The effect of policies in 2015-2016 was clearly progressive – disposable income increased in all deciles except the top decile, and the increase was especially strong in the second to fourth deciles. As per 2014-2015, the progressive profile was to a large extent driven by public pensions and self-employed SIC. Changes in the direct taxes mainly benefited incomes of those in the middle of income distribution and produced a strong negative effect on income in the tenth decile due to the introduction of the solidarity tax. The effect of non means-tested benefits in 2015-2016 was positive and was fairly evenly distributed across income deciles, but means-tested benefits, as per 2014-2015, produced a regressive effect by lowering the income of those at the lower tail of income distribution.

The effect of pensions, again similar to 2014-2015, was mainly an outcome of the way that pensions were indexed – only a part of the pension below a certain threshold was indexed, which had a stronger effect at the lower tail of income distribution. The effect of self-employed SIC was also similar to the one observed in 2014-2015: the increase in the minimum wage in 2016 raised the income threshold below which incomes of the self-employed are not subject to SIC.

There were several major reforms of direct taxes in 2016, which had an effect on incomes across the entire income distribution. First, as mentioned above, the new solidarity tax, which was introduced in 2016, had a negative effect on the disposable income in the tenth decile. Second, an increase in the allowance for dependents, which is defined in absolute terms, had a proportionally stronger effect on incomes at the lower tail of income distribution; however, this effect was offset by the fact that allowances for dependent spouse and parents were abolished as of 2016 (unless the spouse or the parent are disabled) and this resulted in a negative net effect in the bottom decile. Third, the introduction of differentiated basic allowance had a progressive positive effect on disposable income; however, the effect in the bottom deciles is weaker as the share of employed individuals in there is relatively small. On the whole, households in the middle deciles benefited most from changes in the direct taxes. The changes in non-means tested benefits mainly reflect growth in average earnings.

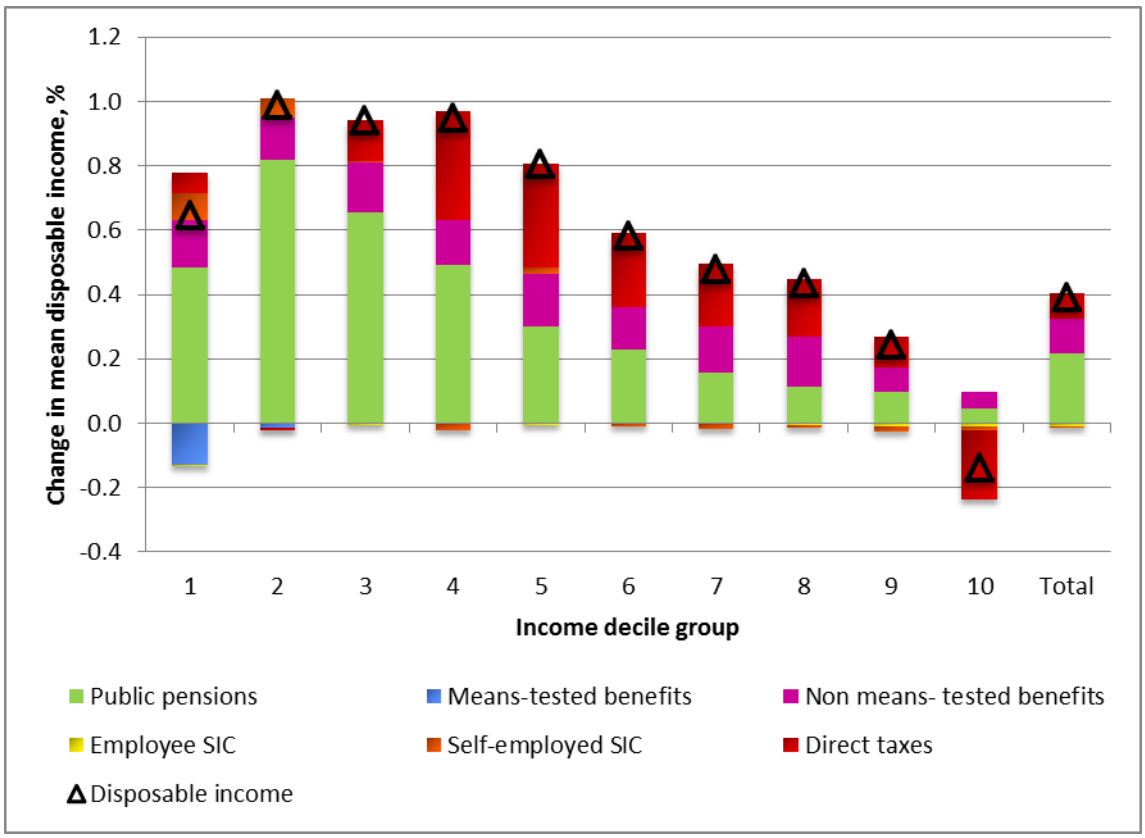
Despite no policy changes in means-tested benefits (GMI and housing benefit), these benefits had a negative effect on disposable income in the bottom decile, which, as per 2014-2015, was driven by changes in other policies that had a positive effect on low income households.

Table 1 (Latvia): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.48	-0.13	0.15	0.00	0.08	0.06	0.65
2	0.00	0.82	-0.01	0.13	0.00	0.06	-0.01	0.99
3	0.00	0.66	0.00	0.15	0.00	0.01	0.13	0.94
4	0.00	0.49	0.00	0.14	0.00	-0.02	0.34	0.95
5	0.00	0.30	0.00	0.16	0.00	0.02	0.32	0.80
6	0.00	0.23	0.00	0.13	0.00	-0.01	0.23	0.58
7	0.00	0.16	0.00	0.14	0.00	-0.01	0.19	0.48
8	0.00	0.11	0.00	0.16	0.00	-0.01	0.18	0.43
9	0.00	0.10	0.00	0.08	-0.01	-0.02	0.10	0.24
10	0.00	0.05	0.00	0.05	-0.01	-0.01	-0.22	-0.14
Total	**0.00**	**0.22**	**0.00**	**0.11**	**-0.01**	**0.00**	**0.08**	**0.39**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Latvia): Policy effects in 2015-2016, using the CPI-indexation, %



Lithuania

The increase in public pensions and compensation of pension cuts implemented in 2016 appear to have had a large impact on mean disposable income. There were no changes in policy as such; however, across 2014-2016 the losses due to structural cuts in pensions carried out in 2010 and 2011 were partially compensated by the government. This affected old age, early retirement and disability pensions (but not survivor's pensions). The amount of compensation for the pensioner is equal to the share (20% in 2014 and 40% each year in 2015 and 2016) of amount she/he has lost due to pension cuts in 2010-2011. The increase in pensions themselves was higher in 2016 compared to 2015 due to an increase in the current year's insured income and basic pension.

There were no changes in employee social insurance contributions, nor were there changes in SIC policies for the self-employed. However the amount of compulsory health insurance contribution has increased together with the growing minimum wage in 2016. Compulsory health insurance contributions are recorded together with self-employment contributions in EUROMOD and have contributed to a decrease in disposable income.

There were no changes in means-tested programmes. However we can see a small negative impact on disposable income in 2016. A plausible explanation for the reduction in household disposable income due to means-tested benefits is that these are not being indexed by CPI in Lithuania and therefore they suffered a decrease relative to prices in 2016 (due to inflation).

Changes in household disposable income related to non means-tested benefits are a factor of an increase in the current year's insured income, which is used for setting ceilings for a number of non-contributory payments. Thus the increase in disposable income is highest for the top income deciles.

Changes in direct taxes, namely PIT, appear to have had a positive impact on household disposable income. This was mainly due to an increase in the general non-taxable allowance in 2016. The same was true for non-taxable allowances for parents with dependent children. Due to the progressive nature of tax allowances positive effects are mostly distributed in the lower part of the income distribution, except for the first decile (as those without earnings and self-employed are not eligible for tax allowances).

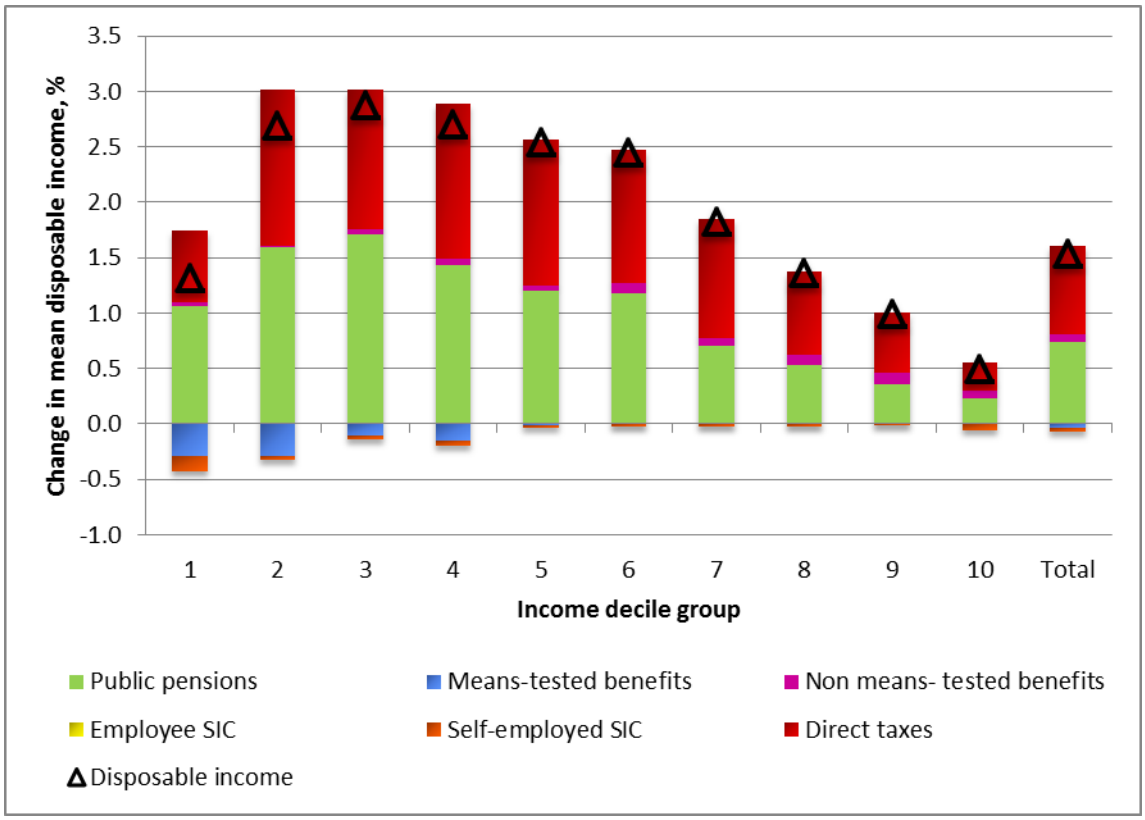
Overall the changes in the abovementioned policies between 2015 and 2016 have had a positive impact throughout the distribution (1.53% growth in disposable income on average), with the second to the sixth deciles making the highest income gains (around 2.5-2.9% of disposable income). The top and bottom deciles remained among the least affected.

Table 1 (Lithuania): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	1.07	-0.29	0.03	0.00	-0.14	0.65	1.31
2	0.00	1.59	-0.30	0.02	0.00	-0.03	1.40	2.69
3	0.00	1.72	-0.11	0.04	0.00	-0.04	1.25	2.87
4	0.00	1.43	-0.15	0.06	0.00	-0.04	1.39	2.69
5	0.00	1.20	-0.01	0.04	0.00	-0.03	1.32	2.53
6	0.00	1.18	0.00	0.09	0.00	-0.02	1.20	2.45
7	0.00	0.70	-0.01	0.08	0.00	-0.02	1.07	1.82
8	0.00	0.53	0.00	0.10	0.00	-0.02	0.76	1.36
9	0.00	0.36	0.00	0.10	0.00	-0.02	0.55	0.99
10	0.00	0.23	0.00	0.07	0.00	-0.06	0.25	0.49
Total	**0.00**	**0.73**	**-0.04**	**0.07**	**0.00**	**-0.04**	**0.80**	**1.53**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Lithuania): Policy effects in 2015-2016, using the CPI-indexation, %



Luxembourg

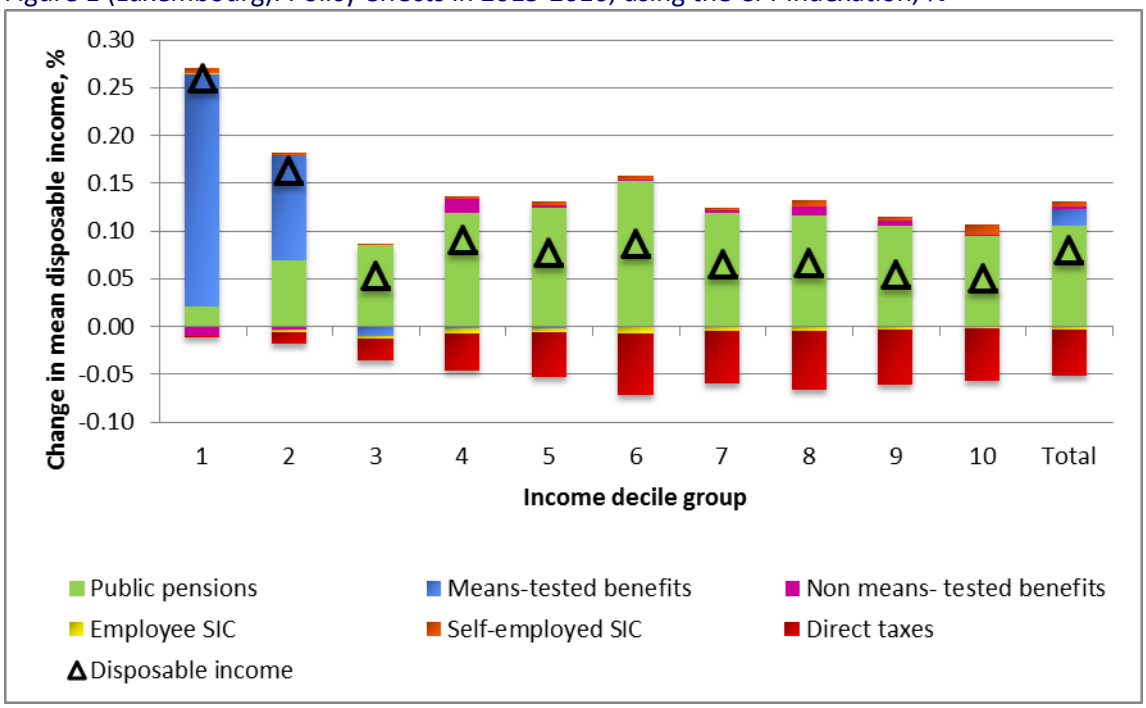
As per previous years, there were no major reforms to speak of and the increase in household disposable income in the round was very modest at 0.08%. Whilst all deciles saw a positive impact, the bottom two deciles gained most from a new rent allowance which in 2016 replaced the (less generous) supplement for rental costs embedded in the guaranteed minimum income. This provides for a progressive pattern across the income distribution but it should be re-stated that the policy effects are overall very small.

Table 1 (Luxembourg): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.02	0.24	-0.01	0.00	0.01	0.00	0.26
2	0.00	0.07	0.11	0.00	0.00	0.00	-0.01	0.16
3	0.00	0.08	-0.01	0.00	0.00	0.00	-0.02	0.05
4	0.00	0.12	0.00	0.01	-0.01	0.00	-0.04	0.09
5	0.00	0.12	0.00	0.00	-0.01	0.00	-0.05	0.08
6	0.00	0.15	0.00	0.00	-0.01	0.00	-0.06	0.09
7	0.00	0.12	0.00	0.00	0.00	0.00	-0.05	0.06
8	0.00	0.12	0.00	0.01	0.00	0.01	-0.06	0.07
9	0.00	0.11	0.00	0.01	0.00	0.00	-0.06	0.05
10	0.00	0.10	0.00	0.00	0.00	0.01	-0.05	0.05
Total	**0.00**	**0.11**	**0.02**	**0.00**	**0.00**	**0.01**	**-0.05**	**0.08**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Luxembourg): Policy effects in 2015-2016, using the CPI-indexation, %



Hungary

The changes in the tax-benefit system made all deciles better off, yielding an average overall increase of 1.58% in equivalised disposable income. The increase in disposable income for the two poorest deciles was slightly higher than for the others (1.94% for the poorest decile, and 1.8% for the second poorest), but all the remaining deciles experienced a very homogeneous increase in disposable income.

Overall the largest contribution to the increase in disposable income came from reduced direct income taxes, following a reduction in the flat marginal income tax rate from 16% to 15%. This change benefitted proportionally more the richest deciles. Further, an increase in non-means tested family allowances (in particular, in the amount of the allowance paid per child for families with children) can probably explain an important part of the contribution of non means-tested benefits to disposable income growth (0.15% overall). This contribution was largest in the poorest three deciles. Further, the increase in uprating factors for unemployment benefits also likely played a role in the contribution of non-means tested benefits to total disposable income growth. Also, reduced employee's social insurance contributions impacted marginally on the growth of disposable income in the bottom two deciles, while their total impact on the overall income distribution was quite small.

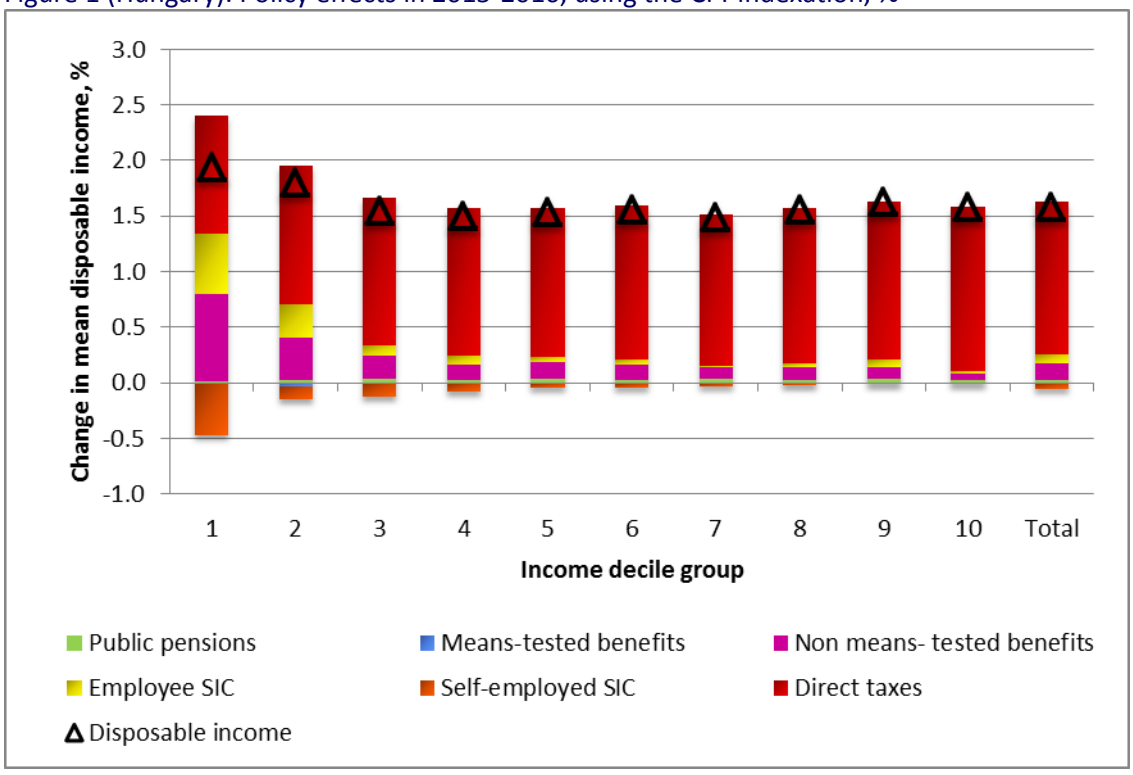
Finally, we cannot find any particularly significant effect for public pensions, means-tested benefits and self-employed social insurance contributions on disposable income, except for a small negative contribution of the latter for the three poorest deciles. In the case of both pensions and means-tested benefits (social assistance benefits, regular child protection benefits and education benefits), this can be explained by a negligible growth in uprating factors.

Table 1 (Hungary): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.01	-0.01	0.79	0.54	-0.46	1.07	1.94
2	0.00	0.02	-0.03	0.39	0.30	-0.12	1.24	1.80
3	0.00	0.03	-0.01	0.22	0.09	-0.11	1.32	1.55
4	0.00	0.03	-0.01	0.14	0.07	-0.07	1.33	1.50
5	0.00	0.03	-0.01	0.16	0.04	-0.04	1.34	1.53
6	0.00	0.03	-0.01	0.14	0.04	-0.04	1.39	1.55
7	0.00	0.03	0.00	0.11	0.01	-0.03	1.37	1.48
8	0.00	0.03	0.00	0.11	0.04	-0.02	1.40	1.56
9	0.00	0.03	0.00	0.11	0.08	-0.01	1.42	1.62
10	0.00	0.02	0.00	0.06	0.03	-0.01	1.48	1.58
Total	**0.00**	**0.03**	**-0.01**	**0.15**	**0.07**	**-0.05**	**1.38**	**1.58**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Hungary): Policy effects in 2015-2016, using the CPI-indexation, %



Malta

Measured in real terms, policy changes led to a small overall increase in average household disposable income by around 0.02%. The increase was mainly driven by changes in Public pensions (0.11% increase) and Direct taxes (0.18% increase). In 2016, the guaranteed national minimum pension for single persons was increased to €7,280 per annum, whilst married couples who currently receive the minimum pension for married persons started to also receive increased payments beyond the COLA of €4.15 per week. The increase due to direct taxation was mainly due to the income tax reform as from 2016.

The Cost-of-Living Adjustment (COLA) for 2016 was €1.75 per week for people aged 54 years and over. This "increase", that is, the additional amount, led to a further increase in the category of Public pensions both in nominal and in real terms and it had an overall positive effect on the average household disposable income.

Direct taxes have had a positive effect on almost all income groups, most notably the middle income groups, which is as expected given that in 2016 the income tax was changed in such a way as to benefit those above the tax free threshold. The tax free thresholds were increased with only the first three tax brackets benefitting from this measure.

Counterbalancing these increases in disposable income, changes to means-tested benefits – the removal of the child supplement in particular – acted to reduce incomes by an average of 0.23%. The child supplement, adopted solely in 2015 and providing income gains to the lowest deciles in that year, was discontinued and its removal saw the gains measured between the 2014 and 2015 policy systems become losses when the 2016 system is compared to 2015.

In addition, this overall negative impact on the disposable income due to means-tested benefits is also as a result of an increase in the minimum pension in 2016. The increase in this benefit impacted the benefit payments of other benefits including the children's allowance, the non-contributory age pension as well as the supplementary allowance. The increase in the minimum pension payment led to an overall increase in the assessable income. This concurrently led to two cases whereby:

- those that were closer to the income threshold before the increase in the Minimum Pension ended up above the income threshold therefore ending not eligible for the benefit;
- those still eligible ended up with a lower amount of benefit given that the income threshold less the assessable income is now a lower amount. The pre-specified rate is therefore applied to a lower amount therefore resulting in a lower benefit to be granted.

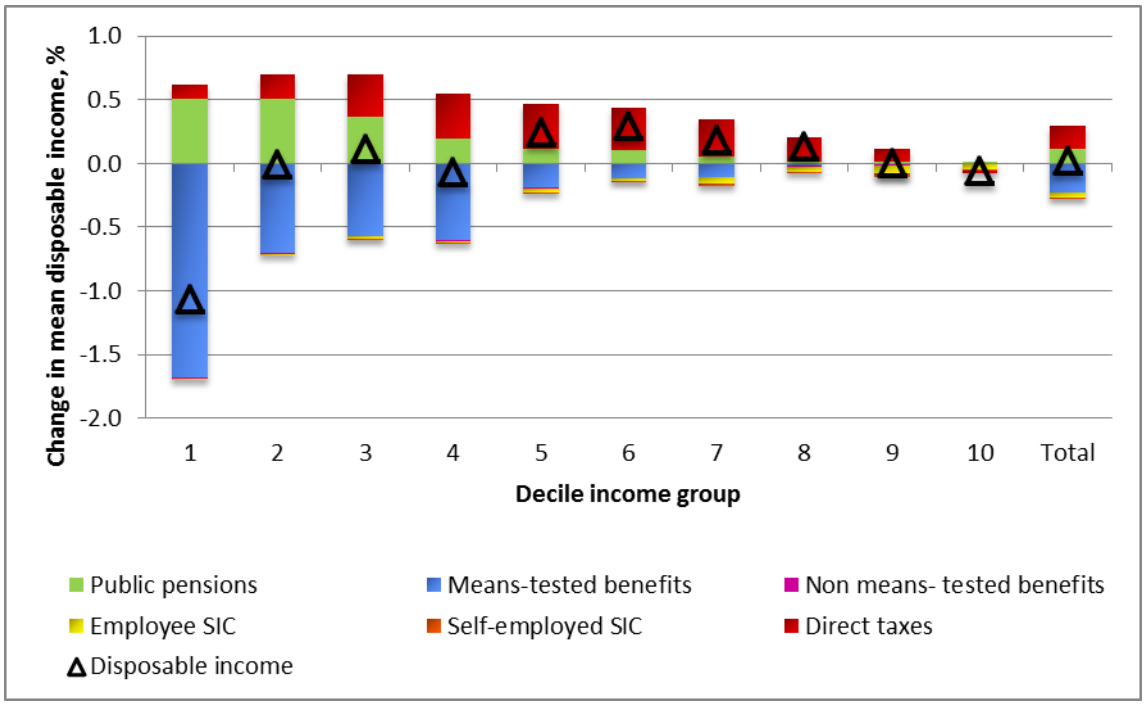
The negligible negative changes in components Employee and Self-employed Social Insurance Contributions (SIC) were caused by the increase in the minimum and maximum contributions payable. For Employee SIC there was an increase in the minimum contribution from €16.63 to €16.80 per week, whilst the maximum contribution increased from €34.31 to €34.49 per week for persons born up to 31.12.1961, and it increased from €41.83 to €42.57 per week for persons born from 1.1.1962. Age limit for maximum contributions payable changed from "<54" to "<55" years. For Self-employed/occupied social contributions the minimum contributions increased from €28.47 to €28.73 per week while the maximum increased from €62.74 to €63.86 per week. Both the changes in Employee SIC and the Employer SIC affected the people in higher deciles to a greater extent.

Table 1 (Malta): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.50	-1.68	-0.01	0.00	0.00	0.12	-1.07
2	0.00	0.51	-0.70	0.00	0.00	0.00	0.19	-0.01
3	0.00	0.37	-0.57	0.00	-0.02	0.00	0.33	0.11
4	0.00	0.19	-0.60	-0.01	-0.01	0.00	0.36	-0.07
5	0.00	0.12	-0.19	-0.01	-0.03	0.00	0.35	0.24
6	0.00	0.10	-0.11	-0.01	-0.02	0.00	0.33	0.30
7	0.00	0.05	-0.10	-0.01	-0.04	-0.02	0.30	0.18
8	0.00	0.02	-0.02	-0.01	-0.05	-0.01	0.19	0.13
9	0.00	0.01	-0.01	-0.01	-0.06	-0.03	0.10	0.00
10	0.00	0.01	0.00	0.00	-0.04	-0.01	-0.03	-0.07
Total	**0.00**	**0.11**	**-0.23**	**-0.01**	**-0.03**	**-0.01**	**0.18**	**0.02**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Malta): Policy effects in 2015-2016, using the CPI-indexation, %



The Netherlands

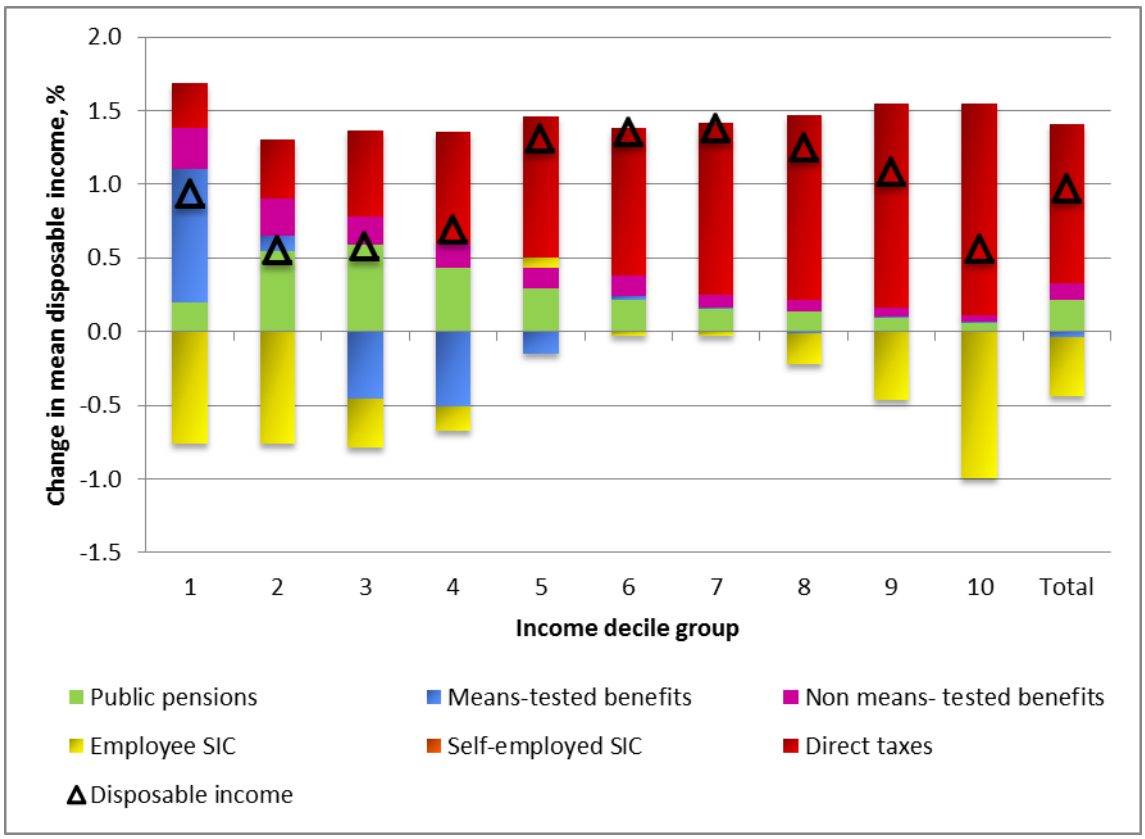
The total effect of 2016 policies is an increase in disposable income of almost 1%. The highest increases (up to 1.4%) are found in the fifth through ninth deciles and the lowest in the second and tenth decile (around 0.6%). In most decile groups, the increase can to a large extent be attributed to the decrease in the income taxation. In the lowest decile, an increase in means tested benefits contributes to the increase in disposable income. This appears to be largely due to the increased care allowance. The introduction of cost sharing norms in social assistance has only very minor effects on equivalent disposable income per decile, even though the effects on individual households are non-negligible. The fact that employee SICs cause a decrease in disposable income in the lower deciles is mainly the result of the fact that the increase of the flat rate part of the health insurance contribution is most noticeable in the lowest deciles.

Table 1 (Netherlands): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.20	0.90	0.28	-0.76	0.00	0.31	0.93
2	0.00	0.54	0.11	0.25	-0.76	0.00	0.41	0.55
3	0.00	0.59	-0.46	0.19	-0.33	0.00	0.58	0.57
4	0.00	0.43	-0.51	0.17	-0.16	0.00	0.76	0.69
5	0.00	0.30	-0.15	0.13	0.07	0.00	0.96	1.31
6	0.00	0.22	0.02	0.14	-0.03	0.00	1.00	1.35
7	0.00	0.15	0.01	0.09	-0.03	0.00	1.16	1.38
8	0.00	0.13	-0.01	0.08	-0.20	0.00	1.26	1.25
9	0.00	0.09	0.01	0.06	-0.47	0.00	1.38	1.08
10	0.00	0.06	0.01	0.04	-0.99	0.00	1.44	0.56
Total	**0.00**	**0.22**	**-0.03**	**0.11**	**-0.41**	**0.00**	**1.08**	**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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Netherlands): Policy effects in 2015-2016, using the CPI-indexation, %



Austria

In 2015-16, households experienced on average a real increase of 3.19%. The policy effect was significantly pro-rich with an income-increasing effect of 0.77% in the first decile and 1.88% in the second but between 2.83% and 3.75% in the higher decile groups.

The income increase in all decile groups was to a large extent driven by the tax reform 2016 which decreased tax rates for all taxable incomes between 11,000 and 90,000 EUR per year, with an increase for taxable incomes only above EUR 1,000,000. As the decreases of tax rates in several tax bands have a cumulative effect, persons in higher income groups gained more.

The losses related to employee SIC in the highest income deciles are due to an above-average increase of the upper contribution limit. This effect contributed also to the somewhat lower gains in total disposable incomes in the highest decile. The slightly progressive effect in employee SIC is also due to the fact that the health insurance contribution rate for blue collar workers was slightly reduced whereas that of white collar workers was slightly increased.

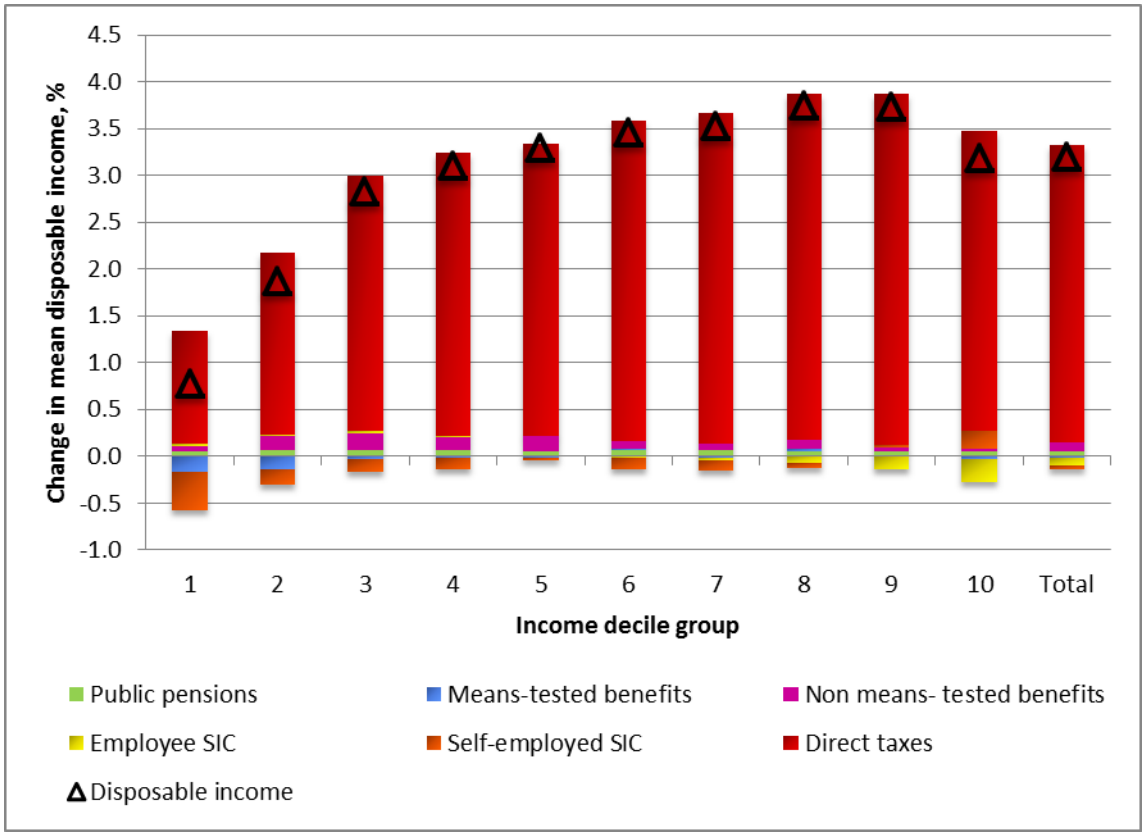
Public pensions were increased by a rate higher than the rate of price growth (in EUROMOD related to the period from June 2015 to June 2016), which resulted in income gains along the entire income distribution. Among non-means-tested benefits which are usually not indexed on a regular basis, (discretionary) increases for family allowance (all age groups) and care benefit (all care degrees) took place, which led to a gain in all income groups with a focus on the lower incomes deciles, as families with children and receivers of care benefit (mainly pensioners) tend to be located more in those income groups.

Table 1 (Austria): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.05	-0.17	0.06	0.03	-0.40	1.21	0.77
2	0.00	0.06	-0.14	0.15	0.01	-0.17	1.95	1.87
3	0.00	0.06	-0.03	0.18	0.02	-0.13	2.72	2.83
4	0.00	0.06	-0.01	0.14	0.01	-0.13	3.02	3.10
5	0.00	0.06	-0.02	0.15	0.00	-0.03	3.13	3.29
6	0.00	0.06	0.01	0.09	-0.01	-0.13	3.43	3.45
7	0.00	0.06	-0.02	0.08	-0.03	-0.11	3.53	3.52
8	0.00	0.06	0.03	0.09	-0.07	-0.06	3.70	3.75
9	0.00	0.06	0.00	0.04	-0.14	0.02	3.76	3.73
10	0.00	0.05	-0.03	0.03	-0.25	0.20	3.19	3.19
Total	**0.00**	**0.06**	**-0.02**	**0.09**	**-0.08**	**-0.03**	**3.18**	**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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Austria): Policy effects in 2015-2016, using the CPI-indexation, %



Poland

Table 1 and Figure 1 show that as a result of tax-benefit changes between 2015 and 2016 the average equivalised HDI measured in real terms increased by 5.25%. This change showed a progressive pattern with positive changes within all income decile groups. However, the first three income decile groups benefited the most, with an average increase of equivalised HDI in the first decile of 35.95%, by 20.2% in the second decile and 12.38% in the third. The remaining income decile groups gained on average between 0.99% and 7.39% of equivalised HDI.

The biggest positive change of mean equivalised HDI is associated with means-tested benefits. On average this income component caused increases of 4.85%. The effect of means-tested benefits can be explained by changes in the Family Allowance that included an increase of both income thresholds and benefit amounts. There were also increases to the value of Family Allowance Supplements for Large Families, Education or Rehabilitation of Disabled Child and Supplement for Lone Parents. Increases to benefit values and the raising of income eligibility thresholds included Housing Benefit, Permanent and Temporary Social Assistance as well. However the biggest change of disposable income in the group of means-tested benefits is attributed to the implementation of Parental Allowance and especially to Childcare Allowance. It is assessed that due to those changes, households from the first to the third income deciles gained respectively 35.38%, 19.65% and 11.93% of equivalised HDI. Average changes of income in households from the fourth to the seventh income decile groups accounted for between 2.11% and 6.94%, while the changes in the top three income decile groups ranged from 0.88% to 1.79%.

The disposable income component which contributed the most to negative changes of mean equivalised HDI is associated with the increase of self-employed social security contributions. This income component caused an average decrease in income of 0.12% with households from the first income decile bearing the biggest burden of self-employed SIC with an average decrease of equivalised HDI of 0.46%.

Public pensions led to an average increase in mean equivalised HDI of 0.51%. In the first six income deciles public pensions increased income on average by around 0.7%, in the seventh and eighth by 0.6% while in the ninth and tenth deciles by 0.4% and 0.2% respectively.

Changes in HDI caused by non-means tested benefits are connected with the annual indexation of Nursing Supplement and a raise of Nursing Allowance values. Those changes influenced the incomes of households from fifth to the eighth income deciles and resulted in average increases of equivalised HDI in the region of 0.1%.

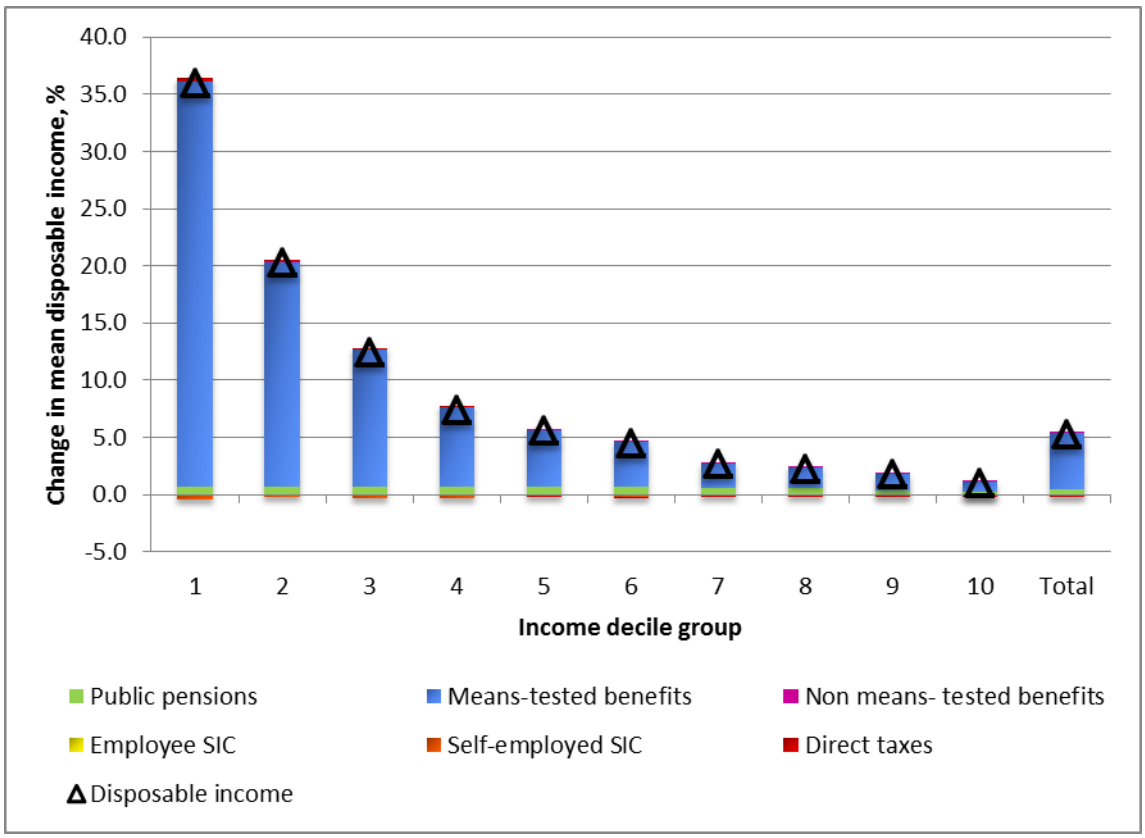
Another contribution to change in equivalised HDI relates to direct taxes. Although the overall effect of changes in direct taxes on mean equivalised HDI is close to 0%, the effects vary among particular income deciles. The positive change of 0.34% in the first income decile is associated with the decrease of the factor used in agricultural tax assessment, while the negative effects on income in the middle and at the upper-end of the income distribution are connected to the effect of fiscal drag with all nominal elements of the direct tax system unchanged between 2015 and 2016. However, these changes are small (about -0.1%). The negative effect of the Employee SIC is connected with the annual indexation of income thresholds for old-age pension and disability insurance.

Table 1 (Poland): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.67	35.38	0.02	0.00	-0.46	0.34	35.95
2	0.00	0.66	19.65	0.05	0.00	-0.21	0.04	20.20
3	0.00	0.72	11.93	0.02	0.00	-0.33	0.03	12.38
4	0.00	0.67	6.94	0.05	0.00	-0.28	0.01	7.39
5	0.00	0.70	4.91	0.10	0.00	-0.13	-0.05	5.53
6	0.00	0.67	3.92	0.11	0.00	-0.16	-0.05	4.49
7	0.00	0.61	2.11	0.09	0.00	-0.06	-0.07	2.68
8	0.00	0.55	1.79	0.05	0.00	-0.07	-0.07	2.26
9	0.00	0.41	1.43	0.02	0.00	-0.06	-0.06	1.74
10	0.00	0.22	0.88	0.00	-0.06	-0.05	0.00	0.99
Total	**0.00**	**0.51**	**4.85**	**0.05**	**-0.01**	**-0.12**	**-0.02**	**5.25**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Poland): Policy effects in 2015-2016, using the CPI-indexation, %



Portugal

Changes in 2016 have a clear progressive effect on the income distribution. Although households in general only get an overall increase of 0.19% in their disposable income, the lower income deciles report very significant gains in comparison. Disposable income for the first income decile grows by almost 11%. This is essentially due to changes in Social Insertion Income and other means tested policies such as the Social Supplement for the Elderly or the Child Benefits. The second income decile also gains from the changes in means tested benefits, having a 1.04% increase in disposable income. Less significant gains go along the distribution until the eighth decile, with means tested benefits always playing an important role.

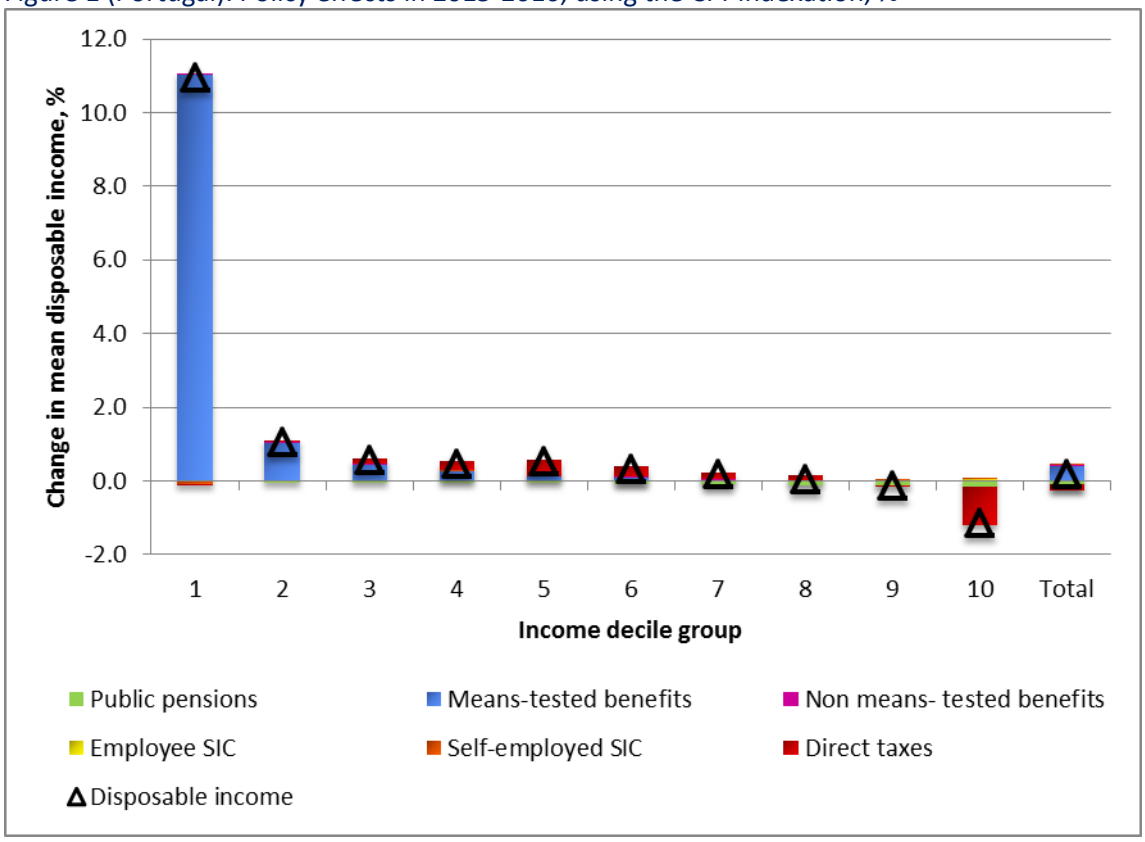
The nominal increase in pensions also benefited the lower income pensioners - at least in relative terms - as shown in the progressive results in the table (negative results show a real loss in disposable income rather than a gain, as this exercise considers an inflation of 0.5% while lower pensions were increased by 0.4%). The last alleviation of the extraordinary solidarity contribution paid by pensioners in 2016 (before being eliminated in 2017) only has a very slight effect (0.06%) on the richest decile. Finally, taxes are slightly alleviated for middle income deciles while the reduction in the disposable income at the tenth decile is essentially due to the increase in taxes (1.06pp out of the 1.14% decrease).

Table 1 (Portugal): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.03	11.01	0.02	0.00	-0.06	-0.01	10.93
2	0.00	-0.05	1.04	0.02	0.00	0.00	0.03	1.04
3	0.00	-0.06	0.44	0.01	0.00	0.00	0.15	0.55
4	0.00	-0.06	0.26	0.02	0.00	0.00	0.25	0.47
5	0.00	-0.06	0.11	0.01	0.00	0.00	0.44	0.51
6	0.00	-0.09	0.09	0.01	0.00	0.00	0.31	0.33
7	0.00	-0.07	0.03	0.01	0.00	0.00	0.19	0.16
8	0.00	-0.13	0.02	0.01	0.00	0.00	0.12	0.02
9	0.00	-0.11	0.01	0.00	0.00	0.01	-0.04	-0.13
10	0.00	-0.16	0.00	0.00	0.06	0.01	-1.06	-1.14
Total	**0.00**	**-0.10**	**0.42**	**0.01**	**0.02**	**0.00**	**-0.15**	**0.19**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Portugal): Policy effects in 2015-2016, using the CPI-indexation, %



Romania

The analysis of the effects of policy changes between 2015 and 2016 shows that all households are better off, since the disposable income of all deciles has increased progressively (around 5% for the first decile and 1.5% for the tenth decile). The overall disposable income change has been estimated to be 2.45%.

Except for the first decile, the largest contribution to the disposable income increase is due to public pensions, their annual indexation rate being superior to the consumer prices index, thus public pensions have slightly increased in real terms (by around 1.5% of disposable income).

The poorest decile has benefited from a significant increase in means-tested benefits, by around 4.9%, explained by the fact that the thresholds of the means-tested benefits have remained nominally the same between 2015 and 2016, while the prices fell, thus resulting in an income gain for the bottom decile. Benefits have increased also due to only 50% of the non means-tested child allowance being included in the income test of means-tested benefits (previously 100% of benefits were taken into account).

The net effect of the direct taxes is negative for the first and second deciles and beneficial for the others. The bottom decile households were most likely affected by the increase in the health insurance liability, as its minimal value is linked with the statutory minimum wage which has increased by more than 28% from 2015 to 2016. On the other hand, the other deciles have benefited from the nominal increase of the tax allowance for employees by nearly 23%. There have also been (smaller) increases in the tax allowance on pension income while the level of earnings at which employees can benefit from the maximum tax allowance on employee earnings has been increased by 50%.

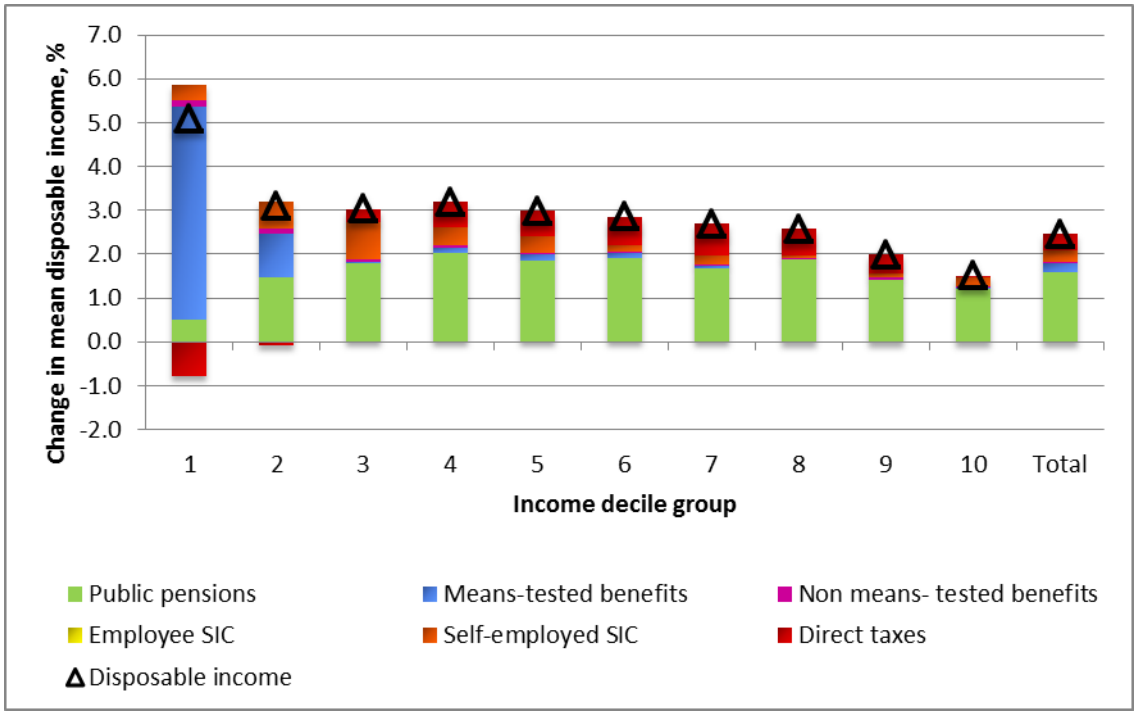
A small positive outcome is also observed in the case of the social insurance contribution for self-employed, coming as a result of a change in the contribution rate. More specifically, the self-employed can opt between paying 10.5% or 26.3% on self-employment income, the former being equivalent to only one third of the full rights in the pensions system.

Table 1 (Romania): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.51	4.86	0.13	0.00	0.36	-0.79	5.07
2	0.00	1.48	0.99	0.10	0.00	0.61	-0.09	3.10
3	0.00	1.79	0.03	0.06	0.00	0.86	0.30	3.03
4	0.00	2.01	0.14	0.05	0.00	0.41	0.57	3.18
5	0.00	1.84	0.16	0.03	0.00	0.37	0.58	2.98
6	0.00	1.90	0.13	0.03	0.00	0.14	0.66	2.86
7	0.00	1.67	0.06	0.03	0.00	0.20	0.73	2.69
8	0.00	1.88	-0.01	0.03	0.00	0.07	0.60	2.56
9	0.00	1.42	0.00	0.06	0.00	0.09	0.42	1.98
10	0.00	1.22	0.00	0.04	0.00	0.19	0.05	1.51
Total	**0.00**	**1.58**	**0.20**	**0.05**	**0.00**	**0.24**	**0.38**	**2.45**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Romania): Policy effects in 2015-2016, using the CPI-indexation, %



Slovenia

Disposable income for the total population increases by 1.23%, however the effects of tax-benefit changes are quite heterogeneous along the distribution of disposable income. In fact, the poorest decile experiences the highest increase in disposable income of 4.66%. All other income groups experience a milder increase in disposable income, between 2.2 and 0.84%, with the poorest deciles characterised by relatively larger increases.

Public pensions represent one of the main factors driving the increase in disposable income between 2015 and 2016, with an annual growth of 0.51% for the total population, with 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.

The second most important factor contributing to the increase in disposable income are means-tested benefits, which account for 0.47pp out of a 1.23% increase in total disposable income between 2015 and 2016. For the poorest decile, means-tested benefits have the largest positive impact on disposable income, accounting for 3.89pp out of a total increase in disposable income of 4.66%. The second poorest decile enjoys an increase in disposable income of 1.39pp due to means-tested benefits, out of a total increase of 2.2%. The overall effect of means-tested benefits can be explained by the fact that minimum income benefits increased at a higher rate than CPI during the 2015-2016 period. Also, the minimum income represents the base reference value for the calculation of other means-tested benefits related to social assistance, housing and income support, also targeted at the lowest deciles.

Direct taxes, mainly Personal Income Taxes, also contributed positively, although to a small extent (0.25% for the total population), to the increase in disposable income between 2015 and 2016. This results from an increase in the maximum income threshold for the second tax bracket. Specifically, taxable incomes between 8,021 and 20,400 euro per year are subject to a marginal tax rate of 27% in 2016, while in 2015 this rate applied only to taxable incomes between 8,021 and 18,960 euro per year; taxable incomes between 18,960 and 20,400 in 2015 were therefore subject to a higher marginal tax rate of 41%. This change favoured particularly middle and higher income deciles, which experienced a higher reduction in tax liabilities: for the top decile, reduced direct taxes represent 0.52pp out of a total increase in disposable income of 0.94%.

Non means tested benefits had a positive although very small impact (0.13% for the total population) on disposable income across all income deciles. It is plausible that such an effect was caused by the indexation of imputed benefits which are not simulated in EUROMOD.

Self-employed social insurance contributions contributed negatively to disposable income growth, although to a small extent. This results from an increase between 2015 and 2016 in the tax base on which self-employed SIC contributions are levied, from 72 to 74 percent of self-employment income.

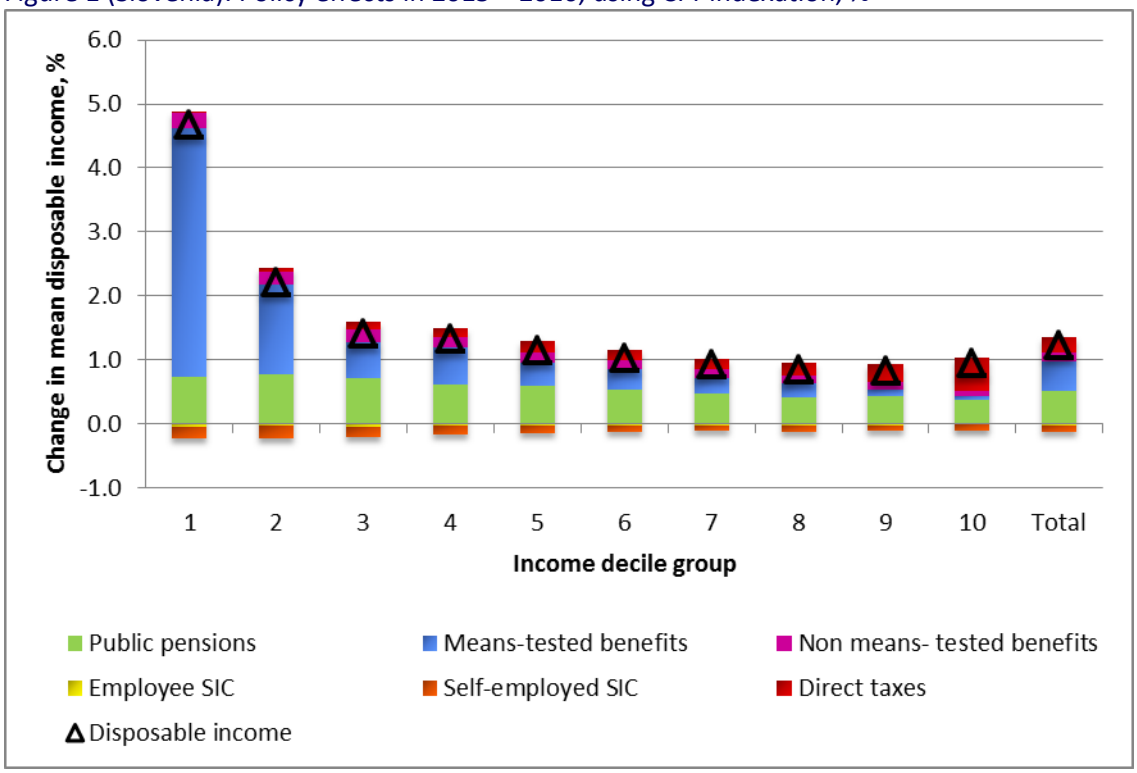
Finally, the effect of employee's social insurance contributions on disposable income growth is almost negligible, across all income deciles. The overall effect is driven by indexation and not by policy changes, as wage increase was higher than CPI.

Table 1 (Slovenia): Policy effects in 2015 – 2016, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.74	3.89	0.24	-0.05	-0.18	0.02	4.66
2	0.00	0.78	1.39	0.20	-0.04	-0.20	0.06	2.20
3	0.00	0.71	0.58	0.20	-0.04	-0.16	0.11	1.40
4	0.00	0.62	0.58	0.15	-0.03	-0.14	0.15	1.33
5	0.00	0.59	0.37	0.15	-0.03	-0.12	0.17	1.14
6	0.00	0.53	0.33	0.14	-0.03	-0.10	0.16	1.03
7	0.00	0.46	0.25	0.14	-0.03	-0.07	0.17	0.92
8	0.00	0.41	0.23	0.11	-0.02	-0.10	0.21	0.84
9	0.00	0.44	0.10	0.11	-0.02	-0.09	0.29	0.83
10	0.00	0.37	0.07	0.08	-0.02	-0.09	0.52	0.94
Total	**0.00**	**0.51**	**0.47**	**0.13**	**-0.03**	**-0.11**	**0.25**	**1.23**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Slovenia): Policy effects in 2015 – 2016, using CPI-indexation, %



Slovak Republic

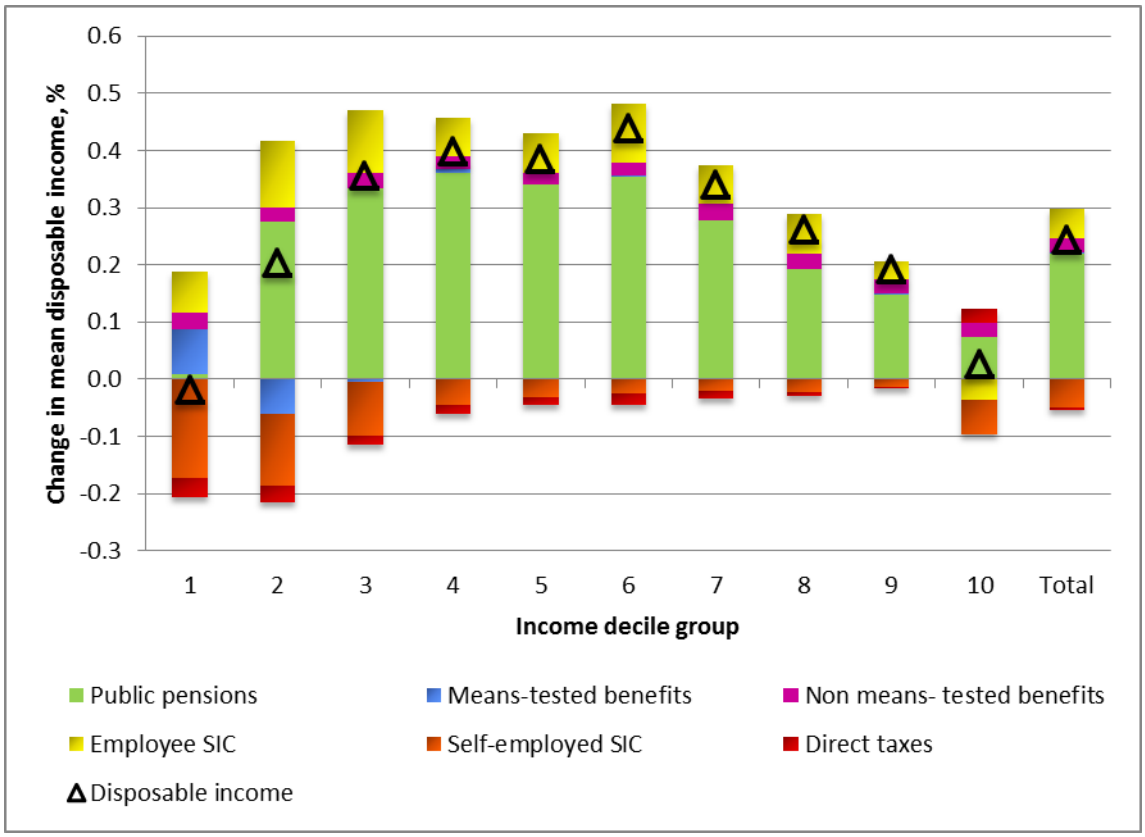
In comparison to 2015 policies, (deflated) 2016 policies increase mean household income only by 0.24% in total. Changes in public pensions accounted for most of the increase in household disposable income (0.22pp), reflecting that pensions indexation was higher than growth in CPI. The distribution of gains across income deciles reflects where recipients of pensions are located. All other tax and benefit instruments have only a very minor distributional impact.

Table 1 (Slovak Republic): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.01	0.08	0.03	0.07	-0.17	-0.03	-0.02
2	0.00	0.27	-0.06	0.03	0.12	-0.13	-0.03	0.20
3	0.00	0.33	0.00	0.03	0.11	-0.09	-0.02	0.36
4	0.00	0.36	0.01	0.02	0.07	-0.04	-0.01	0.40
5	0.00	0.34	0.00	0.02	0.07	-0.03	-0.01	0.39
6	0.00	0.35	0.00	0.02	0.10	-0.02	-0.02	0.44
7	0.00	0.28	0.00	0.03	0.07	-0.02	-0.01	0.34
8	0.00	0.19	0.00	0.03	0.07	-0.02	-0.01	0.26
9	0.00	0.15	0.00	0.02	0.03	-0.01	0.00	0.19
10	0.00	0.07	0.00	0.02	-0.04	-0.06	0.02	0.03
Total	**0.00**	**0.22**	**0.00**	**0.03**	**0.05**	**-0.05**	**-0.01**	**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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Slovak Republic): Policy effects in 2015-2016, using the CPI-indexation, %



Finland

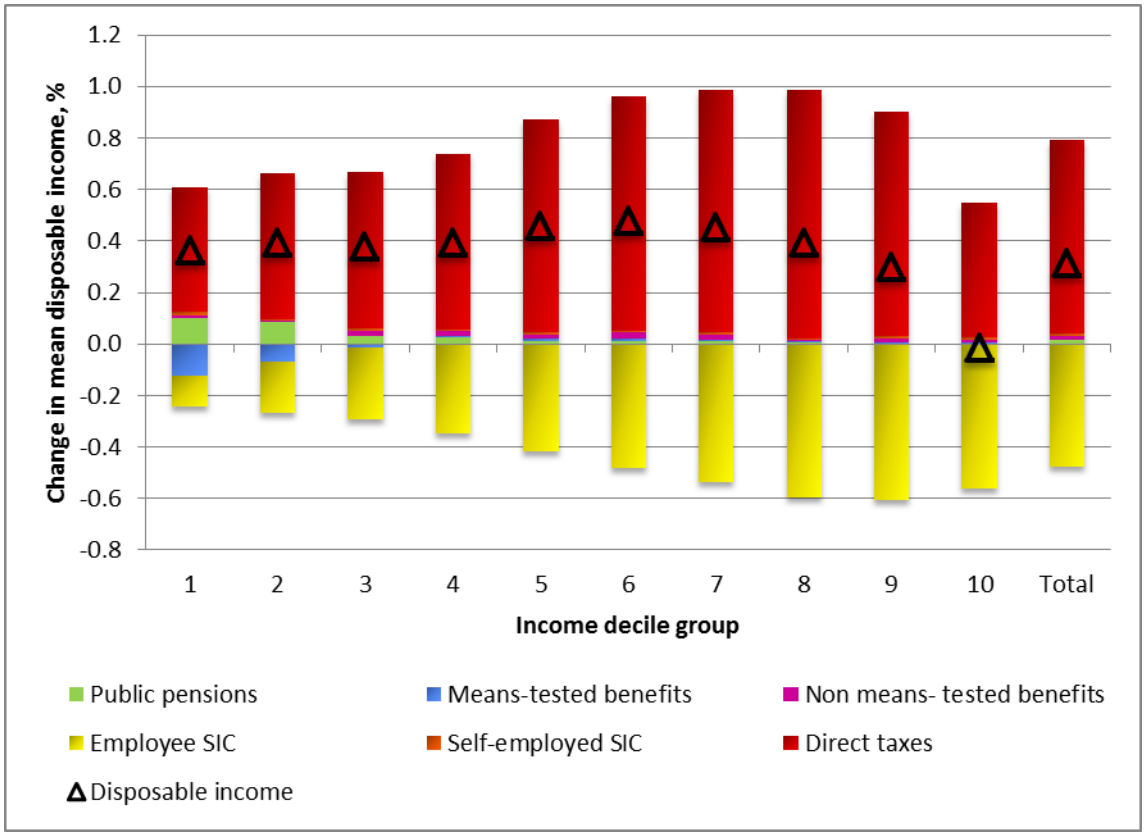
In 2016 the policy changes increased the disposable income in all income deciles except the highest income decile. The increase of 20 euro/month in the guarantee pension improved the situation of pensioners with low income. Most of the other non-contributory benefits decreased, because they are indexed by the national pension index and the index was negative (-0.4%) in 2016. However, the child benefit, study benefits and local authority income support were not subject to this cut. One big change was the increase of 77% in the unemployment insurance contribution, and the resulting negative effect can be seen in all income decile groups. Overall, however, the most significant effects were due to the changes in taxes.

Table 1 (Finland): Policy effects in 2015-2016, using the HICP-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.10	-0.12	0.01	-0.12	0.01	0.48	0.36
2	0.00	0.09	-0.07	0.00	-0.20	0.01	0.56	0.39
3	0.00	0.03	-0.01	0.02	-0.28	0.01	0.61	0.38
4	0.00	0.03	0.00	0.02	-0.35	0.01	0.68	0.39
5	0.00	0.01	0.01	0.02	-0.42	0.01	0.83	0.46
6	0.00	0.01	0.01	0.02	-0.48	0.01	0.91	0.48
7	0.00	0.01	0.01	0.02	-0.54	0.01	0.94	0.45
8	0.00	0.00	0.00	0.01	-0.60	0.01	0.96	0.39
9	0.00	0.00	0.00	0.02	-0.61	0.01	0.87	0.30
10	0.00	0.00	0.00	0.01	-0.56	0.01	0.52	-0.01
Total	**0.00**	**0.02**	**0.00**	**0.01**	**-0.47**	**0.01**	**0.75**	**0.31**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Finland): Policy effects in 2015-2016, using the CPI-indexation, %



Sweden

For the period between 2015 and 2016, we observe the following main effects of policy changes. Changes in tax-benefit policies have accounted for a modest increase of household disposable income, by only 0.18% on average. The largest increases benefitted the poorest three deciles of the distribution of household disposable income. Disposable income grew at a decreasing rate across deciles until the fourth richest decile, while the top three deciles experienced a loss in disposable income.

The most important component contributing to the growth of disposable income between 2015 and 2016 was public pensions, most likely since the pension index grew faster than CPI growth. The indexation favoured all deciles, but to a greater extent those between the second and the fourth decile.

Reduced employee and self-employed social insurance contributions contributed positively to the growth of disposable income, although to a lesser extent than public pensions. In the case of employee's social insurance contributions, the effect was stronger for the richest half of the income distribution, and increasing with disposable income. In the case of self-employed SICs, on the contrary, the effect was stronger among the poorest half of the income distribution (in particular for the poorest decile), and decreasing with disposable income.

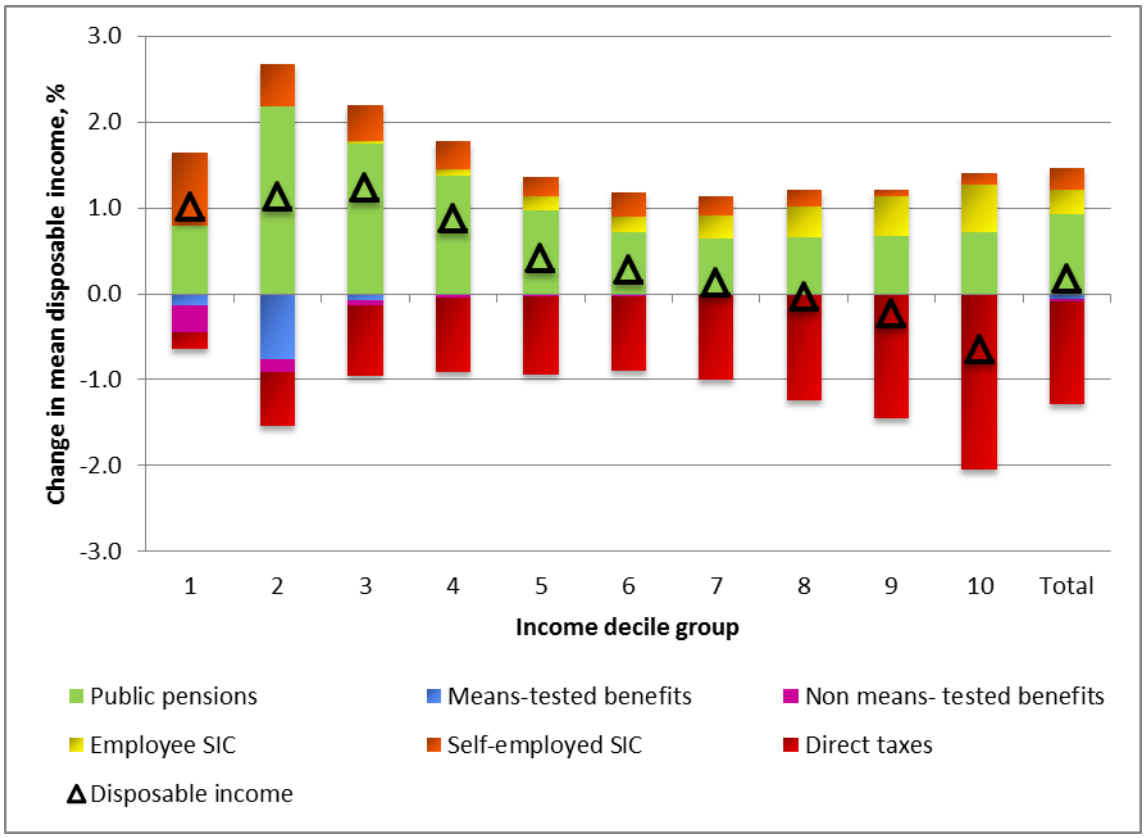
The positive effect of the growth in pension incomes has been offset by direct income taxes. Direct taxes have been the most important income component negatively affecting total disposable income growth (-1.19% for the total population), most importantly among the fourth richest deciles, and to a minor extent among the poorest deciles. The highest (negative) incidence of income taxes for the richest deciles adds to the redistributive nature of the Swedish tax/benefits system. Both means- and non-means-tested benefits have had a slight regressive impact, reducing negligibly disposable income on average; the effect is concentrated in the three poorest deciles.

Table 1 (Sweden): Policy effects in 2015-2016, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.78	-0.14	-0.31	0.00	0.85	-0.19	1.00
2	0.00	2.18	-0.76	-0.15	0.01	0.49	-0.63	1.13
3	0.00	1.74	-0.07	-0.07	0.04	0.41	-0.82	1.23
4	0.00	1.37	-0.02	-0.03	0.08	0.33	-0.86	0.87
5	0.00	0.97	-0.01	-0.03	0.16	0.23	-0.91	0.41
6	0.00	0.72	-0.01	-0.03	0.18	0.28	-0.87	0.28
7	0.00	0.64	0.00	0.00	0.27	0.23	-0.99	0.13
8	0.00	0.66	0.00	0.00	0.37	0.18	-1.23	-0.04
9	0.00	0.67	0.00	0.00	0.45	0.08	-1.44	-0.24
10	0.00	0.72	0.00	0.00	0.54	0.14	-2.05	-0.65
Total	**0.00**	**0.93**	**-0.06**	**-0.03**	**0.28**	**0.25**	**-1.19**	**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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (Sweden): Policy effects in 2015-2016, using the CPI-indexation, %



United Kingdom

The total effect of (deflated) 2016 policies on mean income is -0.05%. Although between 2015 and 2016, there were gains from further increases to Personal Income Tax Allowance and the state pension rising faster than inflation thanks to the triple-lock indexation, there was a loss of 0.29% of income on average, from increased employee Social Insurance Contributions.

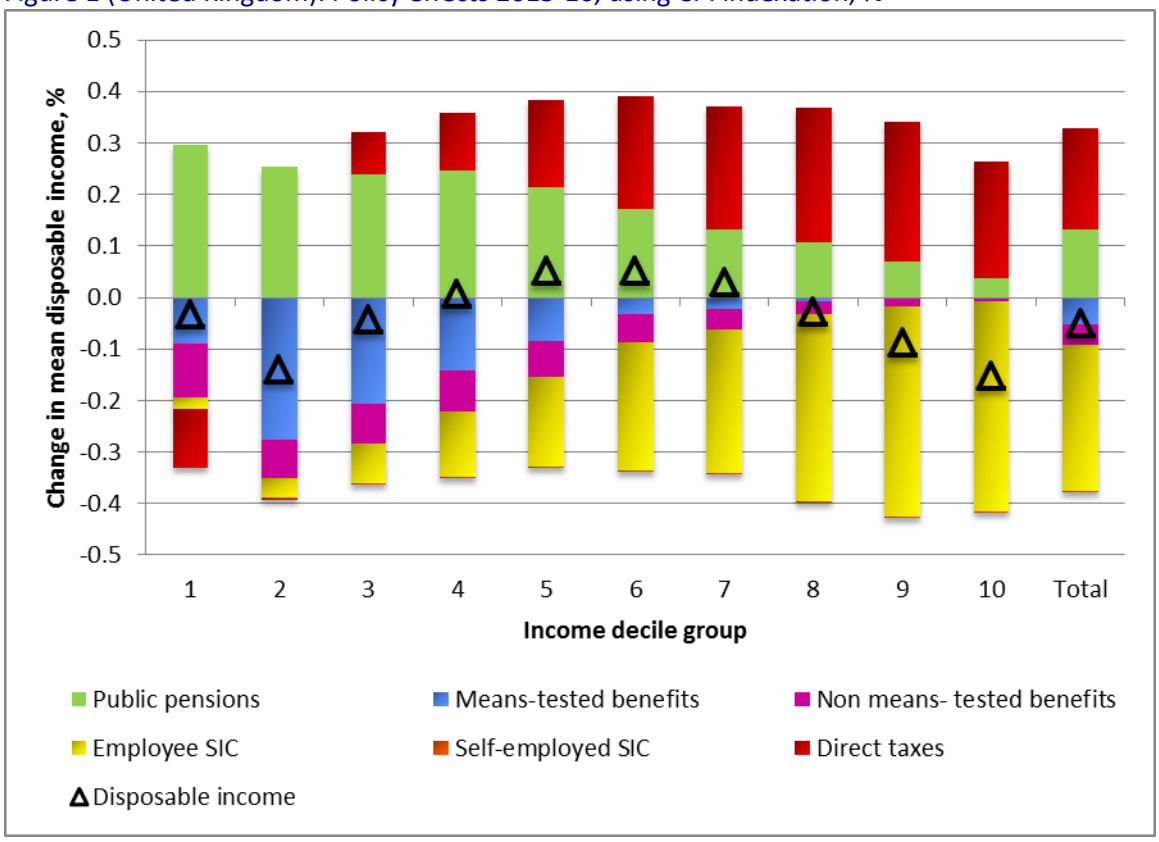
The distributional pattern shows an inverse U-shape: with the second and tenth decile groups losing around 0.15% of income on average. Comparing 2015 to price-indexed 2016, the poorer part of the population loses mainly from frozen benefits and increased Council Tax in England and Wales, whilst the middle and top part of the income distribution lose from increased employee SIC.

Table 1 (United Kingdom): Policy effects 2015-16, using CPI indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.30	-0.09	-0.10	-0.02	0.00	-0.11	-0.03
2	0.00	0.25	-0.28	-0.07	-0.04	0.00	0.00	-0.14
3	0.00	0.24	-0.21	-0.08	-0.08	0.00	0.08	-0.04
4	0.00	0.25	-0.14	-0.08	-0.13	0.00	0.11	0.01
5	0.00	0.21	-0.08	-0.07	-0.17	0.00	0.17	0.05
6	0.00	0.17	-0.03	-0.06	-0.25	0.00	0.22	0.05
7	0.00	0.13	-0.02	-0.04	-0.28	0.00	0.24	0.03
8	0.00	0.11	-0.01	-0.03	-0.36	0.00	0.26	-0.03
9	0.00	0.07	0.00	-0.01	-0.41	0.00	0.27	-0.09
10	0.00	0.04	0.00	-0.01	-0.41	0.00	0.23	-0.15
Total	**0.00**	**0.13**	**-0.05**	**-0.04**	**-0.29**	**0.00**	**0.19**	**-0.05**

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2016 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure 1 (United Kingdom): Policy effects 2015-16, using CPI indexation, %



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