

EUROMOD WORKING PAPER SERIES

EM 4/18

**Effects of tax-benefit policy changes
across the income distributions of the
EU-28 countries: 2016-2017**

February 2018



Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2016-2017*

The following people contributed to this paper:

Slavko Bezeredi, Venelin Boshnakov, Laurence Bouvard, Réka Branyiczki, Simon Bugeja, María Jesús Burgos, Lidia Ceriani, Aušra Čižauskaitė, Mitja Čok, Paola De Agostini, Klaas de Vos, María del Valle Navas, Desislava Dimitrova, Dragomir Draganov, Anasse El Maslohi, Carlos Farinha Rodrigues, Francesco Figari, Carlo Fiorio, Maria Flevotomou, Michael Fuchs, Rastislav Gabik, Patricia Gallego Granados, Katrin Gasior, Anne-Sophie Genevois, Bent Greve, Michelle Harnisch, Péter Hegedűs, Katarina Hollan, Pertti Honkanen, Tine Hufkens, M. Azhar Hussain, Nizamul Islam, H. Xavier Jara, Vítor Junqueira, Klára Kalíšková, Jack Kneeshaw, Christos Koutsampelas, Nataša Kump, Cenely Leppik, Chrysa Leventi, Philippe Liégeois, Christine Lietz, Klas Lindström, Sebastiaan Maes, Boris Majcen, Kostas Manios, Manos Matsaganis, Märt Masso, Godwin Mifsud, Stephanie Mifsud, Eva Militaru, Daniel München, Michał Myck, Jekaterina Navickė, Cathal O'Donoghue, María Milagros Paniagua, Wojciech Paukszteło, Alari Paulus, Dušan Paur, Jan Pavel, Teresa Pérez, Martina Pezer, Magnus Piirits, Anna Pluta, Alexandros Polycarpou, Daria Popova, Tapio Räsänen, Pasquale Recchia, Pauline Saliba, Miska Simanainen, Holly Sutherland, Péter Szivós, Miko Tammik, Iva Tasseva, Jussi Tervola, Ekaterina Tosheva, Panos Tsakoglou Ivica Urban, Maria Valaste, Lien Van Cant, Toon Vanheukelom, Josefine Vanhille, Melchior Vella, Joana Vicente, Henrik von Hofsten, and Anna Zasova.

Contact: euromod@essex.ac.uk

To cite this report please refer to:

EUROMOD (2018) "Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2016-2017", EUROMOD Working Paper 4/18, Institute for Social and Economic Research, University of Essex.

* This document and the process of extending and updating EUROMOD is financially supported by the European Union Programme for Employment and Social Innovation 'Easi' (2014-2020). For further information please consult <http://ec.europa.eu/social/easi>. The information contained within this document does not necessarily reflect the position or opinion of the European Commission. The results presented here are based on EUROMOD version H1.0. EUROMOD is maintained, developed and managed by the Institute for Social and Economic Research (ISER) at the University of Essex, in collaboration with national teams from the EU member states. We wish to acknowledge the contribution of past members of the EUROMOD project as well as its 2017 members, especially those authors of the H1.0 EUROMOD country reports, listed above.

For Belgium, Bulgaria, Denmark, Germany, Spain, France, 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, Luxembourg, Poland, Slovenia and Finland we use the Eurostat EU-SILC together with national variables provided by respective national statistical offices. For Greece, we use the national version of the EU-SILC. For Italy, Austria and the Slovak Republic we use the national SILC data made available by respective national statistical offices. For the UK we use Family Resources Survey data made available by the Department of Work and Pensions via the UK Data Service. The usual disclaimers apply.

Contents

Introduction	3
Change in prices 2016-2017.....	9
Belgium	10
Bulgaria	12
Czech Republic.....	14
Denmark.....	16
Germany.....	18
Estonia.....	20
Ireland	22
Greece	24
Spain.....	26
France.....	28
Croatia.....	30
Italy	32
Cyprus	34
Latvia.....	36
Lithuania	38
Luxembourg	40
Hungary.....	42
Malta	44
The Netherlands.....	46
Austria	48
Poland	50
Portugal.....	52
Romania	54
Slovenia.....	56
Slovak Republic	58
Finland.....	60
Sweden.....	62
United Kingdom	64
References	66

Introduction

This paper provides a short country-by-country harmonised analysis - using EUROMOD¹ - of the distributional effects on household disposable income of direct tax and cash benefit and pension policy changes between 2016 and 2017. It is the latest in this series of reports, available as EUROMOD working papers, produced annually on the public release of an updated EUROMOD. At the same time, last year's equivalent report - covering policy changes between 2015 and 2016 - has also been revised to account for the availability of more recent input micro-data, model extensions and corrections and finalised HICP values for 2016.²

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 2017 tax-benefit policies (deflating the tax-benefit monetary parameters back to 2016 by the Harmonized Index of Consumer Prices, HICP) and household disposable incomes simulated under 2016 policies. The difference is expressed as a percentage of mean household disposable income in 2016. The population is ranked into decile groups based on their equivalised household disposable income in 2016 and the effect is shown for each decile group as well as the population as a whole, based on each person's equivalised household disposable income. The total policy effect on household disposable incomes is decomposed into the following components: public pensions, means-tested benefits, non-means-tested benefits, employee and self-employed social insurance contributions (SIC) and direct taxes. We isolate the direct policy effect from changes in market/original income, which are held constant in our analysis and shown in the tables and figures as unchanging. Note that the scale used for Figure 1 differs across countries.

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

For most countries, the analysis makes use of micro-data from the EU Statistics on Income and Living Conditions (EU-SILC) for 2015 (Germany uses 2014 data) with market incomes updated to the starting year in each analysis - 2016. For the UK we make use of data from the Family Resources Survey (FRS) for 2014/2015 with market incomes updated to 2016.

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

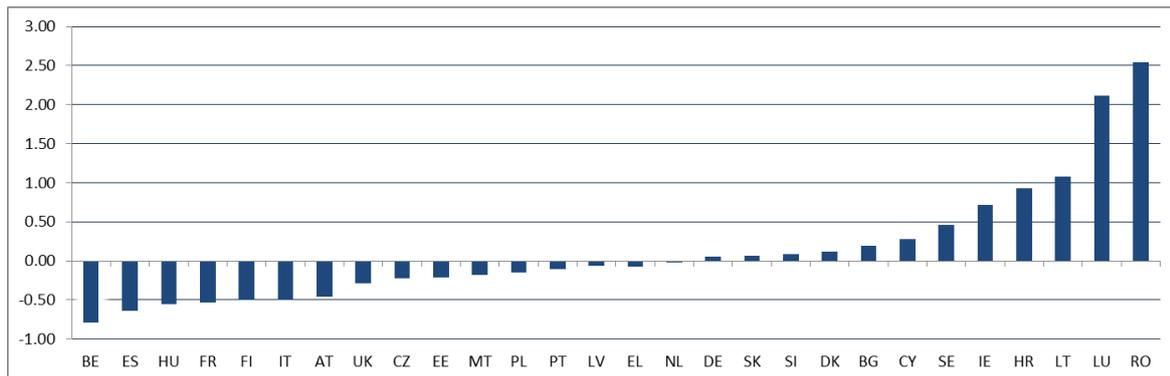
² EUROMOD, 2017, "Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2015-2016" EUROMOD Working Paper EM10/17 Colchester: ISER, University of Essex.

³ The full methodology used to estimate the effects of tax-benefit policy changes is described in Section 2 of De Agostini, P., A. Paulus and I. Tasseva, 2016, "The effect of changes in tax-benefit policies on the income distribution in 2008-2015" EUROMOD Working Paper EM6/16 Colchester: ISER, University of Essex.

Results and a cross-country summary

Figure A summarises the policy effect on average household disposable income across all EU-28 countries. The effect ranges from a decrease of 0.79% of household income in Belgium to an increase of 2.55% of household income in Romania.

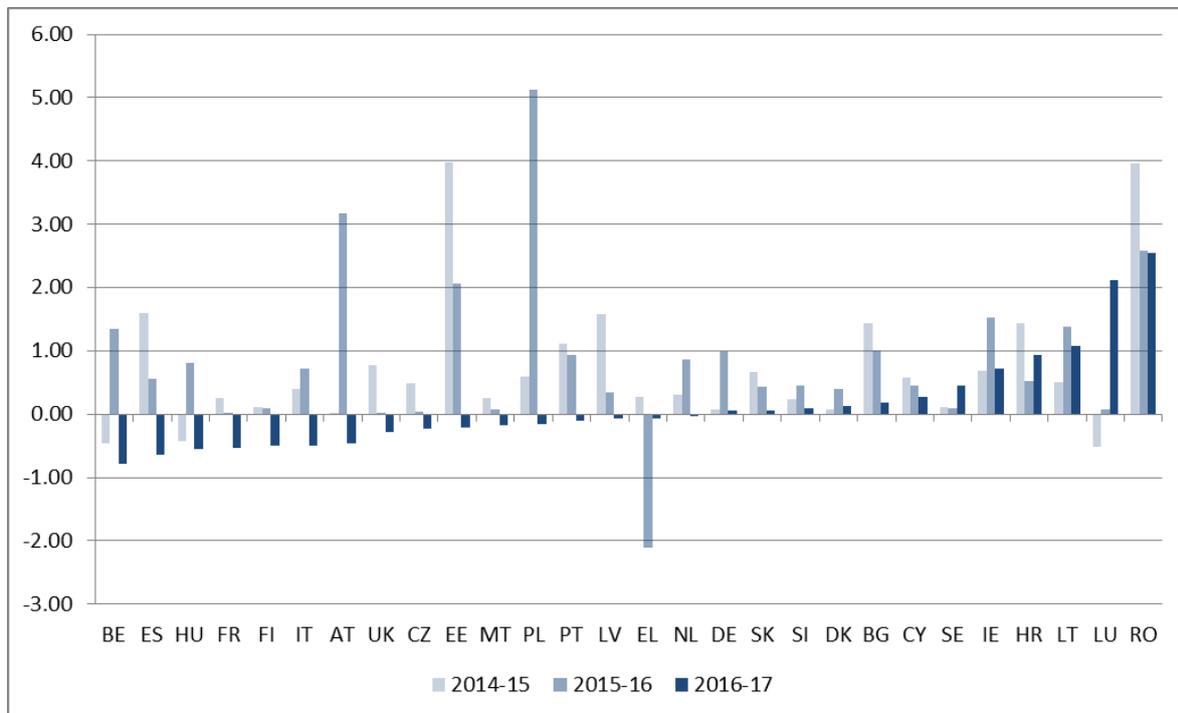
Figure A: Change in household disposable income (%) as a result of policy effects 2016-2017, using HICP indexation



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 3.3 % points) and the individual figures for Belgium and Romania in the context of recent years, Figure B provides the equivalent information for each of the last three years.

Of the three periods analysed, 2016-2017 stands out insofar as the overall effect of policy reforms is to lower average household disposables in around half of the countries - a substantially greater number than in either 2014-2015 (3 countries) or 2015-2016 (1 country). Despite this change of direction in 2016-2017, for several countries we still witness three consecutive years of increased average incomes attributable to policy effects. Romanian incomes especially have been helped by reforms to the tax-benefit system in recent years (though as we see below, for 2016-2017 gains have not been shared equally across the income distribution for Romania with the poorest decile actually suffering a loss in real terms).

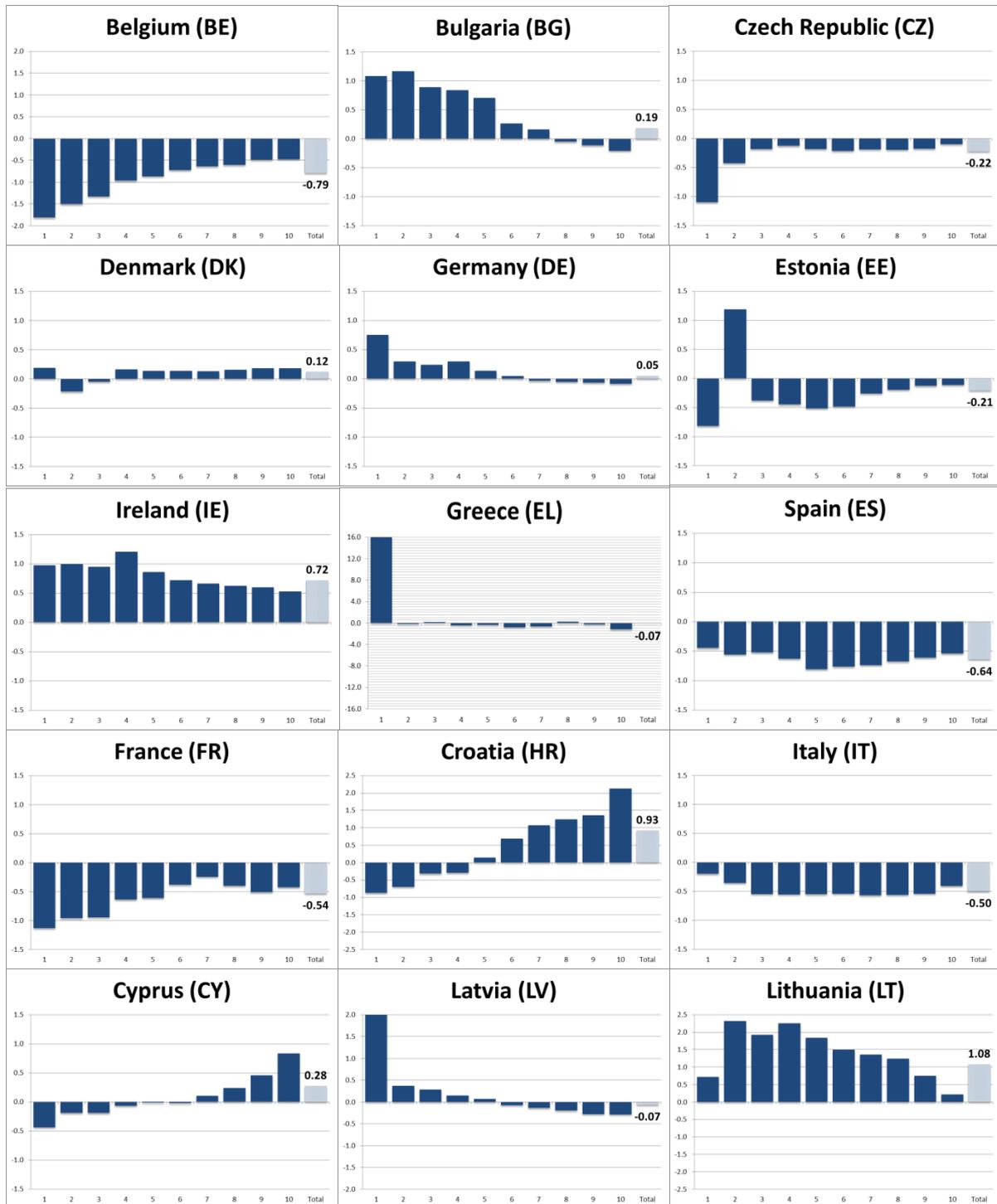
Figure B: Change in household disposable income (%) as a result of policy effects 2014-2015, 2015-2016 and 2016-2017, using HICP indexation

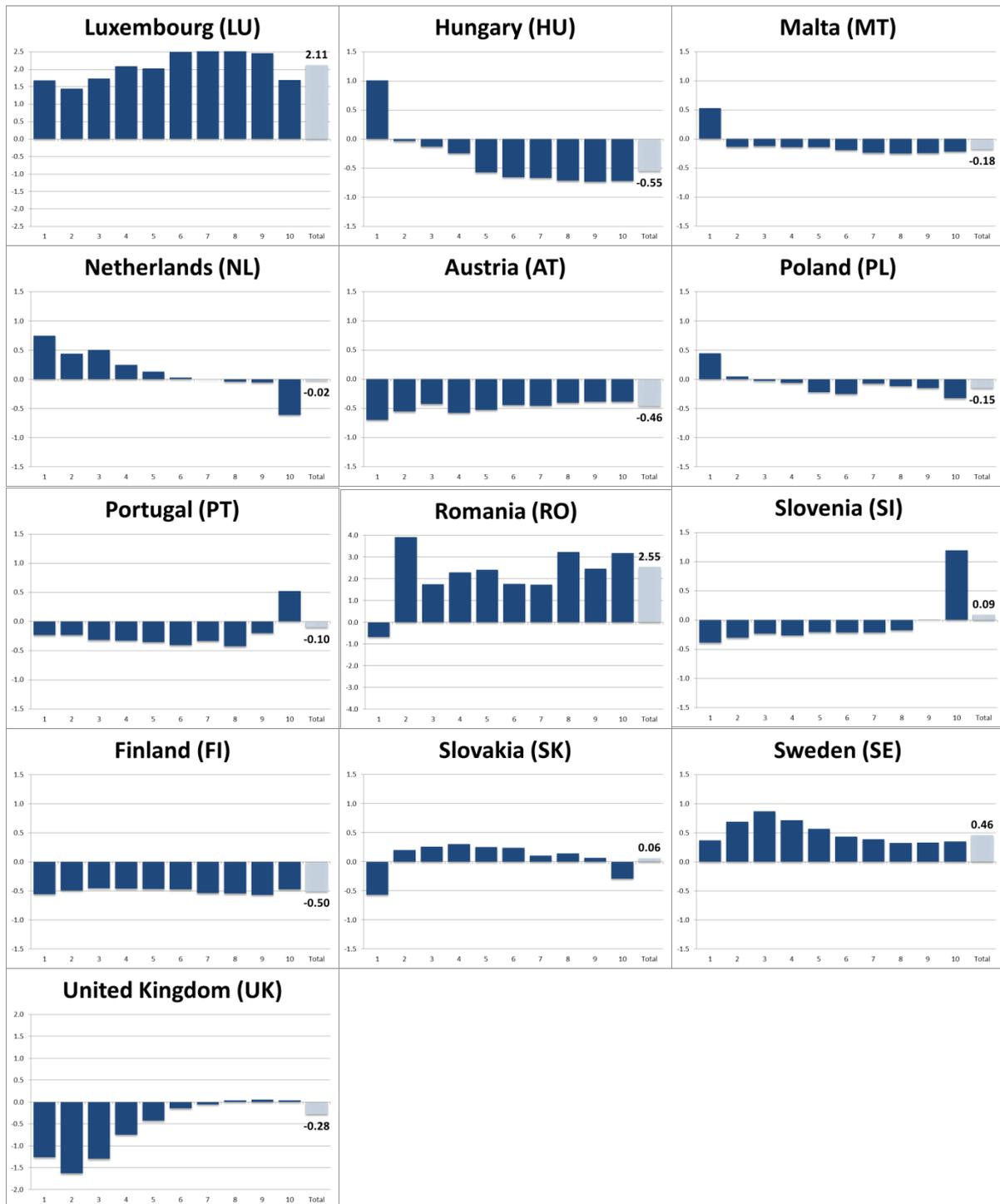


The distributional effects across all the EU-28 countries due to policy changes between 2016-2017 are summarised in Figure C, breaking down the change into that for each decile group. The figures are not all drawn to the same scale but in each case the interval between gridlines is the same: 0.5%. Rather more countries - between a quarter and a third - show effects that are regressive (increases in income worth more, or decreases worth less, as a % of household income at higher incomes than at lower incomes) than in previous years. Nevertheless, a simple majority still show an effect that is progressive - some more obviously than others. There are a few countries where the policy effects are (broadly) shared equally across the income distribution (Finland certainly and arguably also Denmark and Austria) and still other countries where losses are focused mainly in the middle of the distribution (Spain and Italy). Slovakia provides an inverted U-shaped distribution with losses at both ends and small gains across the middle deciles.

The most dramatic picture is provided by Greece where the overall policy effect is close to zero but the lowest income decile received a substantial income boost of around 16% due in the main to the introduction of a guaranteed minimum income (GMI).

Figure C: Change in household disposable income (%) by income decile group as a result of policy effects 2016-2017, using HICP indexation





Interpreting the results

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

- In some countries there were no changes to policies in nominal terms. However, when measured in real terms if the HICP is increasing, usually this will appear as a loss to households (a reduction in benefit or increase in tax or contribution).

- In some countries there were changes to public sector wages that other analysis of public policy changes might include. In this analysis we hold all wages constant and do not include the distributional effect of real changes to public sector wages, nor to the interaction between these changes and the tax-benefit system.
- For all countries, these results do not show the direct effect of any change to the minimum wage (though note that indirect effects may be seen where benefits are anchored to the minimum wage).
- In some countries, increases in social assistance and similar benefits (or the introduction of new benefits) may not have the effects shown at the bottom of the income distribution if take-up turns out to be incomplete (though note below that adjustments for this are made in some countries).

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

- Approximate adjustments for the non take-up of benefits are made in several countries for some benefits but not in others. Approximate adjustments for tax evasion are made in Bulgaria, Greece, Italy and Romania, but not in other countries.⁴ It is not possible to simulate all policies because of a lack of necessary information in the micro-data (i.e. EU-SILC, and FRS for the UK). There is some difference in the extent of simulation across countries. If policies cannot be simulated their values are uprated by indexes that capture the typical or average change in value between the two policy years, based on statutory indexation where this exists and has been applied.
- Pensions are not simulated in most cases and these are uprated using statutory uprating (where this exists) or using an index of average pension payments. This difference in uprating treatment may result in conceptual differences in the policy effect attributed to pensions in this analysis. In some cases, where average pension payments are used to uprate observed pension values, the results may capture changes in the composition of pensioners (e.g. a higher proportion of younger/older pensioners with higher or lower pensions) which may result in (small) changes in pensions appearing in the analysis even if pensions in payment were in fact indexed for inflation.
- In some cases other non-simulated short-term contributory benefits (e.g. to cover sickness, unemployment or maternity) have been assumed to rise in line with earnings in the previous year.⁵ This may imply a higher rate of growth than inflation (and appear as an increase in benefit) even if there have been no policy changes to these benefits in the year in question.

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

⁴ See Tammik (2018) for detail on which countries adjust for benefit non take-up and which adjust for tax evasion and the approach they take.

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

⁶ <https://www.euromod.ac.uk/using-euromod/country-reports>

Change in prices 2016-2017

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

Table A: Harmonized Index of Consumer Prices (HICP), 2017

Country	HICP
Belgium	1.023
Bulgaria	1.013
Czech Republic	1.024
Denmark	1.014
Germany	1.016
Estonia	1.033
Ireland	1.006
Greece	1.012
Spain	1.020
France	1.014
Croatia	1.016
Italy	1.016
Cyprus	1.012
Latvia	1.022
Lithuania	1.028
Luxembourg	1.028
Hungary	1.029
Malta	1.016
The Netherlands	1.015
Austria	1.018
Poland	1.018
Portugal	1.014
Romania	1.010
Slovenia	1.015
Slovak Republic	1.014
Finland	1.010
Sweden	1.014
United Kingdom	1.026

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

Belgium

On average, the policy changes between 2016 and 2017 resulted in a 0.79% reduction in the mean disposable income of the population and have had a negative impact throughout the income distribution. In addition, the changes were of a regressive character with the bottom deciles losing a higher percentage of their income compared to the top ones. The negative changes (especially for the second and the third deciles) are mainly driven by reductions in public pensions. The first decile was also particularly sensitive to reductions in means-tested and non-means-tested benefits. Changes in the self-employed contributions appear to have a small positive impact on incomes but it is almost negligible compared to the decrease in pensions. Overall, the changes in policies between 2016 and 2017 were parametric hence the reduction in disposable income is mainly due to the failure to compensate fully for price growth.

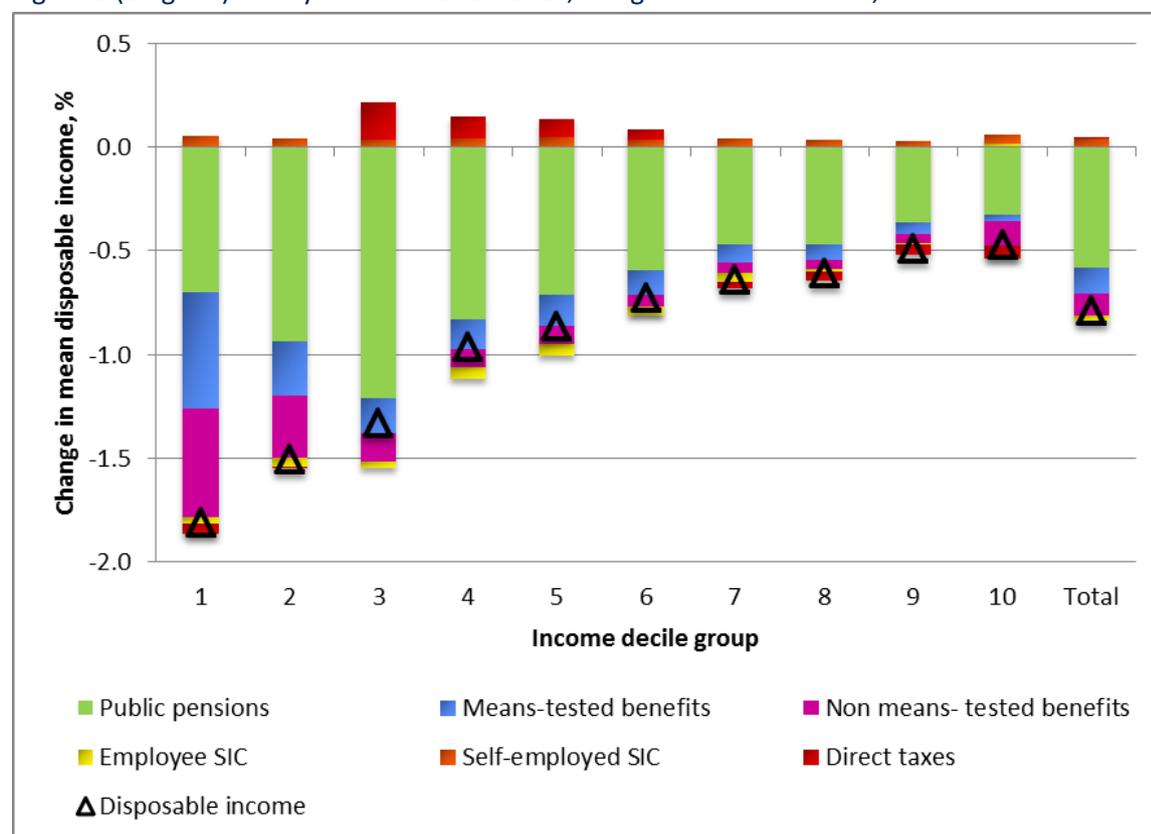
Table 1 (Belgium): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.70	-0.56	-0.53	-0.03	0.05	-0.05	-1.81
2	0.00	-0.94	-0.26	-0.30	-0.05	0.04	0.00	-1.51
3	0.00	-1.21	-0.17	-0.14	-0.03	0.04	0.18	-1.33
4	0.00	-0.83	-0.14	-0.09	-0.06	0.04	0.11	-0.97
5	0.00	-0.71	-0.15	-0.09	-0.05	0.05	0.09	-0.87
6	0.00	-0.59	-0.12	-0.06	-0.04	0.04	0.05	-0.73
7	0.00	-0.47	-0.08	-0.05	-0.04	0.04	-0.03	-0.64
8	0.00	-0.47	-0.07	-0.04	-0.02	0.04	-0.04	-0.61
9	0.00	-0.36	-0.05	-0.04	-0.01	0.03	-0.05	-0.49
10	0.00	-0.32	-0.03	-0.12	0.02	0.05	-0.06	-0.47
Total	0.00	-0.58	-0.12	-0.11	-0.02	0.04	0.00	-0.79

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Belgium): Policy effects in 2016-2017, using the CPI-indexation, %



Bulgaria

In 2016-17, household disposable incomes increased on average by 0.19% in real terms due to policy changes. The incomes of the bottom seven decile groups increased on average, while in the top three deciles average incomes fell slightly. Income changes were pro-poor: the income increase for the bottom two decile groups (1.09% and 1.17%) was most considerable.

Public pensions were indexed between 2016 and 2017 by 2.6% and on average their nominal value increased by about 2 percentage points. Additionally, a lump-sum supplement was given to the pensioners with lowest pensions in December 2016 and April 2017. This increase affected all decile groups, but contributed mostly at the bottom of the income distribution. The increase in household disposable incomes due to the indexation of pensions was 0.46% on average, and 1.1%-1.84% in the first three decile groups. The indexation had a smaller income-increasing effect (of less than 0.5%) in the top five deciles.

There was a small income-increasing effect on incomes due to means-tested benefits. In July 2016 the threshold for child benefits was changed from BGN350 to BGN400 (average monthly income per family member for the last 12 months) and more families gained access to the means-tested child benefit (*месечна помощ за отглеждане на дете до завършване на средното образование, но не по-късно от 20 годишна възраст*) and the child benefit for education (*целева помощ за ученици*). As a result, there was a small positive income increase in deciles 3-9. On the other hand, the lack of nominal changes in most means-tested benefit levels as well as the increase in the heating allowance (*целева помощ за отопление*) which lagged behind inflation led to small real income losses in the first two decile groups.

Some non-means-tested child benefits, whose level is not linked to previous earnings, were nominally frozen, i.e. their level deteriorated in real terms. However, as very few families received them there was no noticeable income drop.

There was a reduction in household disposable income due to an increase in SIC paid by employees and self-employed. As the contributory maximum threshold was nominally frozen liabilities for SIC went down in real terms.⁷ The resulting net income gains were, however, offset by the increase in the contribution rate for old-age, disability and survivor for employees (from 7.9% to 8.34%) and self-employed (from 17.8% to 18.8%).

Finally, although the level of the child tax deduction went down in real terms (it froze nominally), households paid less income tax as taxable income was lowered by the increase in SIC. Household disposable income rose across all deciles as a result.

⁷ As the minimum wage increased nominally (ahead of price growth), so did the contributory minimum threshold. However, as we keep earned incomes constant, we do not model this change.

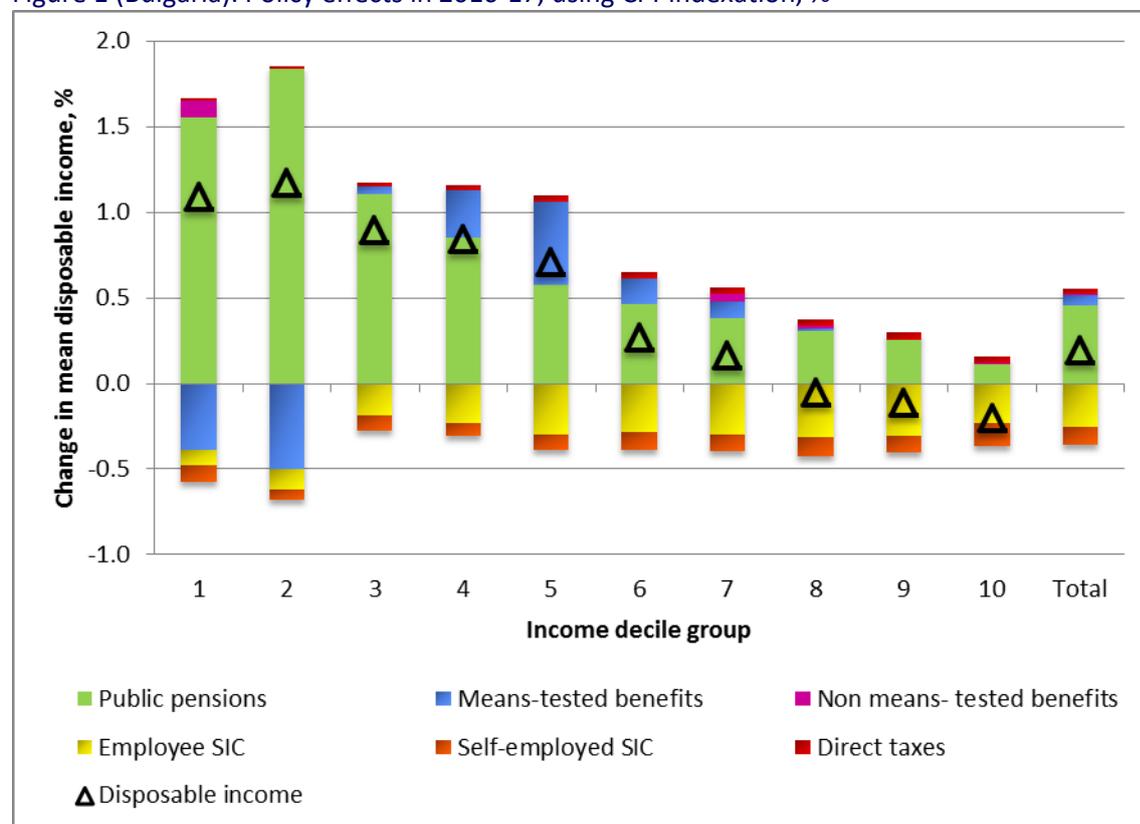
Table 1 (Bulgaria): Policy effects in 2016-17, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	1.55	-0.39	0.10	-0.09	-0.10	0.02	1.09
2	0.00	1.84	-0.50	0.00	-0.12	-0.06	0.02	1.17
3	0.00	1.10	0.04	0.00	-0.19	-0.09	0.03	0.89
4	0.00	0.85	0.28	-0.01	-0.22	-0.08	0.03	0.84
5	0.00	0.57	0.49	-0.01	-0.29	-0.09	0.04	0.71
6	0.00	0.46	0.15	0.00	-0.28	-0.11	0.04	0.26
7	0.00	0.38	0.10	0.04	-0.30	-0.10	0.04	0.16
8	0.00	0.30	0.02	0.01	-0.31	-0.11	0.04	-0.05
9	0.00	0.25	0.01	-0.01	-0.30	-0.10	0.04	-0.11
10	0.00	0.11	0.00	0.01	-0.23	-0.13	0.04	-0.21
Total	0.00	0.46	0.05	0.01	-0.26	-0.11	0.03	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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Bulgaria): Policy effects in 2016-17, using CPI-indexation, %



Czech Republic

Overall, due to policy changes, the real disposable income of the population decreased by 0.22% between years 2016-2017. The bottom deciles lost much more than the top ones. The highest drop in disposable incomes has been observed for the first and second deciles (by 1.1% and 0.43%, respectively). Higher deciles experienced lower drops ranging roughly between 0.1 and 0.2% of disposable income. Therefore the policy changes have had a clearly regressive character.

Incomes of the bottom deciles were greatly affected by a reduction in means-tested benefits. In particular, the maximum amounts of housing costs went down in 2017, even though they are usually increased a little bit every year. This resulted in a reduction in the amounts of housing benefit and thus negatively impacted the disposable incomes of the bottom deciles. Also, the amount of social assistance benefits was lower for long-term unemployed in 2017.⁸

The growth in the minimum wage increased the minimum health insurance contributions base and thus had a negative effect on disposable incomes of families at the bottom of income distribution who now pay higher SIC.

Households in the top deciles were negatively affected by changes in direct taxes, despite an increase in the amounts of tax credits for the second and third-parity children and higher tax credit compensating for kindergarten costs. The amount of the kindergarten tax credit grew thanks to the increase of minimum wage, because this tax credit is capped at the minimum wage amount.

A valorization of public pensions carried out in 2017 is the only policy measure that has had a positive impact on the incomes of all deciles, especially on the income of second-fourth deciles where most pensioners are concentrated.

⁸ It is calculated based on subsistence minimum + 0.4*(minimum living standard - subsistence minimum), while in 2016 it was based on minimum living standard.

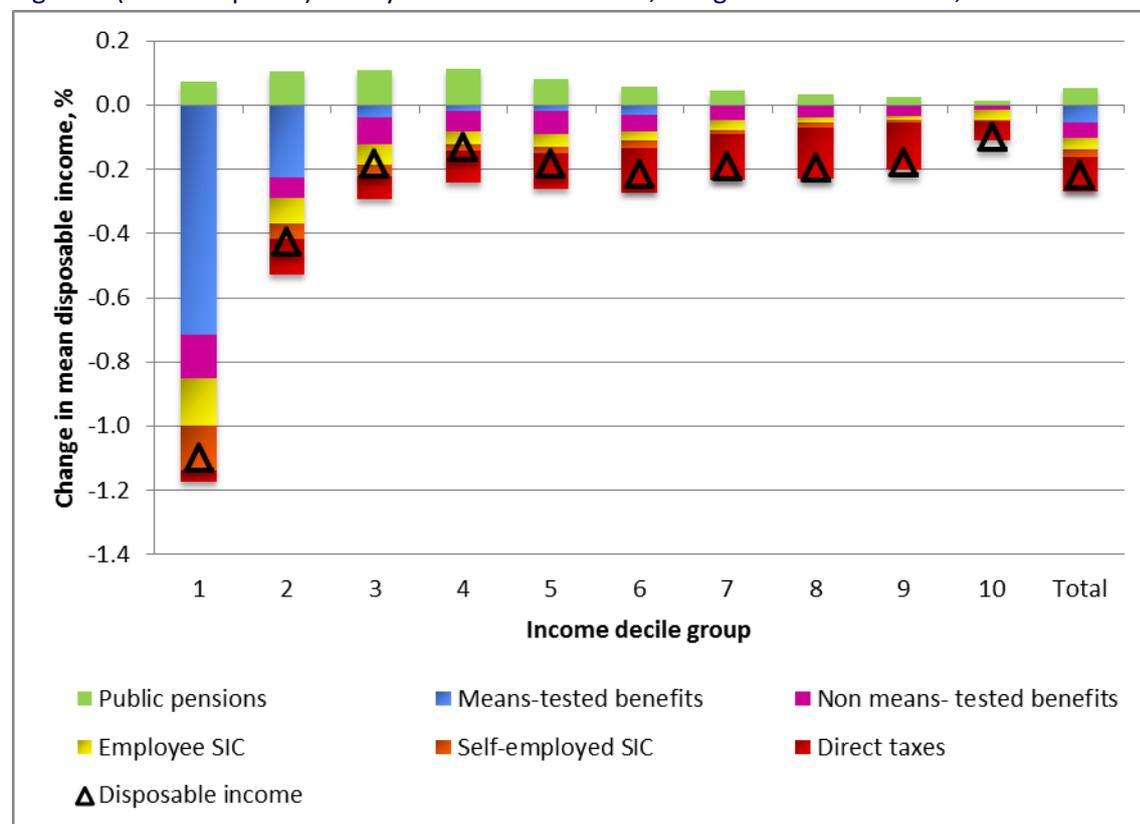
Table 1 (Czech Republic): Policy effects in 2016-2017, using the CPI-indexation, %

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	-0.72	-0.13	-0.15	-0.14	-0.04	-1.10
2	0.00	0.10	-0.23	-0.07	-0.08	-0.05	-0.11	-0.43
3	0.00	0.11	-0.04	-0.08	-0.06	-0.04	-0.07	-0.19
4	0.00	0.11	-0.02	-0.06	-0.04	-0.02	-0.10	-0.13
5	0.00	0.08	-0.02	-0.07	-0.04	-0.02	-0.11	-0.18
6	0.00	0.06	-0.03	-0.05	-0.03	-0.02	-0.14	-0.22
7	0.00	0.04	0.00	-0.05	-0.03	-0.01	-0.14	-0.19
8	0.00	0.03	0.00	-0.04	-0.02	-0.01	-0.16	-0.20
9	0.00	0.02	0.00	-0.03	-0.01	-0.01	-0.15	-0.18
10	0.00	0.01	0.00	-0.01	-0.03	0.00	-0.06	-0.10
Total	0.00	0.05	-0.05	-0.05	-0.04	-0.02	-0.11	-0.22

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Czech Republic): Policy effects in 2016-2017, using the CPI-indexation, %



Denmark

The total effect of (deflated) 2016-2017 policy change on mean income is very small (0.12%). No major reforms took place between 2016 and 2017 and increases in income are mostly due to the annual increase of pension payments and lower tax contributions to some extent counter balanced by decreases in means-tested benefits.

Changes by income groups show a regressive pattern with households at the bottom (deciles 2 and 3) of the income distribution experiencing a negative development in disposable income whereas this is not the case for the other deciles. The increase in income of the bottom decile group is based on an increase in pension benefits and non-means tested benefits, whereas a negative impact is seen from the means-tested benefit due to the implementation of the benefit ceiling for social assistance recipients. However, the impact of the benefit ceiling effects the second and third deciles more as they are more likely to have received benefit amounts above the ceiling. The increase of income groups in deciles 1, 4 and 5 is mostly based on an increase in public pensions, whereas for those with higher incomes it is the changes in the direct taxes that had most impact. This is linked to the fact that most tax allowances and income thresholds have been indexed higher than the indexation of prices. In addition, the health tax and the church tax have been reduced.

Table 1 (Denmark): Policy effects in 2016-2017, 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	0.08	-0.04	0.08	0.00	0.00	0.07	0.19
2	0.00	0.26	-0.51	0.03	0.00	0.00	0.00	-0.22
3	0.00	0.26	-0.33	0.02	0.00	0.00	0.00	-0.05
4	0.00	0.18	-0.07	0.02	0.00	0.00	0.03	0.16
5	0.00	0.10	-0.05	0.02	0.00	0.00	0.06	0.13
6	0.00	0.08	-0.04	0.01	0.00	0.00	0.08	0.13
7	0.00	0.06	-0.03	0.01	0.00	0.00	0.09	0.13
8	0.00	0.05	-0.02	0.01	0.00	0.00	0.11	0.15
9	0.00	0.03	-0.01	0.00	0.00	0.00	0.15	0.18
10	0.00	0.03	0.00	0.00	0.00	0.00	0.15	0.18
Total	0.00	0.09	-0.08	0.01	0.00	0.00	0.09	0.12

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure1 (Denmark): Policy effects in 2016-2017, using the CPI-indexation, %



Germany

In 2016-17, the average household disposable income remained about the same (an increase of just 0.05%) due to policy changes. However, looking at the effects across decile groups reveals that the policy effect was progressive: it had a small income increasing effect for the lower half of the distribution (ranging from 0.75% in the first decile to 0.05% in the sixth decile group) and a small income decreasing effect for the upper half of the distribution (up to -0.09% in the tenth decile). The increases in the lower half of the distribution were mainly driven by an increase in means-tested benefits, followed by a much smaller increase in public pensions. Within the means-tested benefits, the strongest effect was due to an increase of education benefits as well as a slight increase in the basic rate and means-test value for unemployment benefits 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 in nominal terms but the effect disappeared in real terms.

Public pensions increased both in nominal and real terms, yielding a small income gain for households, especially for those in the lower half of the income distribution. Social security contributions were the main factor diminishing households' disposable income at all points of the distribution. The reason is twofold. On the one hand, the long-term care insurance contribution rate was increased from 1.175% to 1.275% between 2016 and 2017, which affected the entire income distribution. On the other hand, the rise of the minimum health insurance contribution as well as the health insurance contribution for students was the cause behind the stronger effect of employee SIC in the lowest deciles of the distribution.

Income tax liabilities contributed on average to a very small income loss of 0.01%. As the tax free allowance increased slightly in real terms, households in the bottom second and third deciles gained slightly. However, as the rest of tax thresholds grew slower than prices, tax liabilities increased in real terms and led to small income losses in the middle and top of the income distribution.

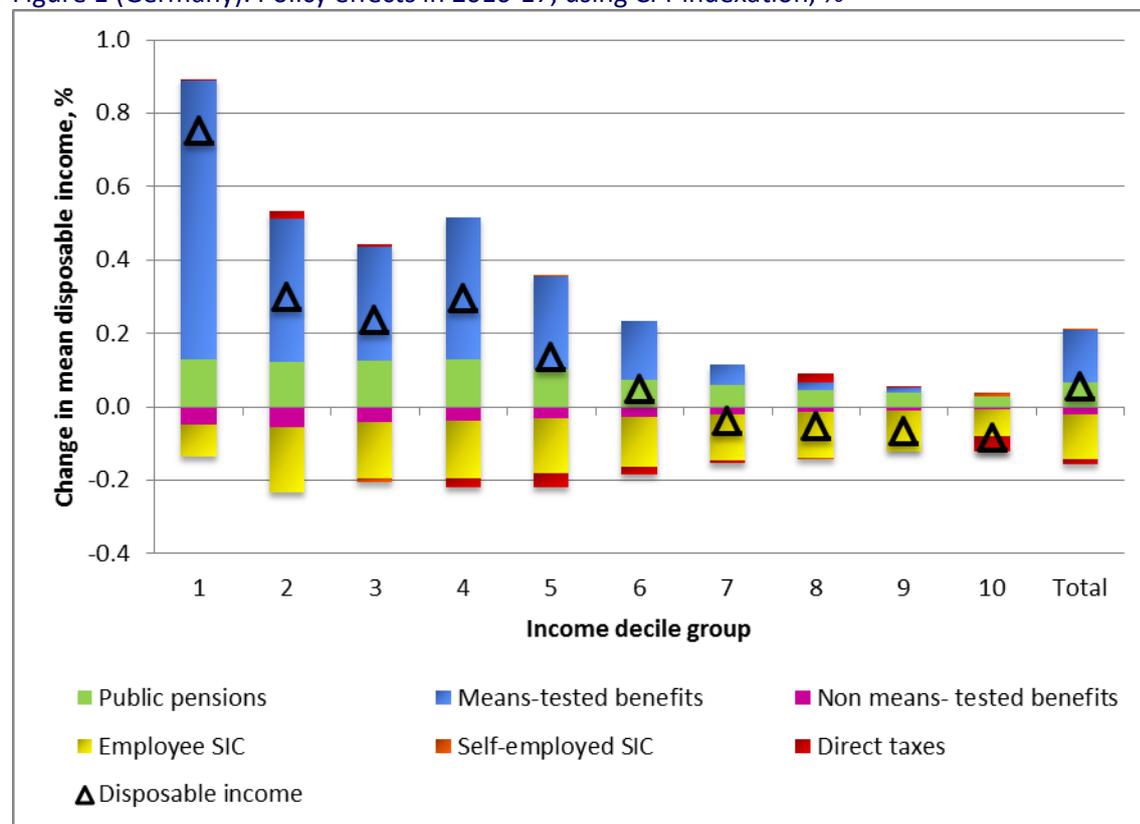
Table 1 (Germany): Policy effects in 2016-17, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.13	0.76	-0.05	-0.09	0.00	0.00	0.75
2	0.00	0.12	0.39	-0.05	-0.18	0.00	0.02	0.30
3	0.00	0.13	0.31	-0.04	-0.15	-0.01	0.01	0.24
4	0.00	0.13	0.39	-0.04	-0.16	0.00	-0.02	0.29
5	0.00	0.10	0.25	-0.03	-0.15	0.00	-0.04	0.13
6	0.00	0.07	0.16	-0.03	-0.14	0.00	-0.02	0.05
7	0.00	0.06	0.05	-0.02	-0.13	0.00	-0.01	-0.04
8	0.00	0.05	0.02	-0.02	-0.12	0.00	0.02	-0.05
9	0.00	0.04	0.01	-0.01	-0.11	0.00	0.00	-0.07
10	0.00	0.03	0.00	-0.01	-0.08	0.01	-0.04	-0.09
Total	0.00	0.07	0.14	-0.02	-0.12	0.00	-0.01	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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): **1.00** represents increase in income $\geq 1\%$; **3.00** represents increase $\geq 3\%$; **1.00** represents reduction in income $\geq 1\%$; **3.00** represents reduction $\geq 3\%$.

Figure 1 (Germany): Policy effects in 2016-17, using CPI-indexation, %



Estonia

In comparison to 2016 policies, (deflated) 2017 policies decreased mean household income by 0.21%. Relative losses are larger for lower income groups with the exception of the second decile group which is the only one to gain on average (+1.19%). Income losses are mainly related to income tax policies. First, after only one year, the (tax) refund to low-paid employees was abolished. The latter is considered on an accrual basis in EUROMOD (following its conventions), i.e. pay-outs received in 2017 are considered as part of 2016 incomes in EUROMOD. This accounted for about two thirds of the total income loss from income taxes (-0.58%). The other third is due to a new cap on deductible mortgage interest payments and keeping some tax allowances nominally constant, even though the two main ones (personal tax allowance and pension tax allowance) were increased about 5% in nominal terms. Additionally, there was a small negative contribution from self-employed SIC due to the minimum tax base being slightly increased ahead of prices.

On the benefit side, the picture was more mixed. Public pensions were indexed by 5.1% in 2017 compared to inflation of 3.3% and provided the largest gain to household incomes on average. Given where the pensioners are located in the income distribution, it was the second decile which gained the most in relative terms (+1.03%). The bottom two decile groups further benefitted from the introduction of a new means-tested benefit targeted at pensioners (pensioner's living alone allowance), +0.5% and +1%, respectively, and the second decile group also from an above-inflation increase of the income limit for needs-based family benefit (+0.4%). The combination of these three components resulted in the second decile group to gain on average, unlike any other decile group. On the contrary, the bottom decile group experienced an extra loss of income of 0.7% related to the main social assistance benefit (subsistence benefit) as its parameters were held nominally constant.

Note that the analysis does not reflect a sizeable expansion of parental allowance for large families, which took effect from 1 July 2017, and hence is not part of the 2017 baseline (following EUROMOD modelling conventions).

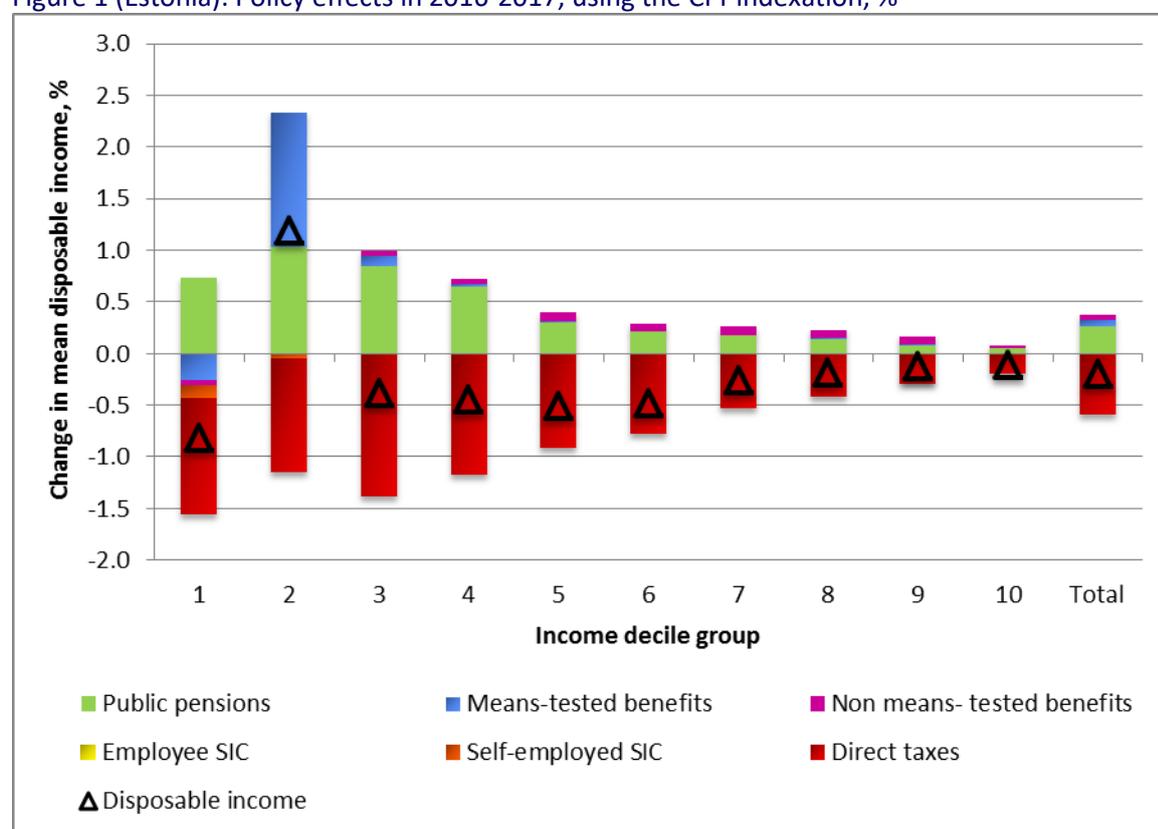
Table 1 (Estonia): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.74	-0.25	-0.05	0.00	-0.12	-1.14	-0.82
2	0.00	1.03	1.31	-0.01	0.00	-0.03	-1.11	1.19
3	0.00	0.85	0.10	0.05	0.00	-0.01	-1.37	-0.38
4	0.00	0.65	0.03	0.05	0.00	-0.01	-1.17	-0.45
5	0.00	0.30	0.01	0.09	0.00	-0.01	-0.90	-0.52
6	0.00	0.21	0.01	0.07	0.00	0.00	-0.77	-0.48
7	0.00	0.17	0.01	0.09	0.00	0.00	-0.53	-0.26
8	0.00	0.14	0.01	0.07	0.00	0.00	-0.42	-0.20
9	0.00	0.08	0.00	0.08	0.00	0.00	-0.29	-0.13
10	0.00	0.05	0.00	0.03	0.00	0.00	-0.19	-0.11
Total	0.00	0.26	0.06	0.06	0.00	-0.01	-0.58	-0.21

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Estonia): Policy effects in 2016-2017, using the CPI-indexation, %



Ireland

In comparison to 2016 policies, (deflated) 2017 policies increase mean household income by 0.72% in total.

Decreases in direct taxes have accounted for an increase in average equivalised household disposable income of 0.41%. The changes benefited the upper part of the income distribution most. The effect might be driven by three factors: (i) the reduction of tax rates of Universal Social Charge; (ii) the increase of the maximum amount of Home Carers Tax Credit from 1,000 to 1,100 euros per year; and (iii) the increase of the maximum amount of the Earned Income Tax Credit from 550 to 950 euros per year.

Changes in means-tested benefits accounted for a small increase in average equivalised household disposable income of 0.11%. The changes reflect the increase in personal rates of means-tested benefits. The increase in equivalised household disposable income is particularly large for individuals in the lowest income decile (0.80%). Changes in public pensions accounted for 0.22% of the increase in household disposable income, reflecting the increase in personal rates for pensions. The distribution of gains across income deciles reflects where recipients of public pensions are located.

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

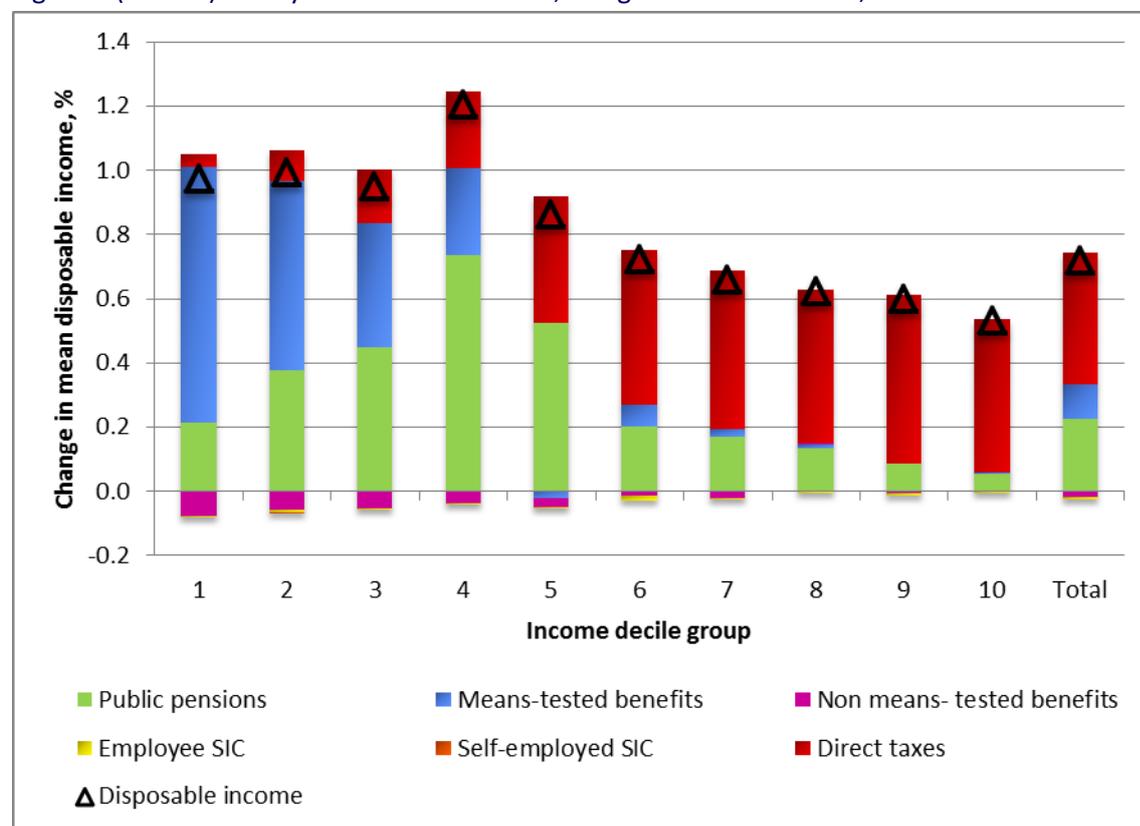
Table 1 (Ireland): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.21	0.80	-0.08	0.00	0.00	0.04	0.97
2	0.00	0.38	0.59	-0.06	-0.01	0.00	0.10	0.99
3	0.00	0.45	0.39	-0.05	0.00	0.00	0.17	0.95
4	0.00	0.74	0.27	-0.04	0.00	0.00	0.24	1.20
5	0.00	0.52	-0.02	-0.03	0.00	0.00	0.39	0.86
6	0.00	0.20	0.07	-0.02	-0.02	0.00	0.48	0.72
7	0.00	0.17	0.03	-0.02	0.00	0.00	0.49	0.66
8	0.00	0.14	0.01	0.00	0.00	0.00	0.48	0.62
9	0.00	0.09	0.00	-0.01	-0.01	0.00	0.53	0.60
10	0.00	0.06	0.00	0.00	0.00	0.00	0.48	0.53
Total	0.00	0.22	0.11	-0.02	-0.01	0.00	0.41	0.72

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Ireland): Policy effects in 2016-2017, using the CPI-indexation, %



Greece

Policy changes in 2017 had a progressive effect on the income distribution. Although households in general saw stability in their disposable income, the lowest income decile reported substantial gains equal to 15.87% of disposable income. This increase was mainly driven by the introduction of guaranteed minimum income (GMI), which was provided to all households with incomes below a certain (low) threshold. As GMI replaced food stamps and housing allowance, two benefits that had more generous income-tests and thus also reached people located in higher deciles of the distribution, households belonging to the second decile were negatively affected by these policy changes. The 50% reduction in the amount of the means-tested pensioners' social solidarity benefit (EKAS) also had a negative impact on the disposable income of households belonging to deciles 3 to 9. Decreases in household disposable income driven by public pensions and non means-tested benefits are solely due to inflation.

In January 2017, all funds providing main pensions were consolidated into one, called EFKA. Rules became uniform for employees previously insured in IKA, public sector employees and employees previously insured in 'noble' funds and by 2020 this will also be the case for public enterprise workers and banking employees. All own-account workers, self-employed liberal professions and farmers were also insured in EFKA. This development did not have a serious impact on employees (since the rules were already almost uniform for them) but it brought major changes to the regime of self-employed workers and farmers; contributions are no longer paid as lump-sums but as a proportion of their earnings. This reform positively affected the disposable income of self-employed located in deciles 1-9 and had a negative impact for those located in decile 10. Since social insurance contributions decrease taxable income, the indirect impact of this reform was that households located in deciles 1-9 paid more direct taxes whereas the tax burden of households in the highest income decile was slightly reduced.

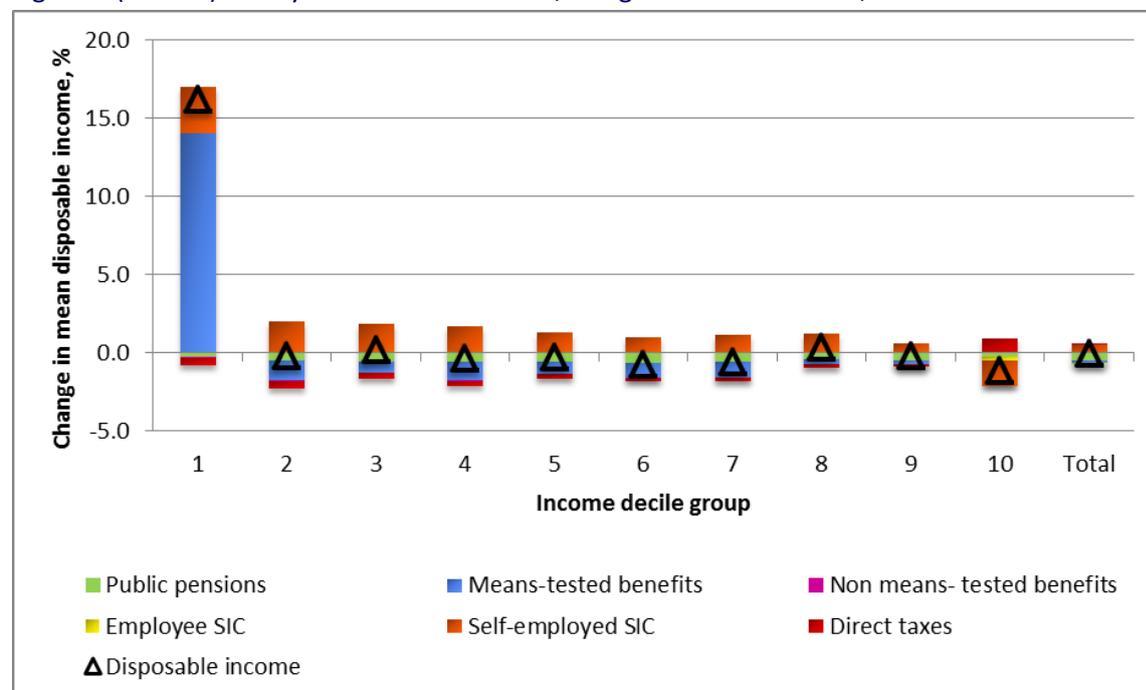
Table 1 (Greece): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.24	13.72	-0.04	0.04	2.92	-0.52	15.87
2	0.00	-0.43	-1.30	-0.03	0.02	2.02	-0.47	-0.19
3	0.00	-0.51	-0.71	-0.02	0.04	1.85	-0.43	0.21
4	0.00	-0.57	-1.18	-0.02	0.03	1.72	-0.38	-0.40
5	0.00	-0.57	-0.73	-0.02	0.03	1.29	-0.33	-0.33
6	0.00	-0.64	-0.95	-0.02	0.00	0.99	-0.17	-0.79
7	0.00	-0.55	-1.00	-0.01	0.02	1.17	-0.23	-0.61
8	0.00	-0.42	-0.26	-0.01	0.02	1.23	-0.27	0.28
9	0.00	-0.44	-0.26	-0.01	-0.04	0.59	-0.11	-0.26
10	0.00	-0.25	-0.02	0.0	-0.20	-1.61	0.91	-1.17
Total	0.00	-0.44	-0.16	-0.01	-0.04	0.56	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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Greece): Policy effects in 2016-2017, using the CPI-indexation, %



Spain

Due to policy changes between 2016-2017, households experienced on average a real income decrease of 0.64%. The decrease affected all decile groups but was stronger in the central part of the distribution (between the fifth and seventh decile), lower in the two tails. The effect is driven mainly by direct taxation and pensions.

The decrease in disposable incomes due to public pensions is attributable to low indexation (0.25%) between between 2016 and 2017 compared to the increase of prices.

The tax amounts are not changed in nominal terms, but there is a decrease in the real disposable income due to the increase in prices.

There is a decrease in means-tested benefits (mainly for the first decile), and in non means-tested benefits. This decrease reflects the fact that amounts have been kept unchanged as IPREM (the index generally used for adjusting benefit amounts over time) remained frozen between 2016 and 2017 compared to the growth in prices.

We observe a small negative effect of the employee SIC on disposable income and a small positive effect of Self-Employed SIC.

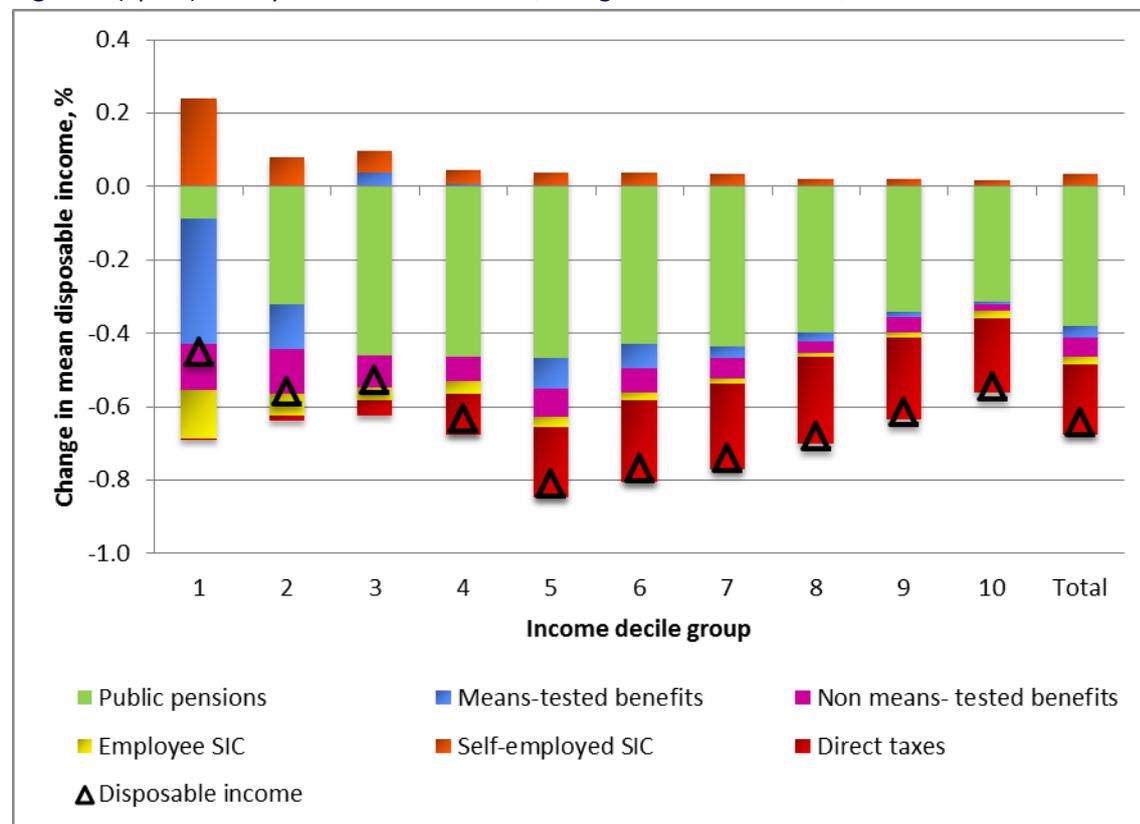
Table 1 (Spain): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.09	-0.34	-0.12	-0.13	0.24	0.00	-0.45
2	0.00	-0.32	-0.12	-0.12	-0.06	0.08	-0.01	-0.56
3	0.00	-0.46	0.04	-0.09	-0.03	0.06	-0.04	-0.53
4	0.00	-0.47	0.00	-0.06	-0.03	0.04	-0.11	-0.63
5	0.00	-0.47	-0.09	-0.07	-0.03	0.04	-0.19	-0.81
6	0.00	-0.43	-0.07	-0.07	-0.02	0.04	-0.22	-0.77
7	0.00	-0.44	-0.03	-0.05	-0.01	0.03	-0.24	-0.74
8	0.00	-0.40	-0.02	-0.03	-0.01	0.02	-0.24	-0.68
9	0.00	-0.34	-0.01	-0.04	-0.01	0.02	-0.22	-0.62
10	0.00	-0.31	-0.01	-0.02	-0.02	0.02	-0.20	-0.54
Total	0.00	-0.38	-0.03	-0.05	-0.02	0.03	-0.19	-0.64

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Spain): Policy effects in 2016-2017, using the CPI-indexation, %



France

In 2017, policy changes delivered a decrease in disposable income for all deciles. The highest decrease in disposable income took place in the bottom deciles, essentially due to the decrease in public pensions and means-tested benefits.

Several changes in policies can explain this overall decrease in the disposable income. For means-tested benefits the reform of housing assistance that made the eligibility criteria stricter had a large negative effect with the bottom deciles being affected the most. At the aggregate level half of the decrease in real terms for means-tested benefits resulted from the fact that the increase of the various benefit amounts lagged behind inflation.

The negative impact of public pensions resulted from a general freeze on their revalorization.

The very small decrease in disposable income caused by social insurance contributions is the result of introducing an arduousness contribution that has no effect for almost all deciles except for the top ones.

Non means-tested benefits also had a small negative effect on the disposable income that resulted from benefit amounts being increased at a slower rate than the inflation.

Only direct taxes had an overall a positive effect on the disposable income thanks to a lump sum income tax reduction of up to 20%. The gains were largest for households in the middle deciles.

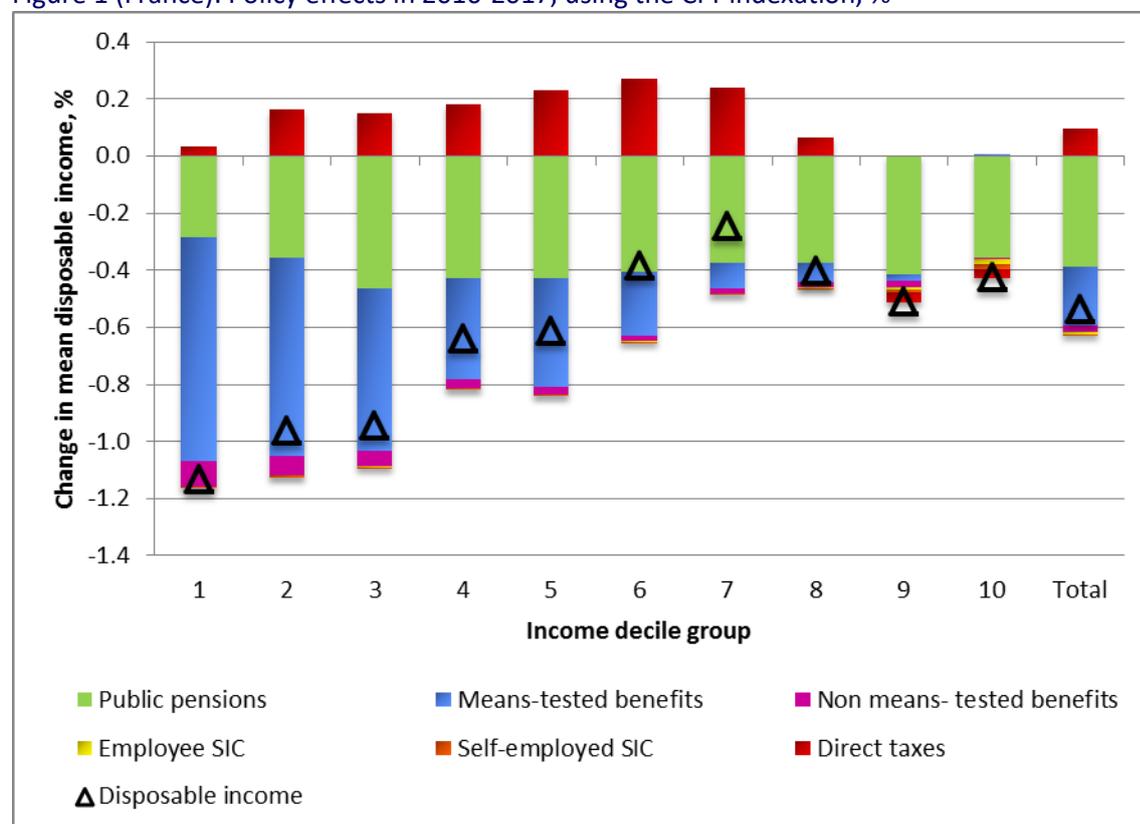
Table 1 (France): Policy effects in 2016-2017, using the CPI-indexation, %

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	-0.78	-0.09	0.00	-0.01	0.03	-1.13
2	0.00	-0.36	-0.69	-0.07	0.00	-0.01	0.16	-0.96
3	0.00	-0.46	-0.57	-0.05	0.00	0.00	0.15	-0.94
4	0.00	-0.43	-0.36	-0.03	0.00	0.00	0.18	-0.64
5	0.00	-0.43	-0.38	-0.03	0.00	0.00	0.23	-0.61
6	0.00	-0.41	-0.23	-0.02	0.00	0.00	0.27	-0.39
7	0.00	-0.38	-0.09	-0.02	0.00	0.00	0.24	-0.25
8	0.00	-0.37	-0.07	-0.02	-0.01	0.00	0.06	-0.40
9	0.00	-0.41	-0.02	-0.02	-0.01	-0.01	-0.03	-0.51
10	0.00	-0.36	0.00	0.00	-0.02	-0.02	-0.03	-0.43
Total	0.00	-0.39	-0.20	-0.02	-0.01	-0.01	0.10	-0.54

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (France): Policy effects in 2016-2017, using the CPI-indexation, %



Croatia

Overall, the effect of policy changes between 2016 and 2017 was to increase real disposable by 0.92%. However, the pattern pronouncedly favoured those with higher income, e.g., the first decile group loses around 1%, while decile group 10 gains more than 2% in terms of equivalised household disposable income.

The HICP is projected to rise by 1.6% between 2016 and 2017. Means-tested benefits are not inflation-adjusted in Croatia, and their real value falls due to the increase in the price level. The largest income fall, 0.42%, is felt by the first decile group, which is most dependent on means-tested benefits; decile groups 2 to 5 lose around 0.2% of their income on average. Public pensions are adjusted using the “current value of pension”, but the formula for its calculation takes into account the price inflation in the preceding period (see section 1.1 of EUROMOD Country Report for Croatia), in which prices were stable. Therefore, pension income also falls in real terms, about 0.5% of income in the first 5 decile groups, and somewhat less in the remaining groups.⁹

As explained in section 2.1 of the EUROMOD Country Report for Croatia, the SIC rate on income from contractual work is halved in 2017. The subsequent gain is relatively even for different decile groups and on average it amounts to 0.26% of income (see column “Self-employed SIC”). On the other hand, the relative gains from PIT reform increase with income: from 0.20% for decile group 4 to 1.96% for the top decile group (see column “Direct taxes”).

⁹ At the time of writing this report new forecasts are available, which say that the price level will increase by less than 1.6% in 2017, namely about 1% (EIZ, 2017). Such development would lead to smaller decrease of HDI for receivers of social benefits and public pensions than indicated by this analysis.

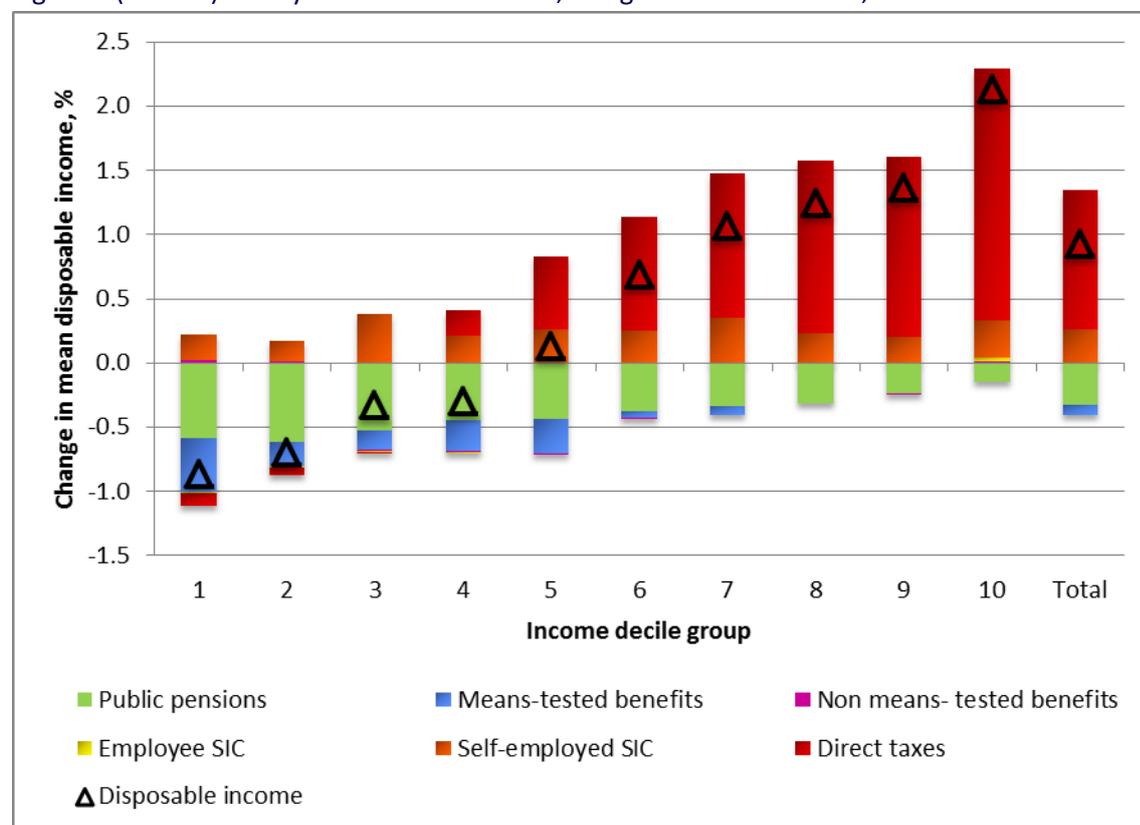
Table 1 (Croatia): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.59	-0.42	0.02	-0.01	0.20	-0.09	-0.87
2	0.00	-0.62	-0.19	0.01	-0.01	0.16	-0.06	-0.70
3	0.00	-0.53	-0.15	-0.01	-0.01	0.38	-0.01	-0.33
4	0.00	-0.45	-0.24	-0.01	-0.01	0.21	0.20	-0.30
5	0.00	-0.44	-0.27	-0.01	0.00	0.26	0.57	0.13
6	0.00	-0.38	-0.05	-0.01	0.00	0.25	0.88	0.68
7	0.00	-0.34	-0.07	0.00	0.00	0.35	1.12	1.06
8	0.00	-0.32	0.00	0.00	0.00	0.23	1.34	1.24
9	0.00	-0.24	0.00	-0.01	0.00	0.20	1.40	1.36
10	0.00	-0.15	0.00	0.01	0.03	0.29	1.96	2.13
Total	0.00	-0.33	-0.08	0.00	0.00	0.26	1.08	0.92

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Croatia): Policy effects in 2016-2017, using the CPI-indexation, %



Italy

In 2017 a number of policy changes have had a positive impact on pensioners: i) the extra payment (i.e. *quattordicesima*) for pensioners has been extended to those with income below a certain limit, ii) the tax credits related to income from pensions have been made more generous, iii) the solidarity contribution and the reduction of pensions above 91251.16 euro per year have not been renewed in 2017. However, all public pensions have not been indexed and the overall net effect on disposable income (when using a CPI change factor equal to 1.0156) is negative, albeit small. The changes observed in the Figure 1 due to direct taxes are overall more related to the indexation assumption rather than changes in the policies.

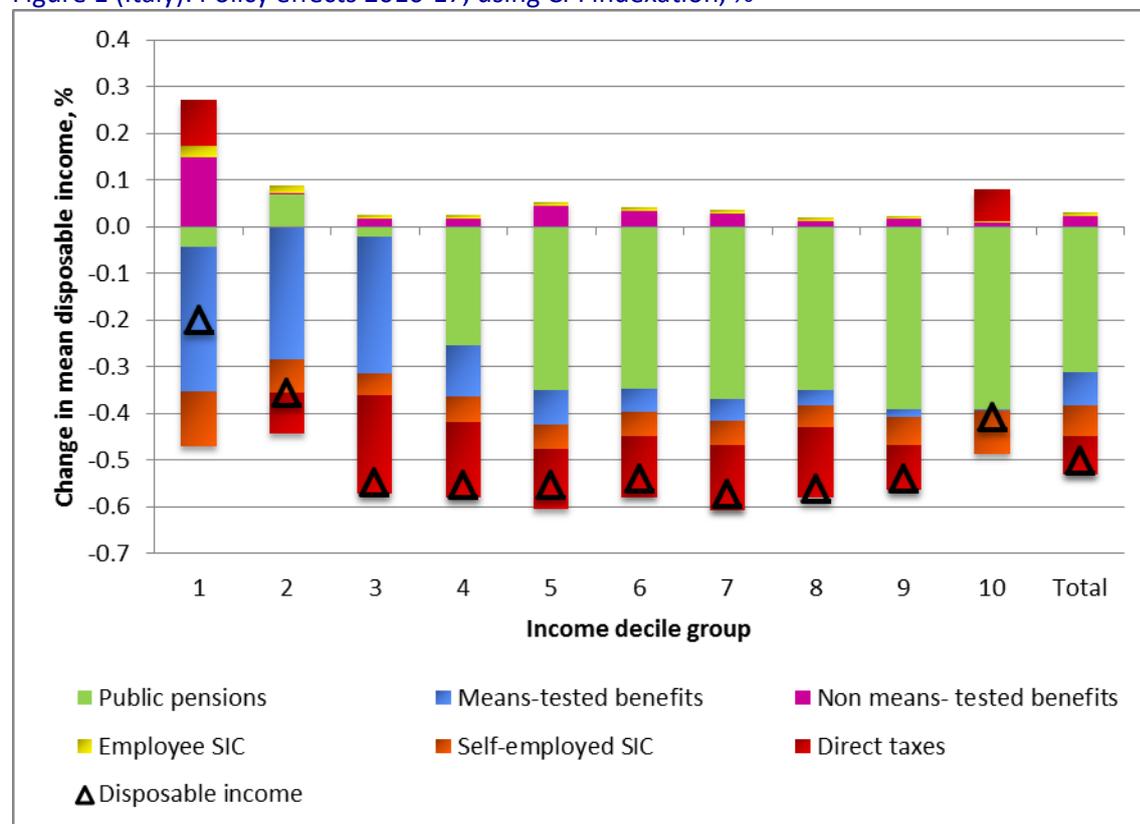
Table 1 (Italy): Policy effects 2016-17, using CPI indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.04	-0.31	0.15	0.02	-0.12	0.10	-0.20
2	0.00	0.07	-0.28	0.00	0.02	-0.07	-0.09	-0.36
3	0.00	-0.02	-0.29	0.02	0.01	-0.05	-0.21	-0.55
4	0.00	-0.25	-0.11	0.02	0.01	-0.06	-0.16	-0.55
5	0.00	-0.35	-0.07	0.04	0.01	-0.05	-0.13	-0.55
6	0.00	-0.35	-0.05	0.03	0.01	-0.05	-0.13	-0.54
7	0.00	-0.37	-0.05	0.03	0.01	-0.05	-0.14	-0.57
8	0.00	-0.35	-0.03	0.01	0.01	-0.05	-0.15	-0.56
9	0.00	-0.39	-0.02	0.02	0.01	-0.06	-0.10	-0.54
10	0.00	-0.39	0.00	0.01	0.00	-0.09	0.07	-0.41
Total	0.00	-0.31	-0.07	0.02	0.01	-0.06	-0.08	-0.50

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): **1.00** represents increase in income $\geq 1\%$; **3.00** represents increase $\geq 3\%$; **1.00** represents reduction in income $\geq 1\%$; **3.00** represents reduction $\geq 3\%$.

Figure 1 (Italy): Policy effects 2016-17, using CPI indexation, %



Cyprus

The overall estimated effects of policy changes from 2016 to 2017 are relatively small in Cyprus. This can be explained by marginal changes in 2017 policy rules. Most benefit levels, income thresholds and tax rates have remained constant.

The exception is the abolition of the special contributions (special contribution of public employees, special contribution of private sector employees, special contribution of private sector self-employed and special contribution on pensions) which led to an overall increase of disposable income of 0.47%. However, effects are estimated to be regressive with higher income groups benefitting to a greater extent than lower income groups. This can be explained by the progressive design of the contributions now removed (higher tax rates on higher income bands) but also by the fact that higher income groups were more likely to have incomes liable to the special contributions.

In addition, the non-indexation of policy parameters has reinforced the regressive effect. Pensions, non-means tested and means-tested benefits have all risen slower than the growth in prices in Cyprus. Thus, the relative loss of income was higher than the actual benefit of the abolition of the special contributions which led to a decrease in disposable income of the lowest 6 income decile groups.

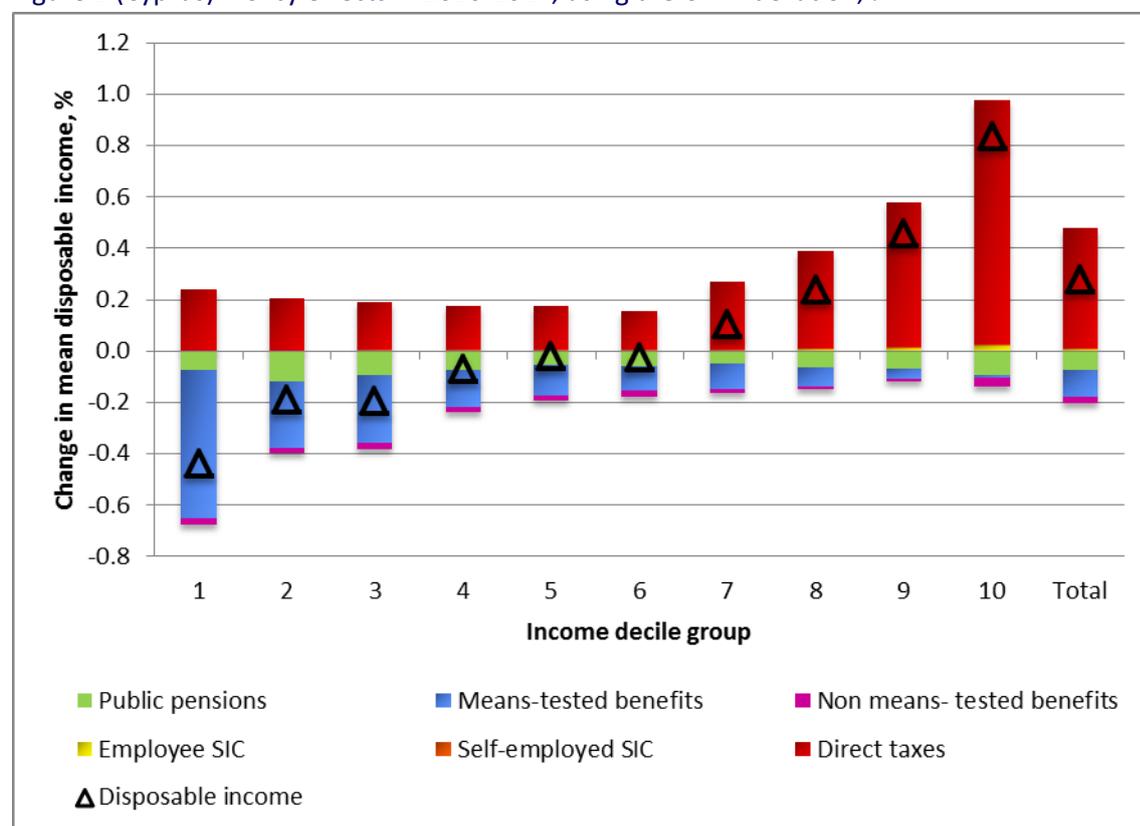
Table 1 (Cyprus): Policy effects in 2016-2017, using the CPI-indexation, %

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	-0.58	-0.02	0.00	0.00	0.24	-0.44
2	0.00	-0.12	-0.26	-0.02	0.00	0.00	0.20	-0.19
3	0.00	-0.09	-0.26	-0.03	0.00	0.00	0.18	-0.19
4	0.00	-0.07	-0.15	-0.02	0.00	0.00	0.17	-0.07
5	0.00	-0.05	-0.12	-0.02	0.00	0.00	0.17	-0.02
6	0.00	-0.06	-0.10	-0.02	0.00	0.01	0.15	-0.03
7	0.00	-0.05	-0.10	-0.02	0.00	0.01	0.26	0.11
8	0.00	-0.07	-0.07	-0.01	0.00	0.01	0.38	0.24
9	0.00	-0.07	-0.04	-0.01	0.01	0.00	0.56	0.46
10	0.00	-0.10	-0.01	-0.04	0.02	0.00	0.95	0.83
Total	0.00	-0.08	-0.10	-0.02	0.01	0.00	0.47	0.28

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Cyprus): Policy effects in 2016-2017, using the CPI-indexation, %



Latvia

The effect of policies in 2016-2017 was clearly progressive, and the progressivity was mainly ensured by changes implemented to means-tested benefits and direct taxes.

The effect of means-tested benefits was driven by changes in the income test for GMI, which, as of 2017, excludes the state family benefit. The progressivity of the effect of direct taxes was due to changes in the basic allowance. The basic allowance was made progressive in 2016, but in 2017 it was further increased for low wage earners and reduced for high wage earners, producing a positive effect on disposable income at the bottom of income distribution and a negative effect at the top of income distribution. A small negative effect of direct taxes in the second and third deciles is due to higher tax liability of pensioners whose pensions grew as a result of pension indexation.

Like in 2014-2015 and 2015-2016, change in pensions had a progressive effect on income, and it was mainly due to pension indexation rules, i.e., only pensions below a certain threshold are indexed. The progressive effect of non-means-tested benefits was mainly due to increased family stated benefit for fourth and each consecutive child.

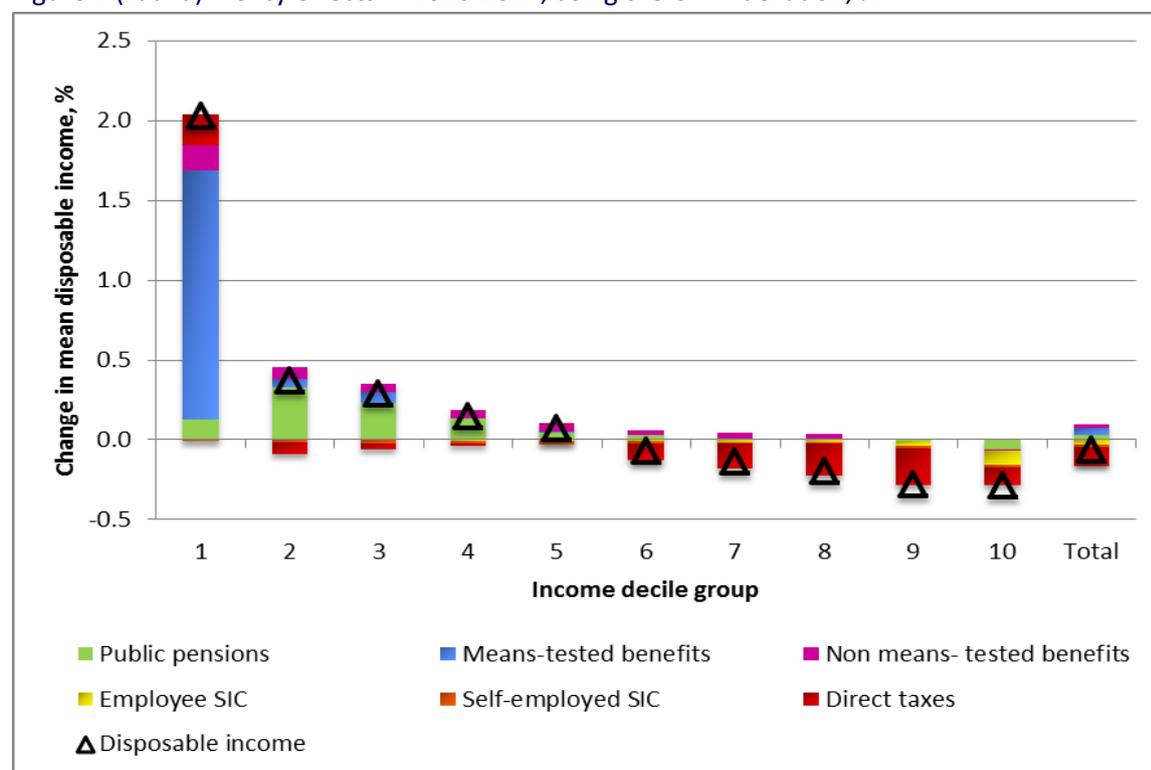
Table 1 (Latvia): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.13	1.56	0.16	0.00	-0.01	0.20	2.03
2	0.00	0.33	0.05	0.08	0.00	-0.01	-0.07	0.37
3	0.00	0.23	0.07	0.06	0.00	-0.02	-0.04	0.29
4	0.00	0.13	0.00	0.05	-0.01	-0.02	-0.02	0.15
5	0.00	0.04	0.01	0.04	-0.01	-0.02	0.01	0.07
6	0.00	0.03	0.00	0.03	-0.01	-0.01	-0.10	-0.07
7	0.00	0.00	0.00	0.04	-0.01	-0.01	-0.15	-0.14
8	0.00	0.00	0.00	0.03	-0.02	-0.01	-0.20	-0.20
9	0.00	-0.01	0.00	0.01	-0.02	-0.02	-0.23	-0.28
10	0.00	-0.06	0.00	-0.01	-0.09	-0.01	-0.11	-0.29
Total	0.00	0.03	0.05	0.03	-0.03	-0.01	-0.12	-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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Latvia): Policy effects in 2016-2017, using the CPI-indexation, %



Lithuania

Overall the changes in policies between 2016 and 2017 have had a positive impact throughout the distribution and were progressive starting from the second decile that gained more than 2% of its disposable income. The first and the ninth deciles gained less than 1%, and the tenth decile significantly less than the population on average (0.22%).

Changes made to direct taxes had the biggest impact on mean disposable income between 2016 and 2017. In particular, disposable incomes have grown due to an increase in the general non-taxable allowance of PIT as well as in child tax allowance in 2016. Due to the progressive nature of tax allowances positive effects are higher in the lower part of the income distribution, except for the first decile (as those without earnings and the self-employed are not eligible for tax allowances).

As for public pensions, there were no changes in policy as such, besides the ad-hoc indexation of pensions. However, we also observe losses in the upper deciles as 2017 was the last year when 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 (40% in 2016) of the amount she/he lost due to pension cuts in 2010-2011. Cuts on pensions amounting to less than 100 LTL (around 29EUR) were compensated by a single payment in 2014, so there is no effect on pensioners with the lower pensions in the following years. As for those who received compensations in 2016, they appear to be worse-off in 2017 without compensations, despite the ad-hoc increases in pensions. The overall change in disposable income due to pensions is still positive.

There were no changes in employee social insurance contributions. However, there were changes in SIC policies for the self-employed. Those included additional contributions for sickness/ maternity insurance and unemployment and a change in the contribution base of the self-employed. Moreover, the amount of compulsory health insurance contribution has increased together with the growing minimum wage in 2017. Compulsory health insurance contributions are recorded together with self-employment contributions in EUROMOD and contributed to the decrease in disposable income for that income component.

The changes in means-tested programmes included changes in child benefits, which were extended to all families with 3+ children and families with 1-2 children of any age with an income below the set threshold. We also see a negative impact on disposable income in 2017 for the lowest decile. A plausible explanation for this reduction in household disposable income is due to means-tested benefits not being indexed by CPI for those already in receipt in 2016.

Changes in household disposable income due to non means-tested benefits are due to an increase in the current years' insured income, which is used for setting ceilings for a number of non-contributory payments. Moreover, there were two newly introduced benefits (for students with children and for multiple births) that had a positive impact on income, albeit marginal in its scope.

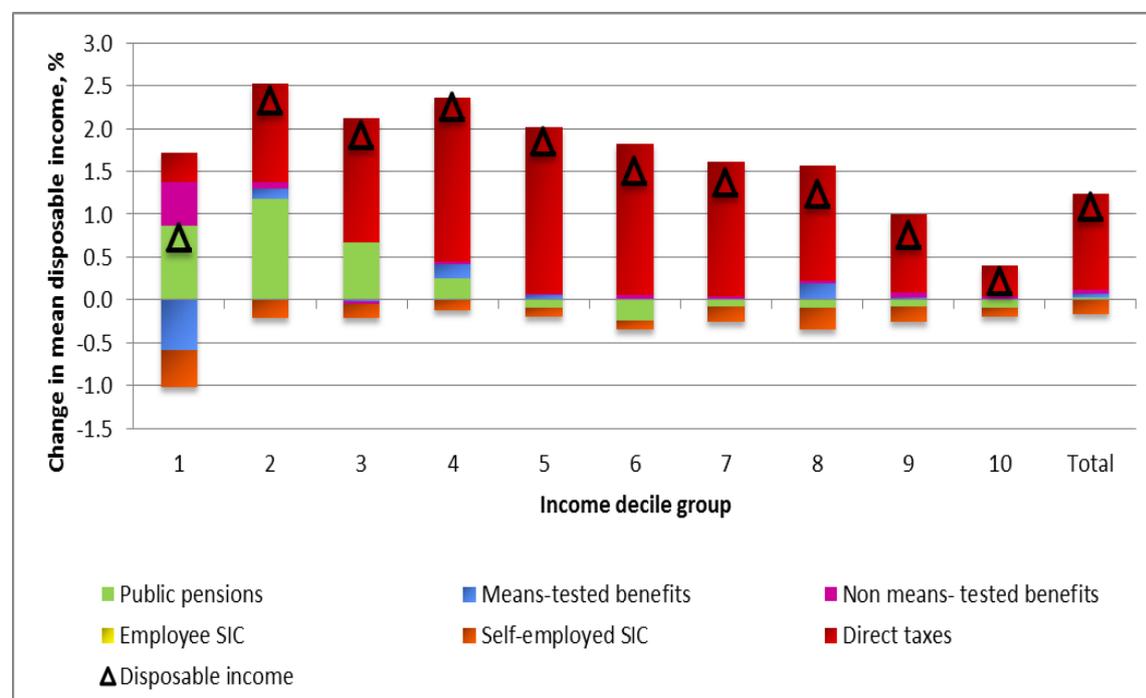
Table 1 (Lithuania): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.87	-0.58	0.52	0.00	-0.43	0.34	0.72
2	0.00	1.19	0.11	0.07	0.00	-0.20	1.15	2.32
3	0.00	0.68	-0.01	-0.03	0.00	-0.17	1.45	1.92
4	0.00	0.26	0.16	0.03	0.00	-0.11	1.92	2.25
5	0.00	-0.08	0.07	0.00	0.00	-0.10	1.95	1.84
6	0.00	-0.23	0.03	0.04	0.00	-0.11	1.77	1.49
7	0.00	-0.08	0.01	0.04	0.00	-0.18	1.56	1.36
8	0.00	-0.09	0.19	0.04	0.00	-0.25	1.35	1.24
9	0.00	-0.07	0.04	0.06	0.00	-0.18	0.90	0.75
10	0.00	-0.08	0.01	0.03	0.00	-0.12	0.37	0.22
Total	0.00	0.04	0.04	0.05	0.00	-0.16	1.12	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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Lithuania): Policy effects in 2016-2017, using the CPI-indexation, %



Luxembourg

The analysis of the effects of policy changes between 2016 and 2017 shows that the overall mean disposable income has increased by 2.11%. The largest positive contribution being attributable to direct taxes and public pensions (increase by 2.00% and 0.29% respectively). The largest negative impact is generated by non means-tested benefits at -0.22%.

There were numerous changes affecting direct taxation that helped to increase disposable income. Around a fifth of the impact resulted from removal of the budget balancing temporary tax that was in effect for only 2015 and 2016. The majority of the impact however came from the extensive reshaping of the tax brackets and marginal tax rates for personal income tax and from reworking the different tax credits.

Public pensions went through a generous indexation that was above the rate of inflation.

The gains from means-tested benefit mostly resulted from increasing the amounts of expensive life allowance.

There were also large changes affecting non means-tested benefits but those changes mostly cancelled out resulting in a slight decrease of disposable income. There was a large positive impact from increasing the child benefit amounts that was offset by the negative impact from abolishing the tax bonus for children and from decoupling the new school year allowance amount from the number of children.

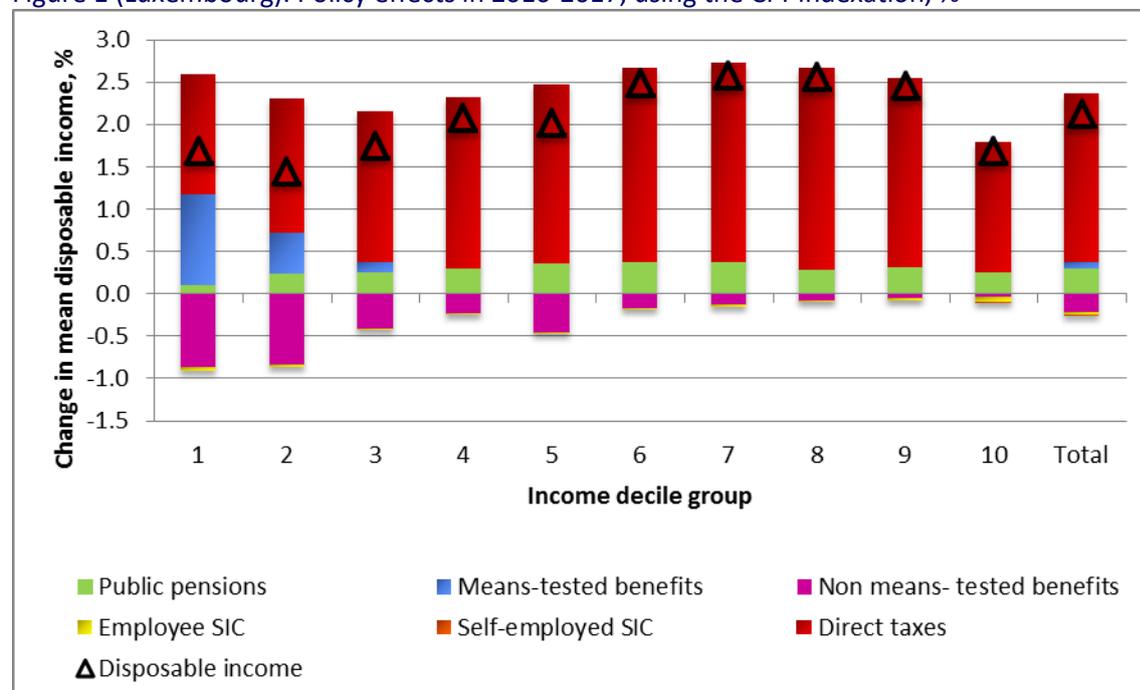
Table 1 (Luxembourg): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.11	1.07	-0.87	-0.04	0.00	1.42	1.68
2	0.00	0.24	0.48	-0.84	-0.02	0.00	1.59	1.44
3	0.00	0.25	0.12	-0.41	-0.01	0.00	1.79	1.73
4	0.00	0.30	-0.01	-0.22	-0.01	0.00	2.01	2.08
5	0.00	0.36	0.00	-0.45	-0.01	0.00	2.12	2.01
6	0.00	0.37	-0.01	-0.16	-0.02	0.00	2.30	2.48
7	0.00	0.37	0.00	-0.12	-0.02	0.00	2.35	2.57
8	0.00	0.28	-0.01	-0.08	-0.02	0.00	2.38	2.56
9	0.00	0.31	-0.01	-0.05	-0.03	0.00	2.23	2.46
10	0.00	0.25	0.00	-0.03	-0.05	-0.02	1.54	1.68
Total	0.00	0.29	0.08	-0.22	-0.03	0.00	2.00	2.11

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Luxembourg): Policy effects in 2016-2017, using the CPI-indexation, %



Hungary

The analysis shows that the changes made in the tax-benefits system between 2016-1027 yield an average overall negative effect of 0.55% in equivalised disposable income

Overall the largest contribution to the decrease in disposable income came from Public pensions and from income taxes, respectively 0.13% and 0.90%. The reductions in means tested and non means-tested benefits had almost negligible negative impacts on average on disposable income (-0.03% and -0.05% respectively). This is because there were no structural changes to means-tested calculation between 2016 and 2017, but the amount of social assistance for old age, the regular social assistance benefit and the stand-by allowance depend on the National Minimum Pension. Since the latter remained unchanged in nominal terms, this resulted in a cut in real terms of means-tested benefits (although almost negligible considering the very small changes in the price index).

On the other hand, some positive policy effects on household disposable income arose from Social Insurance Contributions reforms (0.04% from employee SICs and 0.52% from self-employed SICs). The first is driven by the introduction in 2014 of a Family Contribution Allowance, which reduced employees' health and pension insurance contributions resulting in the total positive effect shown by Employees SIC in Table 1 and Figure 1. Second, the effect of self-employed SIC is due to a reduction in contribution tax rate from 27% to 22% for the self-employed.

Across the income distribution the effect is progressive: with the first decile group benefitting from these policy changes by around 1%, whilst all other decile groups saw a decrease with losses getting gradually larger as we move up through the income decile groups..

Changes to non means-tested benefits, although yielding a total negative effect, contributed positively to rising household income in the two lower deciles. There were no structural changes to the non means-tested benefit calculations, but the National Minimum Wage, used as a base value for the calculation of selected benefits (such as unemployment benefits and job seekers allowance), increased from HUF 111,000 to HUF 127,500 per month. This corresponds to a 0.15% increase, much higher than the increase registered by the consumer price index. The amount of other non means-tested benefits (child care allowance, child raising support, family allowance and maternity grant) depends on the National Minimum Pension, which has not changed in nominal terms and therefore decreased in real terms. Overall, however, the positive impact of benefits anchored to rising Minimum Wages seem to have been the main driver of the net positive effect of non-means tested benefits on disposable income for the poorer decile groups.

In summary, on average almost all income groups were net losers, but the poorest benefitted more than the richest from the policy changes. The bottom decile in fact increased their disposable income by 1.01% per cent, against the 0.72% decrease registered by the top decile.

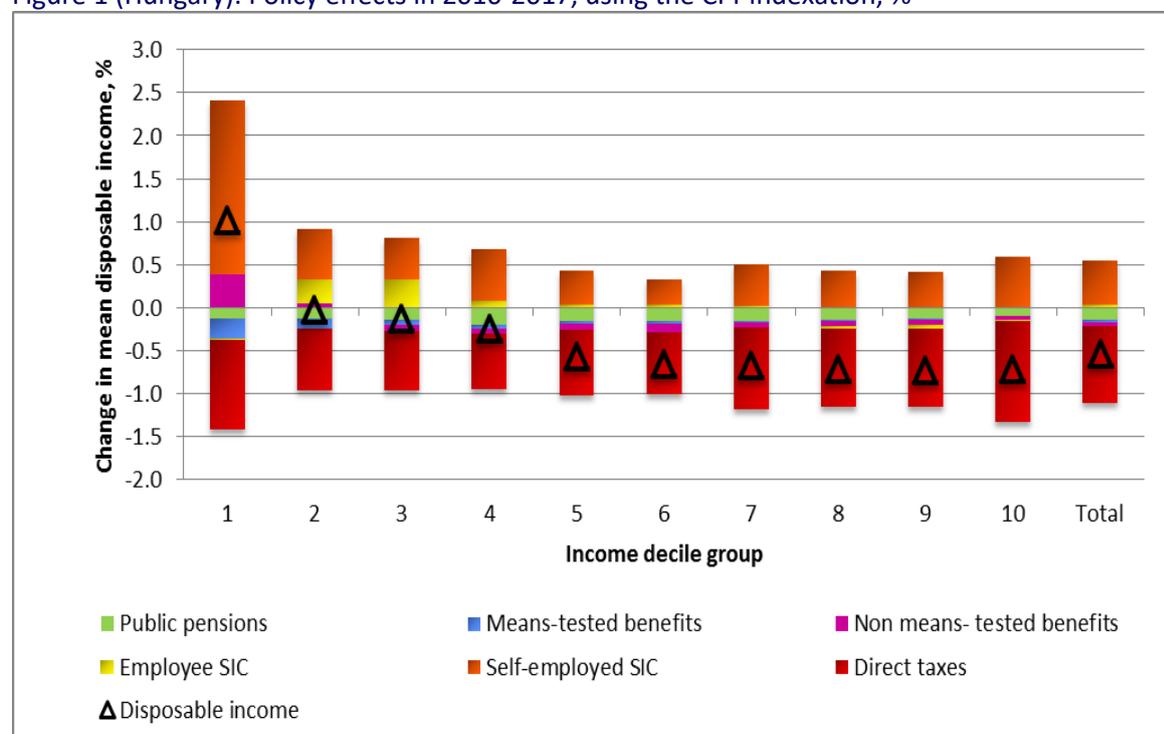
Table 1 (Hungary): Policy effects in 2016-2017, using the CPI-indexation, %

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	-0.24	0.39	0.00	2.03	-1.04	1.01
2	0.00	-0.13	-0.11	0.05	0.28	0.59	-0.71	-0.04
3	0.00	-0.14	-0.06	-0.08	0.33	0.49	-0.68	-0.13
4	0.00	-0.19	-0.04	-0.06	0.08	0.61	-0.64	-0.25
5	0.00	-0.15	-0.03	-0.08	0.03	0.40	-0.76	-0.58
6	0.00	-0.16	-0.02	-0.10	0.04	0.30	-0.72	-0.66
7	0.00	-0.15	-0.01	-0.06	0.02	0.49	-0.96	-0.67
8	0.00	-0.13	-0.01	-0.07	-0.03	0.44	-0.91	-0.72
9	0.00	-0.13	-0.01	-0.07	-0.04	0.42	-0.91	-0.74
10	0.00	-0.09	-0.01	-0.04	-0.01	0.60	-1.18	-0.72
Total	0.00	-0.13	-0.03	-0.05	0.04	0.52	-0.90	-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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Hungary): Policy effects in 2016-2017, using the CPI-indexation, %



Malta

Measured in real terms, policy changes between 2016 and 2017 led to an overall decrease in average household disposable income by around 0.18%. Only the first decile saw an increase (0.53%) with means-tested benefits having by far the biggest impact. However this positive impact for the first decile cannot be attributed to a specific benefit but it is rather the overall result of multiple small changes to the amounts of different benefits.

Overall the mean policy effects of different components were very small and always staying within the range of -0.1% to 0.1%. Nominally there were some positive gains but pension and benefit indexation was in most cases below the rate of inflation and therefore resulted in a loss in real terms. Income tax rebate for pensioners also nominally had a small positive effect on direct taxes but those income gains were again offset by inflation.

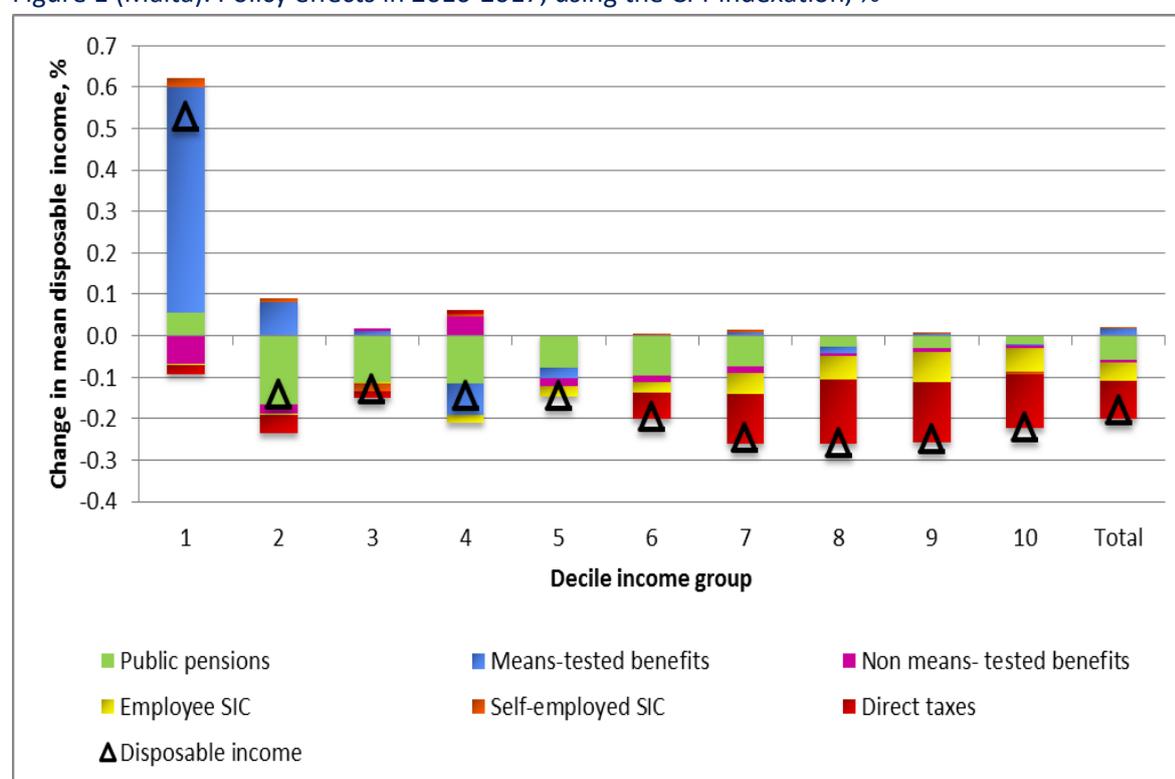
Table 1 (Malta): Policy effects in 2016-2017, using the CPI-indexation, %

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	0.55	-0.07	0.00	0.02	-0.02	0.53
2	0.00	-0.17	0.08	-0.02	0.00	0.01	-0.04	-0.14
3	0.00	-0.11	0.01	0.01	0.00	-0.02	-0.01	-0.13
4	0.00	-0.12	-0.07	0.05	-0.02	0.01	0.01	-0.15
5	0.00	-0.08	-0.03	-0.02	-0.03	0.00	0.00	-0.15
6	0.00	-0.10	0.00	-0.02	-0.03	0.01	-0.06	-0.19
7	0.00	-0.07	0.01	-0.01	-0.05	0.01	-0.12	-0.25
8	0.00	-0.03	-0.01	-0.01	-0.06	0.00	-0.15	-0.26
9	0.00	-0.03	0.00	-0.01	-0.07	0.00	-0.14	-0.25
10	0.00	-0.02	0.00	-0.01	-0.06	-0.01	-0.13	-0.22
Total	0.00	-0.06	0.02	-0.01	-0.04	0.00	-0.09	-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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Malta): Policy effects in 2016-2017, using the CPI-indexation, %



The Netherlands

The total effect of (deflated) 2017 policies is a decrease in disposable income of 0.02%. The pattern is one of monotonously decreasing incomes. For the first (lowest) decile group we find the highest gain in disposable income: 0.74%, whilst in the tenth (highest) decile group we find the highest loss in disposable income of 0.61%. In most decile groups, the increase in disposable income driven by reduced employee SICs is accompanied by a slightly lower loss of disposable income caused by higher income tax rates. The gain in disposable income for the lowest deciles can largely be attributed to an increase of means-tested benefits mainly driven by positive changes of the health care allowance. Notably, the actual increase in disposable income may be lower because this EUROMOD version (H1.0+) does not yet take into account of the increase in the flat rate part of the health insurance contribution between 2016 and 2017. The decrease in disposable income in the highest decile may largely be attributed to the increased tax rate valid for high amounts of assets in what is known with the Netherlands system as “Box 3” (capital income tax).

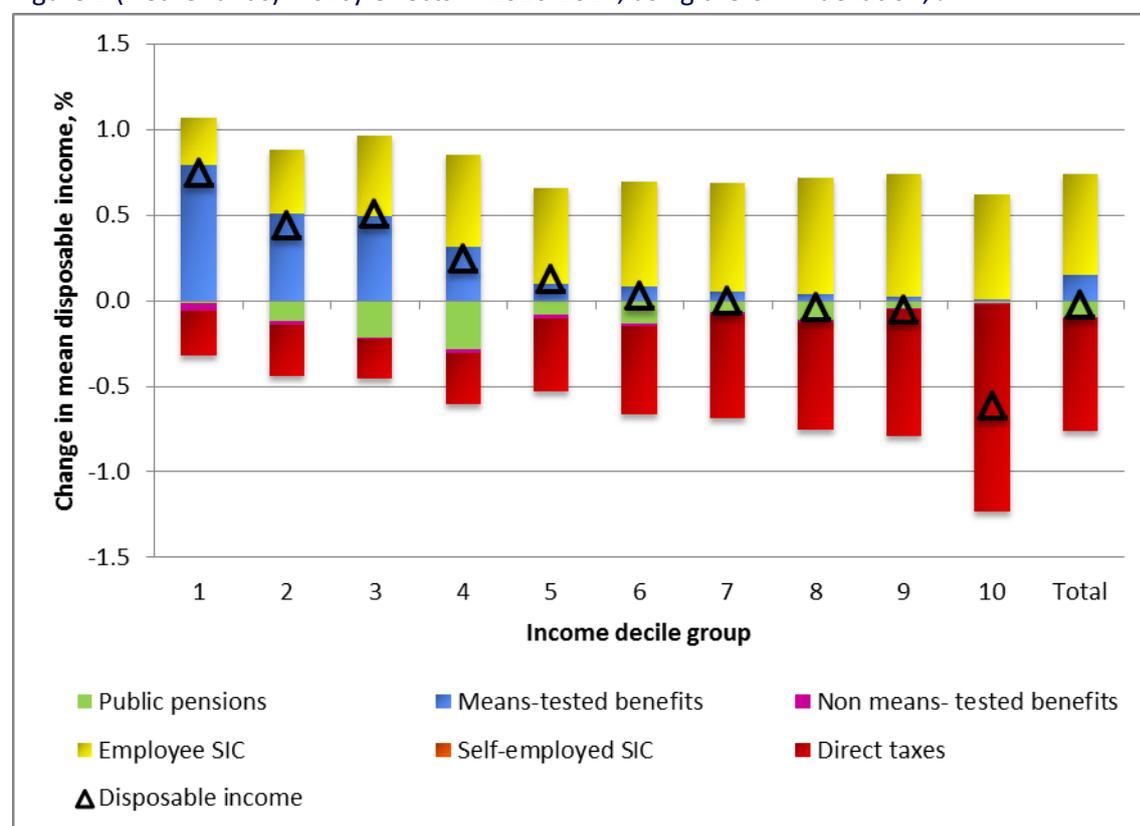
Table 1 (Netherlands): Policy effects in 2016-2017, using the CPI-indexation, %

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	0.79	-0.04	0.28	0.00	-0.27	0.74
2	0.00	-0.12	0.51	-0.02	0.37	0.00	-0.30	0.44
3	0.00	-0.22	0.49	-0.01	0.47	0.00	-0.23	0.50
4	0.00	-0.28	0.31	-0.02	0.54	0.00	-0.30	0.25
5	0.00	-0.09	0.09	-0.02	0.56	0.00	-0.42	0.13
6	0.00	-0.13	0.08	-0.02	0.61	0.00	-0.52	0.02
7	0.00	-0.07	0.05	-0.02	0.63	0.00	-0.60	0.00
8	0.00	-0.12	0.03	-0.01	0.68	0.00	-0.63	-0.04
9	0.00	-0.05	0.02	-0.01	0.72	0.00	-0.74	-0.06
10	0.00	-0.02	0.01	0.00	0.61	0.00	-1.21	-0.61
Total	0.00	-0.10	0.15	-0.01	0.59	0.00	-0.65	-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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Netherlands): Policy effects in 2016-2017, using the CPI-indexation, %



Austria

Due to policy changes enacted between 2016 and 2017, households experienced on average a real decrease of -0.46%. With the (small) exception of the third income decile (-0.43%), the policy effect was slightly pro-rich with an income-decreasing effect of 0.70% in the first decile and around 0.6% in the second decile and fourth decile but losses were limited to between 0.5% (fifth decile) and 0.4% (tenth decile) in the higher decile groups.

The income decrease in all decile groups was to a large extent driven by bracket creep within the income tax system, the indexation of pensions below the CPI and by the non-indexation of non-means tested family benefits.

For the income tax, the loss is smaller in the first decile as many persons in this decile do not have to pay any income tax because of the basic tax allowance.

Public pensions were increased by a rate lower than the rate of price growth (in EUROMOD related to the period from June 2016 to June 2017), which resulted in income losses along the entire income distribution. The only exception is the first income decile where the flat-rate single payment of net EUR 100,-/year for all pensioners had a proportionally higher impact.

The loss in terms of non-means tested benefits is slightly more concentrated in the lower income deciles as children are rather more likely to be found in those income deciles. The change from the flat-rate models in the framework of the childcare benefit to the child care benefit account did not seem to cause significant changes.

The very small income increase in terms of employee and self-employed social insurance contributions seems to be due to the reduction of pension insurance contributions by 50% for active persons in pension-age.

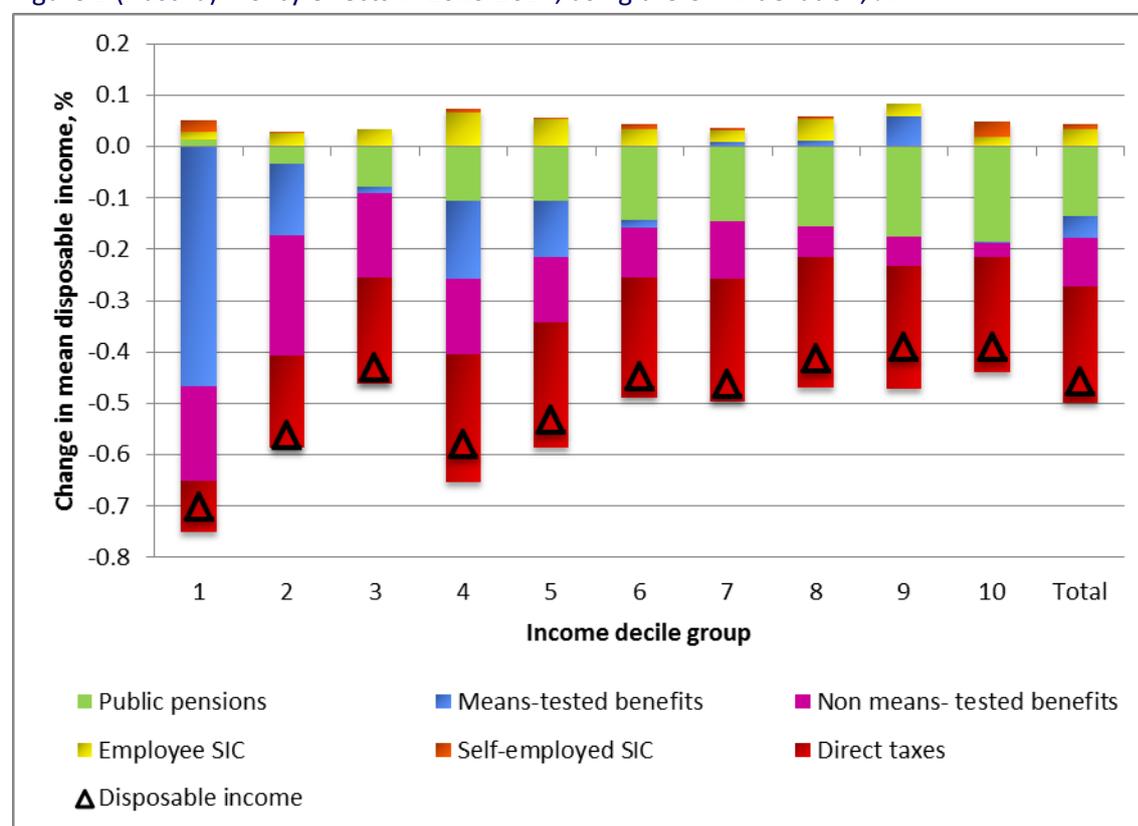
Table 1 (Austria): Policy effects in 2016-2017, using the CPI-indexation, %

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	-0.47	-0.18	0.02	0.02	-0.10	-0.70
2	0.00	-0.03	-0.14	-0.23	0.02	0.00	-0.18	-0.56
3	0.00	-0.08	-0.01	-0.16	0.03	0.00	-0.21	-0.43
4	0.00	-0.11	-0.15	-0.15	0.06	0.01	-0.25	-0.58
5	0.00	-0.11	-0.11	-0.13	0.05	0.00	-0.24	-0.53
6	0.00	-0.14	-0.02	-0.10	0.03	0.01	-0.23	-0.45
7	0.00	-0.15	0.01	-0.11	0.02	0.00	-0.24	-0.46
8	0.00	-0.16	0.01	-0.06	0.04	0.01	-0.25	-0.41
9	0.00	-0.18	0.06	-0.06	0.02	0.00	-0.24	-0.39
10	0.00	-0.19	0.00	-0.03	0.02	0.03	-0.22	-0.39
Total	0.00	-0.14	-0.04	-0.10	0.03	0.01	-0.23	-0.46

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Austria): Policy effects in 2016-2017, using the CPI-indexation, %



Poland

Table 1 and Figure 1 show that as a result of tax-benefit changes between 2016-2017, the average equivalised household disposable income measured in real values from 2017 decreased by 0.15%. This change showed a generally progressive pattern with positive changes mostly at the bottom of the income distribution. The income group which benefited the most was the first income decile with average increase of equivalised income by 0.44%.

The most visible positive change of mean equivalised income at the bottom of the income distribution is associated with changes to direct taxes, in particular to the tax-free allowance. On average changes to direct taxes increased household incomes by 0.10% with the first income decile benefiting the most (1.22%). The changes in the tax-free allowance affected positively households from second to sixth income decile groups and resulted in average income increases ranging from around 0.1% to 0.5% in these deciles. Withdrawal of the tax-free allowance for top earners had a negative influence on the incomes of households in the highest decile.

The disposable income component which contributed the most to negative changes of mean equivalised income – especially at the bottom of the distribution – is associated with the increase of the (flat rate) self-employed social security contributions. This income component, which is directly linked to the dynamics of the average wage – caused an average income decrease of 0.15% with households from the first income decile bearing the biggest proportional burden. For this decile group the increase of the self-employed SIC on average reduced the mean equivalised income by 0.82%.

The approach to indexation of means-tested benefits is another reason for the reduction of equivalised income – on average by 0.06%. Annual indexation of the Nursing Supplement and a number of elements of the Family Benefits were overall not sufficient to compensate for inflation. Many values of FB supplements, as well as benefit values and thresholds in Social Assistance and Housing Benefits remained frozen in nominal terms. This influenced the incomes of households from the third to the eighth income decile groups and resulted in average income decreases ranging from 0.02% to 0.22%.

The overall effect of changes in pensions and non means-tested benefits on mean equivalised income is very small. The very small negative effect of the Employee SIC is related to the annual indexation of income thresholds for old-age pension and disability insurance which is linked to expected wage increases.

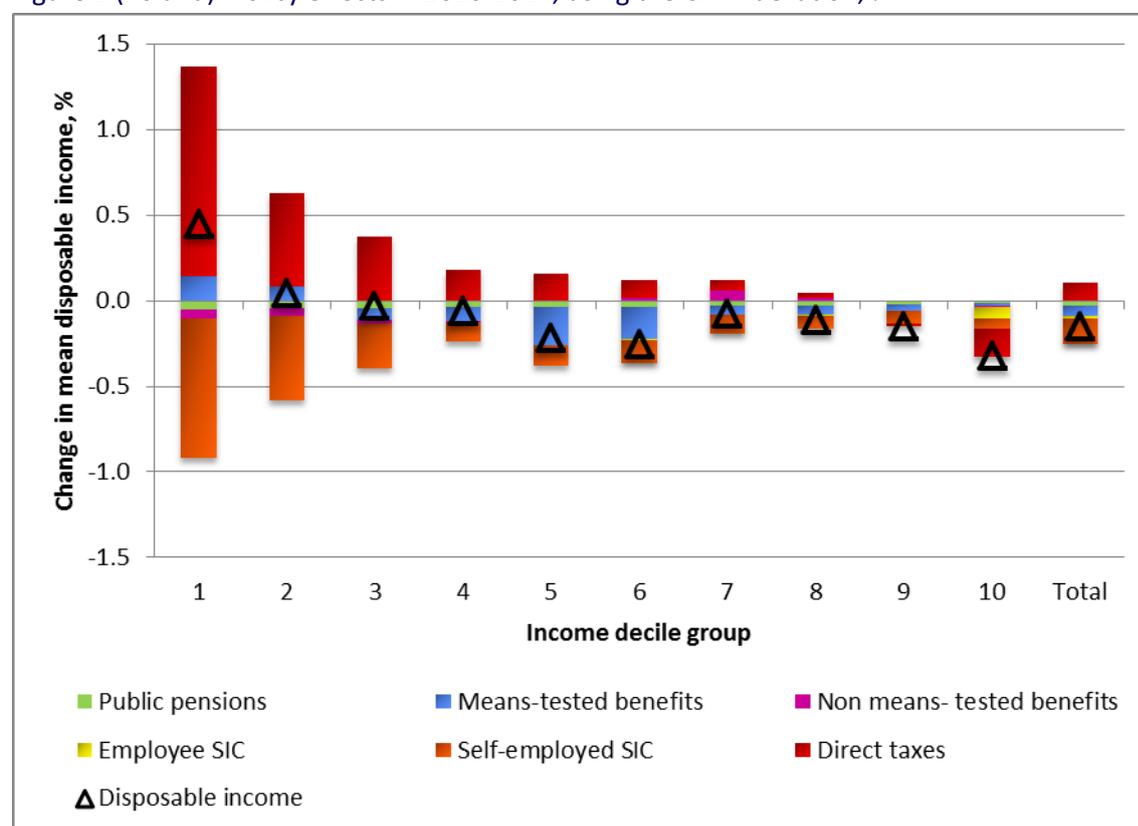
Table 1 (Poland): Policy effects in 2016-2017, using the CPI-indexation, %

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	0.14	-0.05	0.00	-0.82	1.22	0.44
2	0.00	-0.05	0.08	-0.04	0.00	-0.49	0.55	0.04
3	0.00	-0.05	-0.07	-0.02	0.00	-0.27	0.37	-0.03
4	0.00	-0.04	-0.08	-0.01	0.00	-0.12	0.18	-0.06
5	0.00	-0.04	-0.22	0.00	0.00	-0.12	0.16	-0.22
6	0.00	-0.04	-0.19	0.01	0.00	-0.14	0.10	-0.26
7	0.00	-0.03	-0.05	0.06	0.00	-0.11	0.06	-0.08
8	0.00	-0.03	-0.05	0.01	0.00	-0.07	0.04	-0.12
9	0.00	-0.02	-0.03	0.00	0.00	-0.08	-0.02	-0.15
10	0.00	-0.01	-0.02	0.00	-0.07	-0.06	-0.16	-0.33
Total	0.00	-0.03	-0.06	0.00	-0.02	-0.15	0.10	-0.15

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Poland): Policy effects in 2016-2017, using the CPI-indexation, %



Portugal

Policy changes enacted in 2017 had almost no effect on the income distribution. In general, households' disposable income is reduced by 0.10%, with the top middle-income deciles recording a greater reduction (still, as little as -0.43% in the eighth decile). The exception is the highest decile, where income increased by 0.52%. This picture is consistent with the kind of policy changes that occurred in 2017, with these being mostly parametric (e.g., indexation according to 2016 inflation, which was lower than that expected in 2017, thus implying an overall slight reduction on pensions income and on total disposable income). Still, when looking at the changes in income broken down by decile, there are some results that reflect the impact of some of the other policies. For instance, means-tested benefits grew larger in the first deciles (0.20% and 0.19% in the first two deciles compared to an overall 0.04% across the whole distribution) – this is the expected outcome of increasing child benefits for toddlers, especially in the lower income families, or of increasing in real terms the social insertion income amount. There is an increase in income for the highest decile due to changes in contributions to social security (0.12%) – this should be due to the ending of the extraordinary social contribution on pensions. Also, taxes show some relief for the highest decile (+0.93%) which should be linked to the alleviation of the surtax in 2017.

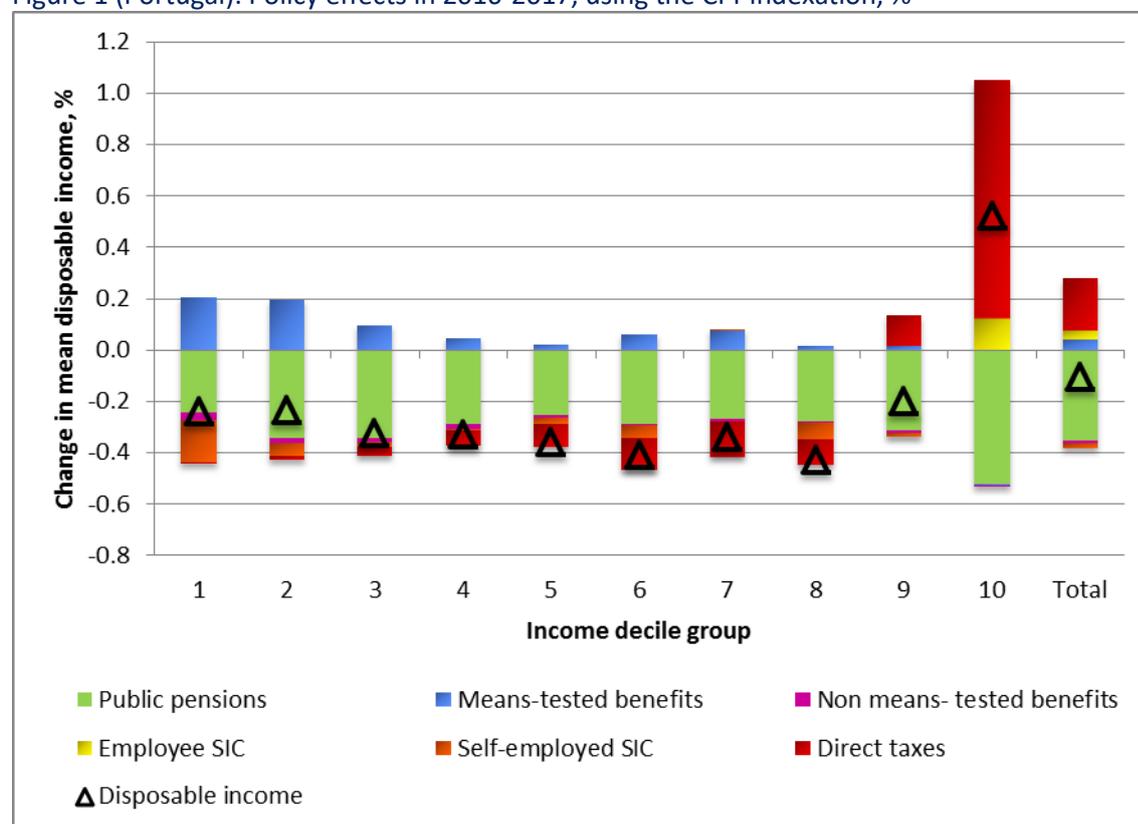
Table 1 (Portugal): Policy effects in 2016-2017, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.24	0.20	-0.03	0.00	-0.16	-0.01	-0.24
2	0.00	-0.35	0.19	-0.02	0.00	-0.05	-0.02	-0.24
3	0.00	-0.35	0.09	-0.02	0.00	-0.02	-0.04	-0.32
4	0.00	-0.29	0.04	-0.02	0.00	0.00	-0.06	-0.33
5	0.00	-0.25	0.02	-0.01	0.00	-0.02	-0.09	-0.36
6	0.00	-0.29	0.06	-0.01	0.00	-0.05	-0.12	-0.41
7	0.00	-0.27	0.07	-0.01	0.00	0.00	-0.14	-0.34
8	0.00	-0.28	0.02	-0.01	0.00	-0.06	-0.10	-0.43
9	0.00	-0.31	0.02	-0.01	0.00	-0.02	0.12	-0.20
10	0.00	-0.52	0.00	0.00	0.12	0.00	0.93	0.52
Total	0.00	-0.35	0.04	-0.01	0.03	-0.02	0.21	-0.10

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Portugal): Policy effects in 2016-2017, using the CPI-indexation, %



Romania

Analysis of the effects of policy changes between 2016 and 2017 shows that overall disposable income has increased by nearly 2.6%. All income components have positive (or null) effects on mean disposable income, the largest contribution being attributable to public pensions (an increase by nearly 1.3% of disposable income), as their annual indexation rate is higher than the consumer prices index.

But not all households have benefited from policy changes, since the disposable income of the poorest decile has fallen by almost 0.7%. For the poorer deciles, negative income effects are attributed to direct taxes, mainly due to the health insurance contribution, its minimum base being linked with the statutory minimum wage which was increased by 16% between 2016 and 2017. Some of the negative effects on direct taxes have been counterbalanced by the fact that starting from 2017 pension income is exempted from health insurance contribution. Income losses from non means-tested benefits are observed for the poorer deciles, most likely a result of CPI indexation since the nominal amounts of the benefits have not changed between 2016 and 2017.

The changes in child benefits (child raising allowance – elimination of the upper ceiling, and child raising incentive – amount increase by 30%) seem to have contributed to income gains from non means-tested benefits, especially for the upper deciles. On the other hand, for poorer deciles we notice a large positive effect of means-tested benefits on disposable income, a consequence of a 30% threshold increase in the case of guaranteed minimum social pension (especially in the second decile).

Table 1 (Romania): Policy effects in 2016-2017, 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	0.36	0.86	-0.22	0.00	0.00	-1.67	-0.67
2	0.00	1.36	3.02	-0.04	0.00	0.17	-0.59	3.92
3	0.00	1.38	0.83	-0.06	0.00	-0.06	-0.34	1.75
4	0.00	1.50	0.43	0.30	0.00	0.05	0.01	2.29
5	0.00	1.66	0.37	0.01	0.00	-0.02	0.40	2.41
6	0.00	1.13	0.20	0.33	0.00	-0.01	0.12	1.77
7	0.00	1.16	0.05	0.17	0.00	-0.02	0.36	1.72
8	0.00	1.40	0.13	0.55	0.00	-0.02	1.18	3.24
9	0.00	1.00	0.07	0.30	0.00	-0.01	1.11	2.46
10	0.00	1.30	0.01	0.38	-0.02	-0.02	1.53	3.19
Total	0.00	1.26	0.29	0.28	0.00	-0.01	0.73	2.55

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Romania): Policy effects in 2016-2017, using the CPI-indexation, %



Slovenia

Policy changes in 2016-2017 accounted for an overall increase in disposable income by 0.09%, however the effects of tax/benefits changes are quite heterogeneous along the income distribution. In fact, the top decile experiences the highest increase in disposable income by 1.19%, while the ninth decile experiences no net change. All other income groups experience a mild decrease in disposable income, between 0.18% and 0.39%, with the poorest deciles characterized by relatively larger decreases.

Direct taxes, mainly Personal Income Taxes, represent the factors driving the highest increase in disposable income between 2016 and 2017, with an annual growth of 0.22% for the total population but with very different experience by decile. This results from an introduction of a new fourth tax bracket and a lower tax rate for the third tax bracket. Specifically, taxable incomes between 20,400 and 48,000 euro per year are subject to a marginal tax rate of 34% in 2017 and incomes between 48,000 and 70,907.20 euro per year are subject to a marginal tax rate of 39%. In 2016 taxable incomes for the whole of this range (20,400 and 70,907.20 euros) were subject to a higher marginal tax rate of 41%. This change favoured the two highest income deciles, which experienced a higher reduction in tax liabilities: for the top decile reduced direct taxes represent the main factor for the increase in disposable income of 1.19% and the ninth decile benefited only slightly (0.06%) from the reduced tax liability. The other deciles with the exception of the second decile experienced slight decrease in disposable income due to direct taxes which is driven with non-updated income thresholds for tax brackets despite the increasing wages.

Public pensions represent another (though comparatively minor) factor driving the increase in disposable income for all deciles between 2016 and 2017, with an annual growth of 0.02% for the total population and with very slightly higher growth experience 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.

All deciles experienced a very slight decrease in disposable income due to means-tested benefits. The overall effect of means-tested benefits (-0.03%) can be explained by the fact that minimum income benefits increased at a lower rate than CPI during the 2016-2017 period, while means-tested benefits which do not rely on minimum income have not been updated at all.

Non means-tested benefits had a very small negative impact overall (-0.08%). Such an effect was plausibly caused by the indexation of imputed benefits which are not simulated in EUROMOD.

Changes to self-employed social insurance contributions contributed negatively to disposable income growth, although to a small extent. This results from an increase between 2016 and 2017 in the minimum base on which self-employed SIC contributions are levied, from 56% to 58% of average gross wage.

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.

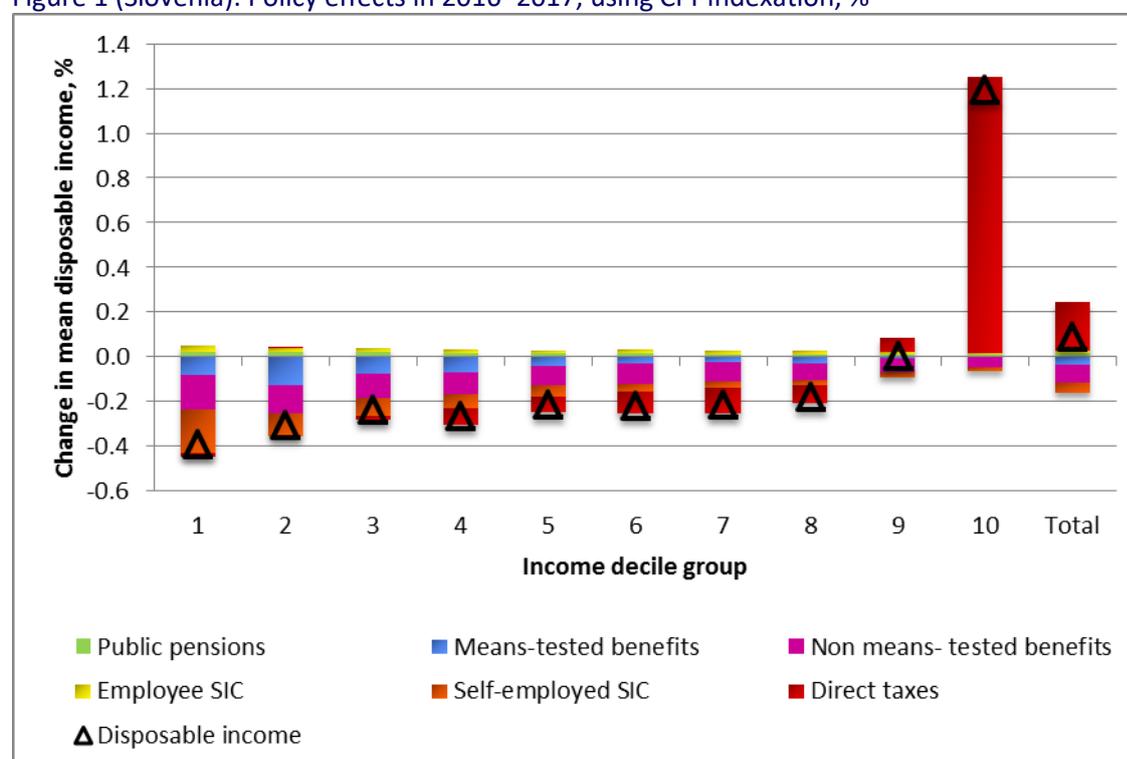
Table 1 (Slovenia): Policy effects in 2016–2017, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	0.02	-0.08	-0.15	0.03	-0.20	-0.01	-0.39
2	0.00	0.02	-0.13	-0.12	0.02	-0.11	0.00	-0.31
3	0.00	0.02	-0.07	-0.11	0.02	-0.08	-0.02	-0.24
4	0.00	0.02	-0.06	-0.10	0.02	-0.06	-0.08	-0.27
5	0.00	0.02	-0.04	-0.08	0.01	-0.06	-0.07	-0.21
6	0.00	0.02	-0.03	-0.09	0.02	-0.04	-0.10	-0.22
7	0.00	0.01	-0.02	-0.09	0.02	-0.03	-0.11	-0.22
8	0.00	0.01	-0.03	-0.07	0.01	-0.02	-0.08	-0.18
9	0.00	0.01	0.00	-0.06	0.01	-0.03	0.06	0.00
10	0.00	0.01	0.00	-0.04	0.01	-0.02	1.23	1.19
Total	0.00	0.02	-0.03	-0.08	0.01	-0.05	0.22	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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Slovenia): Policy effects in 2016–2017, using CPI-indexation, %



Slovak Republic

In comparison to 2016 policies, (deflated) 2017 policies increase mean household income by only 0.06% in total. Changes in public pensions accounted for most of the increase in household disposable income (0.23%), reflecting that pensions indexation was higher than growth in CPI. The distribution of gains across income deciles reflects where recipients of pensions are located. Changes in means-tested benefits decreased household disposable income by 0.05% in total, and 0.83% for the bottom income decile. The effect of means-tested benefits is likely to be related to interactions with other tax-benefit components. For instance, the benefit amount for parental allowance increased and this benefit enters in the definition of the income base for the means-test of social assistance.

Increases in self-employed social insurance contributions have accounted for a 0.40% decrease in household disposable income of the top decile group, but only for a 0.06% decrease in total. This is related to the increase of the maximum assessment base for self-employed SICs. Increases in direct taxes account for a 0.08% reduction in household disposable income, which is due to the introduction of a tax on dividends income, which replaces the health insurance contributions paid from income from dividends, but also due to the lower indexation of the basic allowance. The increase of maximum assessment base for SICs has an impact also on direct taxes. Taxable income of the top decile is lower due to higher SICs, which decreases their tax liability. Finally, employee SICs have only a very minor distributional impact.

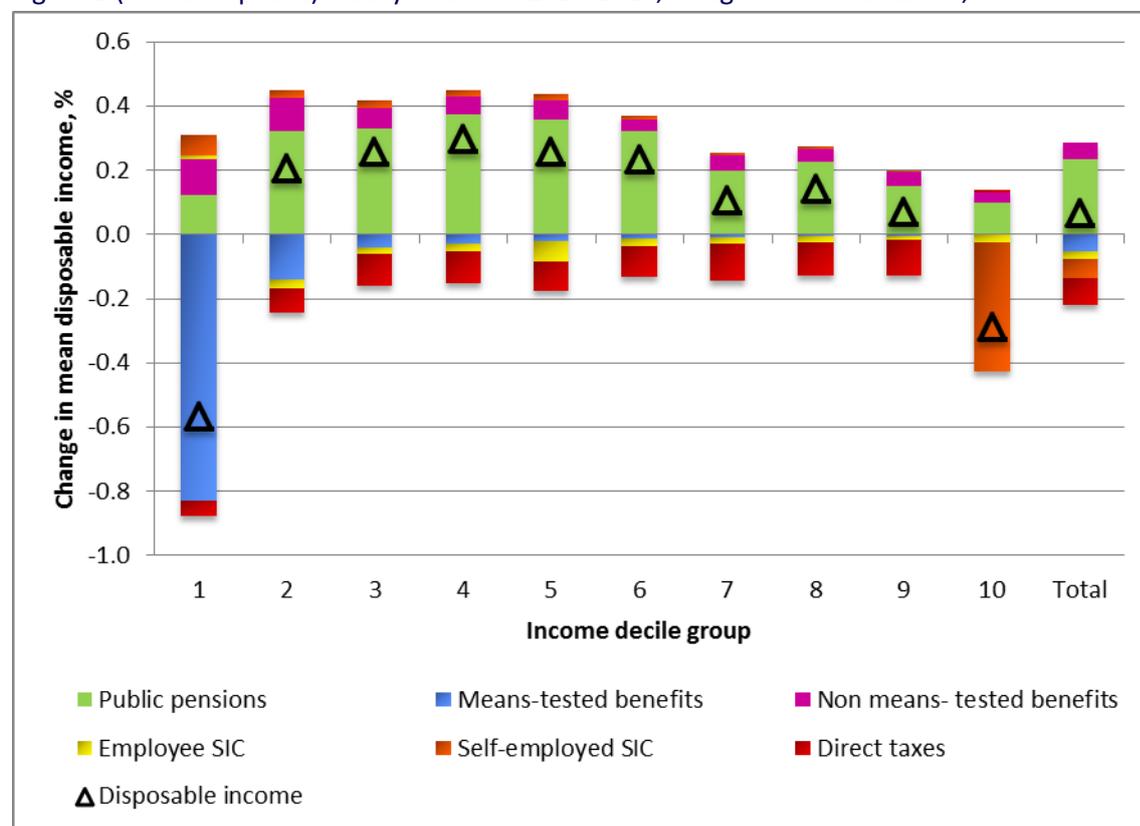
Table 1 (Slovak Republic): Policy effects in 2016-2017, using the CPI-indexation, %

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	-0.83	0.11	0.01	0.06	-0.05	-0.57
2	0.00	0.32	-0.14	0.10	-0.03	0.02	-0.07	0.20
3	0.00	0.33	-0.04	0.06	-0.02	0.03	-0.10	0.26
4	0.00	0.37	-0.03	0.06	-0.02	0.02	-0.10	0.30
5	0.00	0.36	-0.02	0.06	-0.06	0.02	-0.09	0.26
6	0.00	0.32	-0.01	0.04	-0.02	0.01	-0.10	0.23
7	0.00	0.20	-0.01	0.05	-0.02	0.01	-0.12	0.11
8	0.00	0.23	-0.01	0.04	-0.02	0.01	-0.11	0.14
9	0.00	0.15	0.00	0.04	-0.01	0.00	-0.11	0.07
10	0.00	0.10	0.00	0.03	-0.03	-0.40	0.01	-0.29
Total	0.00	0.23	-0.05	0.05	-0.02	-0.06	-0.08	0.06

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Slovak Republic): Policy effects in 2016-2017, using the CPI-indexation, %



Finland

In 2017 the policy changes decreased the disposable income in all income deciles, in total a decrease of 0.50%. The strongest negative effect is due to the increased rates of employee social insurance contribution both for the part related to pension and the part related to unemployment insurance. This negative effect is partially compensated by a reduction in direct taxation, mainly driven by an increase in the allowances and the introduction of a new tax allowance for entrepreneurial income that mostly affects the top part of the distribution.

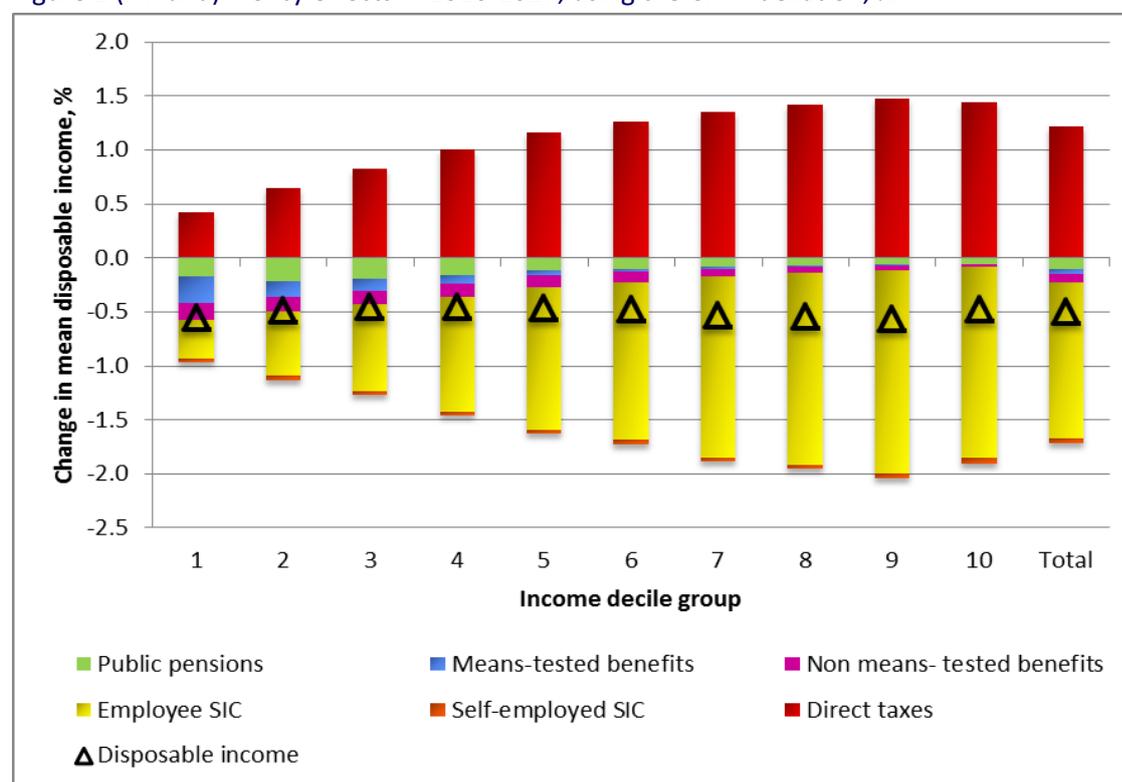
Table 1 (Finland): Policy effects in 2016-2017, using the HICP-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.17	-0.25	-0.17	-0.35	-0.04	0.41	-0.56
2	0.00	-0.22	-0.14	-0.14	-0.60	-0.04	0.64	-0.49
3	0.00	-0.20	-0.12	-0.12	-0.80	-0.04	0.82	-0.45
4	0.00	-0.16	-0.08	-0.13	-1.05	-0.04	1.00	-0.46
5	0.00	-0.12	-0.04	-0.11	-1.32	-0.04	1.16	-0.47
6	0.00	-0.11	-0.02	-0.10	-1.46	-0.04	1.25	-0.48
7	0.00	-0.08	-0.03	-0.07	-1.68	-0.03	1.35	-0.54
8	0.00	-0.07	-0.01	-0.06	-1.77	-0.04	1.41	-0.55
9	0.00	-0.07	-0.01	-0.04	-1.88	-0.04	1.47	-0.57
10	0.00	-0.07	0.00	-0.02	-1.77	-0.06	1.43	-0.48
Total	0.00	-0.11	-0.04	-0.08	-1.45	-0.04	1.22	-0.50

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Finland): Policy effects in 2016-2017, using the CPI-indexation, %



Sweden

In comparison to 2016 policies, (deflated) 2017 policies increase mean household income by 0.46% in total. Changes in public pensions accounted for most of the increase in household disposable income (0.66%), reflecting that pensions indexation was higher than growth in CPI. The distribution of gains across income deciles reflects where recipients of pensions are located.

Increased employee social insurance contributions decreased household disposable income by 0.04%. The effect was the largest for the richest income decile groups, and increasing with disposable income. The effect was driven by an increase in the income base amount, which is used to calculate the final contribution base.

The positive effect of the growth in pensions was mainly offset by direct taxes, which accounted for a 0.22% decrease in household disposable income. The distribution of losses across income deciles is the result of a combination of different factors including: (i) the small increase in County council and funeral tax rates; (ii) small changes in the tax bands of government income tax; and (iii) the increase in employee social insurance contributions, which are subtracted from final income tax.

All other tax and benefit instruments have only a very minor distributional impact.

Table 1 (Sweden): Policy effects in 2016-2017, 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	0.70	-0.26	0.21	-0.01	0.00	-0.28	0.36
2	0.00	1.52	-0.41	0.16	-0.01	0.00	-0.57	0.68
3	0.00	1.16	0.02	0.15	-0.01	0.00	-0.45	0.87
4	0.00	0.94	0.00	0.17	-0.02	0.00	-0.37	0.71
5	0.00	0.72	0.00	0.13	-0.03	0.01	-0.26	0.57
6	0.00	0.55	0.00	0.12	-0.03	0.00	-0.20	0.43
7	0.00	0.48	0.00	0.09	-0.05	0.00	-0.14	0.38
8	0.00	0.40	0.00	0.07	-0.05	0.00	-0.09	0.32
9	0.00	0.45	0.00	0.04	-0.07	0.00	-0.09	0.33
10	0.00	0.56	0.00	0.02	-0.08	0.00	-0.15	0.35
Total	0.00	0.66	-0.03	0.09	-0.04	0.00	-0.22	0.46

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 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (Sweden): Policy effects in 2016-2017, using the CPI-indexation, %



United Kingdom

The total effect of (deflated) 2017 policies on mean income is -0.28%. Although between 2016 and 2017, people from the third to the tenth decile gained from further increases of Personal Income Tax Allowance and the new introduction of Saving Tax Allowance. On the other hand, the state pension rising with inflation thanks to the triple-lock indexation, means that there are no real changes to attributable to the Public Pensions income component.

The distributional pattern shows an half-inverse U-shape: with the second decile group losing around 1.6% of income and the top three deciles gaining 0.04% of income on average. Between 2016 and 2017 the bottom half of the distribution loses from both means and non-means tested benefit mainly because of frozen benefits, whilst the top part of the income distribution loses from increased employee Social Insurance Contributions.

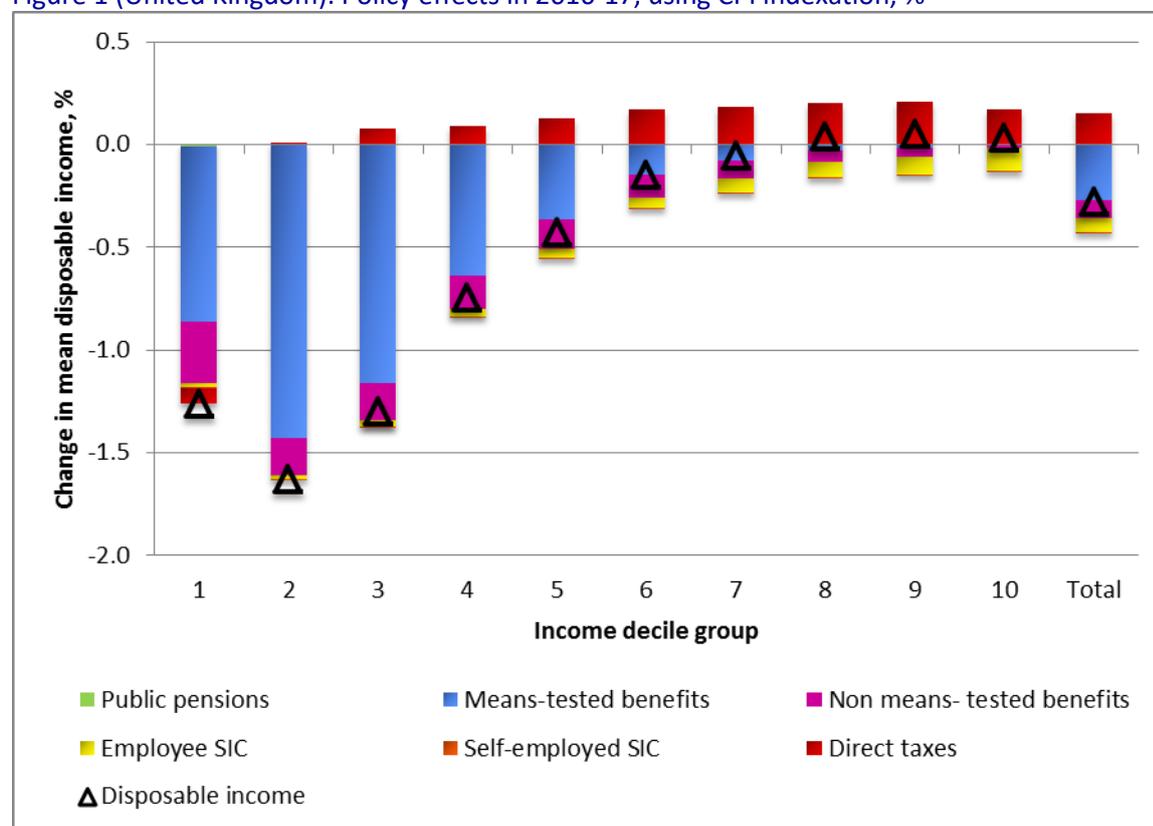
Table 1 (United Kingdom): Policy effects in 2016-17, using CPI indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.01	-0.85	-0.30	-0.02	0.00	-0.08	-1.26
2	0.00	-0.01	-1.42	-0.18	-0.02	0.00	0.00	-1.63
3	0.00	-0.01	-1.15	-0.18	-0.03	0.00	0.07	-1.30
4	0.00	0.00	-0.63	-0.17	-0.03	0.00	0.09	-0.75
5	0.00	0.00	-0.36	-0.15	-0.04	0.00	0.13	-0.43
6	0.00	0.00	-0.15	-0.11	-0.05	0.00	0.17	-0.15
7	0.00	0.00	-0.08	-0.09	-0.07	0.00	0.18	-0.05
8	0.00	0.00	-0.03	-0.05	-0.08	0.00	0.20	0.04
9	0.00	0.00	-0.01	-0.04	-0.09	-0.01	0.21	0.05
10	0.00	0.00	-0.01	-0.01	-0.11	-0.01	0.17	0.03
Total	0.00	0.00	-0.27	-0.09	-0.07	-0.01	0.15	-0.28

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2016, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2017 policies by *projected* Eurostat's Harmonized Index of Consumer Prices (HICP).

Key (shaded cells): 1.00 represents increase in income $\geq 1\%$; 3.00 represents increase $\geq 3\%$; 1.00 represents reduction in income $\geq 1\%$; 3.00 represents reduction $\geq 3\%$.

Figure 1 (United Kingdom): Policy effects in 2016-17, using CPI indexation, %



References

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

Tammik M., 2018, "Baseline results from the EU28 EUROMOD: 2014-2017" *EUROMOD Working Paper EM5/18* Colchester: ISER, University of Essex.

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