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Research note: The effect of different indexation scenarios on child poverty in the UK

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Research note: The effect of different indexation scenarios on child poverty in the UK

Paola De Agostini and Iva Tasseva

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Research note: The effect of different indexation scenarios on child poverty in the UK[1]

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Abstract

Using the tax-benefit microsimulation model EUROMOD and Family Resources Survey, we investigate what would have happened to child poverty in the UK in the periods 2010/11–2015/16 and 2015/16–2020/21 under a range of different indexation scenarios of children's benefits. We find that between 2010/11 and 2015/16 both the relative and absolute child poverty rates would have been lower if children's benefits were uprated by RPI or if the government had introduced the Child Tax Credit uprating package it promised in 2010. Uprating children's benefits up to 2020/21 as announced by the government in the Autumn Financial Statement in 2014 would result in real benefit cuts and increase in child poverty. However, triple lock indexation of children's benefits would sustain their real value and would reduce child poverty rates substantially.

JEL: H23, H53, I38

Keywords: benefit indexation, child poverty, UK, microsimulation

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1. Introduction

Household disposable income can be broadly attributed to individual and household characteristics, market incomes and the tax-benefit system. In contrast to earlier work in the economics literature which focussed primarily on wages, with advancements in data collection public economics has been increasingly concerned with changes in the entire distribution of household disposable income. In particular, the negative impacts of increasing income inequality has seen renewed interest in recent years, see e.g. Piketty (2014), Atkinson and Bourguignon (2015), Bargain et al. (2015). In Europe, since the start of the crisis in 2008 until 2012 relative poverty and inequality in more than half of the EU countries have increased.[2] To be able to reverse these trends, first, we ought to understand the drivers behind these changes and second, we need timely analysis to inform the necessary policy decisions. A key prerequisite for timely analysis is the availability of timely data.

Available micro data with rich information on population characteristics and market incomes for the EU countries come with a lag of 2-3 years, which rules out a detailed analysis of the most recent changes in these attributes. However, a tax-benefit microsimulation model with up-to-date policy rules would enable us to analyse the effect of changes to the tax-benefit system on the income distribution in the most recent period. This is precisely the approach followed in this paper and we aim to provide an estimate of the distributional effects of tax-benefit policy changes for a number of EU countries in the period of 2008-2014, i.e. from the beginning of crisis up until a very recent year. Separately, we also quantify the effects of policy changes in the most recent years – 2013-14 – and contrast these with the overall period. Our analysis builds upon and updates our previous estimates (Avram et al., 2013; De Agostini et al., 2014).

The Shorrocks-Shapley decomposition method elaborated by Bargain and Callan (2010) allows the direct effect of tax-benefit policy changes to be isolated from other factors such as changes in market incomes and population characteristics. This is quite distinct from common pre- vs post-transfer comparisons over time where the direct policy effect has not been separated from the automatic response of policies to population and market incomes changes. The decomposition method has been increasingly applied to study the effect of the tax-benefit system on poverty and inequality, see e.g. Bargain et al. (2012, 2013, 2015). The most resonant finding from this research is that policy changes have mostly resulted in lower poverty and inequality than would otherwise have occurred while market and population-driven factors have pushed in the opposite direction. To get a deeper understanding of the policy effect, Paulus et al. (2014) extend the decomposition framework and split the policy effect into the indexation effect – a result to changes in benefit amounts and tax thresholds – and structural changes – a result of changes in the rules of the tax-benefit system. Somewhat surprisingly, they find that in the period in question (2001-11) in the countries studied most of the reduction in poverty and inequality can be attributed to the "indexation effect" which is a combination of statutory indexation rules and ad hoc changes. In contrast, structural changes, if anything, led to increase in indicators of poverty and inequality.

This paper extends the previous literature by providing empirical evidence on the policy effect since the onset of the crisis for 10 EU countries. The countries are

[2] See Eurostat database (indicators ilc_li02 and ilc_di12).

This research note investigates what happened to child poverty in the UK between 2010/11 and 2015/16, and explores what would have happened under a range of different indexation scenarios of children's benefits. It addresses the following three questions:

1) What would the child poverty rate have been compared to its current 2015/16 level If the government had uprated children's benefits – child benefit (CB) and child tax credit (CTC) – in line with (a) CPI (b) RPI and, for CTC (c) the uprating package it promised in the Emergency Budget and Comprehensive Spending Review of 2010 over this current parliament?
2) If for the next parliament, children's benefits were uprated in line with a triple lock (maximum between CPI, earnings or 2.5%) instead of by the announced government policies, what would be the child poverty rate in 2020/21 (other things remaining the same as in 2015/16)?
3) How much would 2) cost (in 2015/16 prices)?

To address the questions above, we use the tax-benefit microsimulation model EUROMOD and household micro data from the Family Resources Survey (for more details, see Box 1). Our main findings can be summarised as follows:

We estimate that between 2010/11 and 2015/16 in the UK the share of children living in households with disposable income below 60% of the current year median, i.e. the relative child poverty rate, has increased by 0.9 percentage points or 118 thousand children. The share of children living in households with disposable income below 60% of the 2010/11 median, i.e. the absolute child poverty rate, has increased by 6.7 percentage points or 860 thousand children.

If over the period 2010/11 – 2015/16, the Coalition government had uprated CB and CTC by CPI, we find that the child poverty rates would have been similar to the current 2015/16 rates. However, if CB and CTC were uprated by RPI (which grew faster than CPI) the relative child poverty rate would have been about half a percentage point lower than its current level, while the absolute child poverty rate would have been 1.2 percentage points lower or there would have been 152 thousand children *less* living in absolute poverty than currently. Furthermore, if the government had introduced the CTC uprating package it promised in 2010, there would have been a poverty reduction of 3.7 percentage points equal to 479 thousand children *less* living in relative poverty today. Absolute child poverty would have been 5.9 percentage points lower equal to 765 thousand children being moved out of poverty.

Uprating CB and CTC up to 2020/21 as announced by the government would result in *real cuts* to children's benefits. In comparison, if CB and CTC are uprated in line with a triple lock indexation, the real value of the benefits in 2015/16 prices (measured by CPI) would be higher than their value today and so, government spending would increase. However, the increase in spending would also result in a substantial child poverty reduction. Using the relative poverty measure, we estimate that child poverty in 2020/21 would fall by 2.1 percentage points or, in other words,

273 thousand children would be moved out of poverty if children's benefits were indexed by triple lock instead of government policy, other things remaining the same as in 2015/16. Child poverty would be reduced by 3.1 percentage points equal to almost 400 thousand children being moved out of poverty using the absolute poverty measure.

Box 1. Methodological summary

We make use of household micro data – the Family Resources Survey (FRS) for 2009/10 – and the EU-wide tax-benefit microsimulation model EUROMOD. The FRS provides us with information on household and individual characteristics, market incomes and public pensions. The UK component in EUROMOD combines the FRS data with information on the tax and benefit policy rules for a given year (as of the 30th of June), and simulates cash benefit entitlements and direct tax liabilities and calculates household disposable income. To answer the above questions, we simulate in EUROMOD the UK 2010/11 and 2015/16 actual tax-benefit systems as well as the various indexation scenarios with modified CB and CTC benefit amounts. As the income reference period in the FRS lags behind the period of the policies, uprating factors by income source are applied on the FRS data to account for income growth between 2010/11 and 2015/16. However, changes to household and individual characteristics (e.g. demographic or behavioural changes) that may have occurred between 2009/10 (when the FRS data were collected) and 2015/16 are not modelled. Thus, the estimates presented in this research note do not replicate exactly HBAI poverty levels. Furthermore, we do not project any changes in population characteristics, wages and other sources of income up to 2020/21. It should also be borne in mind that for various reasons, e.g. conceptual or modelling differences, results produced with EUROMOD and any other microsimulation model for the UK will inevitably be different. For a recent analysis that reflects on these differences, see De Agostini, Hills and Sutherland (2014).[3] For more information on EUROMOD, see Sutherland and Figari (2013).[4] For detailed information on the UK model, see the UK Country Reports.[5]

To address question 1), we first estimate the child poverty rate in 2015/16. We then compare it with estimates on what would have happened in 2015/16 under three indexation scenarios of children's benefits:

- In the first scenario, `a) CB and CTC uprated by CPI', the 2010/11 benefit amounts have been uprated by CPI up to 2015/16.
- In the second scenario, `b) CB and CTC uprated by RPI', the 2010/11 benefit amounts have been uprated by RPI up to 2015/16.

[3] De Agostini, P., Hills, J. & Sutherland, H. (2014) Were we really all in it together? The distributional effects of the UK Coalition government's tax-benefit policy changes.*Social Policy in a Cold Climate Working Paper 10.*

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

[5] De Agostini, P. and Sutherland, H. (2014), "EUROMOD Country Report: United Kingdom 2009-2013", https://www.iser.essex.ac.uk/euromod/resources-for-euromod-users/country-reports

- In the third scenario, `c) CTC uprating package from 2010/11', the CB amounts are the same as in 2015/16, while the children elements of CTC reflect what they would have been according to the package promised by the Coalition government in 2010 – uprated by CPI in all years and increased by £180 and £110 in 2011/12 and 2012/13, respectively.

Comparing the child poverty rate estimated in 2015/16 with the ones estimated in each one of the scenarios with modified children's benefits, we can assess the effect of the Coalition uprating policies of children's benefits against the alternative scenarios.

To answer question 2), we compare what would happen to child poverty under two alternative indexation scenarios of children's benefits up to 2020/21, if they were implemented on today's population and in today's prices (i.e. in 2015/16):

- `d) Government policy up to 2020/21, deflated by CPI', children's benefits are uprated up to 2020/21 according to the policies announced by the government in the latest Autumn Financial Statement.
- `e) Triple lock up to 2020/21, deflated by CPI', children's benefits are uprated up to 2020/21 in line with a tripe lock, i.e. by a rate equal to the maximum between CPI, earnings and 2.5%.

In both scenarios, the tax-benefit system is identical to the one in 2015/16, apart from the uprated children's benefits, which are expressed in real terms (in 2015/16 prices), by deflating them back by CPI.

To derive their real value today (in 2015/16), the uprated children's benefits can be also deflated back using RPI instead of CPI. Thus, we also explore what would happen to the child poverty rate under the scenarios `f) Government policy up to 2020/21, deflated by RPI' and `g) Triple lock up to 2020/21, deflated by RPI'. Because inflation measured by CPI is smaller than inflation measured by RPI (see Table 1), the real value of the benefits if deflated by CPI is bigger than if deflated by RPI.

Table 1 reports the movements in CPI, RPI, average earnings growth and triple lock indexation between 2011 and 2020 as (observed and forecasted) provided from the Office for Budget Responsibility (OBR) on December 2014.[6] It should be noted that across the period RPI has always risen faster than CPI which has important implications for the results.

Table 2 shows for all components of CB and CTC their actual levels in 2010/11 and 2015/16 as well as what their levels would be under the different indexation scenarios. During the Coalition government, CB amounts lagged behind growth in prices (both CPI and RPI); however, the CTC amount per child grew faster than prices (both CPI and RPI), while the CTC amount per (severely)

[6] OBR December 2014 - Determinats of the fiscal forecast Table 4.1 http://budgetresponsibility.org.uk/pubs/December_2014_Charts_and_tables-web516.xls and OBR December 2014 - Economy supplementary tables - Labour market Table 1.6 http://budgetresponsibility.org.uk/pubs/Economy_Supplementary_Tables_Dec2014.v2.xls

disabled child was uprated in line with CPI. As a result, in scenario a) the CB amounts are higher and the CTC amounts are smaller than/equal to what they are in 2015/16. However, for a family that relies on both CB and CTC the sum of the benefits in 2015/16 and under scenario a) is about the same. Therefore, we expect that the change in the actual child poverty rate between 2010/11 and 2015/16 is about the same to what it would have been if children's benefits were uprated by CPI instead. If children's benefits were uprated by RPI (scenario b)), they would have been more generous than they are in 2015/16 (apart from the CTC amount per child) and a higher poverty reduction (lower poverty increase) would have been achieved. Scenario c) results in a higher CTC amount per child compared to 2015/16 as well as scenarios a) and b), while the CTC amount per (severely) disabled child would have remained the same as in 2015/16. Thus, we expect that if the Coalition government had implemented the CTC package they promised in 2010/11, poverty would have increased least or fell most.

The family component, part of CTC, has been kept nominally the same since 2005. For this reason, the family component in this analysis was not considered as part of the Coalition policies between 2010/11 and 2015/16, i.e. its value was kept the same in scenarios a), b) and c). However, when looking forward up to 2020/21, the Coalition government has not announced any change to the value of the family component. Keeping it nominally the same over time implies a drop in real terms. This can be seen in scenarios d) and f) in Table 2, where by 2020/21 the real value of the family component would be smaller than its current 2015/16 value. Similarly, although the government has announced that they will increase in nominal terms the other components of CB and CTC by 2020/21, the increase is generally not big enough for the benefits to keep up with prices and their value in real terms is actually lower than their current value in 2015/16. Overall, we expect that families with children would be worse off if the Coalition government would uprate children's benefit up to 2020/21 as announced. However, if benefits are indexed by triple lock up to 2020/21 (see scenarios e) and g)), their real value would increase and households with children would be better off.

The level and change in poverty is estimated based on the equivalised household disposable income, using the modified OECD equivalence scale. Two concepts of household disposable income are considered – before and after housing costs. Different poverty thresholds are defined – a relative one and an absolute one. The relative poverty threshold is equal to 60% of the median equivalised household disposable income – before and after housing costs – in the respective scenario. The absolute poverty threshold is based on the 60% of the median 2010/11 equivalised household disposable income – before and after housing costs – which when applied in 2015/16 is uprated by RPI. Table 3 shows the values for the different poverty thresholds used across the scenarios.

Table 4 presents estimates on the child poverty rates in 2010/11 and 2015/16 (in % and number of children).

Addressing question 1), Table 5 shows estimates on the actual child poverty rates (in % and number of children) in 2015/16 as well as estimates on what the child poverty rates would have been under scenarios a), b) and c). Table 5 also presents estimates on the change (in percentage points and number of children) in the child poverty rate between 2015/16 and the different indexation scenarios. A positive (negative) change indicates an increase (a reduction) in the poverty level.

Table 6 addresses question 2) by including estimates on the child poverty rates under the indexation scenarios d), e), f) and g). We then contrast what would happen to the child poverty rate under triple lock indexation (scenarios e) and g)) vs government policy (scenarios d) and f)). A positive (negative) change means that by 2020/21 the child poverty rate would increase (fall) if children's benefits were indexed by triple lock instead of government policy, other things being equal (i.e. as in 2015/16).

To answer question 3), Table 7 shows estimates on the net effect in the scenarios d), e), f) and g), all calculated in 2015/16 prices. The government net effect is measured as the sum of direct taxes, employee and self-employed national insurance contributions minus means-tested and non-means tested benefits and public pensions. A positive (negative) change means that the government net effect – revenues minus spending – would be higher (lower) if children's benefits were indexed by triple lock instead of the government's announced indexation. Table 8 shows the levels of and changes in government spending and revenue by benefit and tax components, again all in 2015/16 prices.

Table 1: Indices (September, previous year = 100)

Scenario	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
RPI(a)	1.046	1.056	1.026	1.032	1.023	1.021	1.029	1.034	1.036	1.036
CPI(a)	1.031	1.052	1.022	1.027	1.012	1.012	1.018	1.020	1.020	1.020
Average Earnings Index(b)	1.015	1.017	1.010	1.017	1.018	1.021	1.033	1.04	1.039	1.038
Triple lock(c)	1.031	1.052	1.025	1.027	1.025	1.025	1.03	1.038	1.04	1.039

Notes: (a) RPI, CPI and triple-lock are measured at September each year. (b) AEI 2011-2016 measured as annual value. (c) These are the OBR forecasts for the 'triple lock'. For 2017 onwards they are the Q2 forecasts for average earnings growth for the relevant year (OBR, December 2014 – Labour market Table 1.6).

Sources: OBR December 2014 - Determinants of the fiscal forecast Table 4.1 http://budgetresponsibility.org.uk/pubs/December_2014_Charts_and_tables-web516.xls; OBR December 2014 - Economy supplementary tables - Labour market Table 1.6 http://budgetresponsibility.org.uk/pubs/Economy_Supplementary_Tables_Dec2014.v2.xls

Table 2: Child benefit and Child Tax Credit components across the scenarios

Benefit	2010/11	2015/16	a) CB and CTC uprated by CPI	b) CB and CTC uprated by RPI	c) CTC uprating package from 2010	d) Government policy up to 2020/21, deflated by CPI	e) Triple lock up to 2020/21, deflated by CPI	f) Government policy up to 2020/21, deflated by RPI	g) Triple lock up to 2020/21, deflated by RPI
Child benefit (CB)									
Amount for the first child (£ per week)	20.3	20.7	23.39	24.29	20.7	20.21	22.3	18.8	20.75
Amount for the second and any further child (£ per week)	13.4	13.7	15.44	16.03	13.7	13.36	14.76	12.43	13.73
Child Tax Credit (CTC)									
Family component (£ per year)	545	545	545	545	545	494.38	594.17	460.04	552.89
Amount per child (£ per year)	2,300	2,780	2,660	2,765	3,845	2,685.09	3,002.58	2,498.58	2,794.02
Amount per disabled child (£ per year)	2,715	3,140	3,140	3,255	3,140	3,125.04	3,397.18	2,907.97	3,161.21
Amount per severely disabled child (£ per year)	1,095	1,275	1,275	1,320	1,275	1,279.05	1,383.36	1,190.20	1,287.27

Notes: The benefit amounts reported for 2010/11 are in 2010/11 prices, while in the rest of the table, they are in 2015/16 prices. The family component for babies was abolished in 2011 and for this reason, it has not been modified in the alternative scenarios. The scenario 'a) CB uprated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by CPI since 2010. The scenario 'b) CB uprated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by RPI since 2010. The scenario 'c) CTC uprating package from 2010/11' refers to 2015/16 tax-benefit system in which CTC has been uprated since 2010 by the package promised by the government. The scenario 'd) Government policy up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by CPI back to 2015/16 prices. The scenario 'e) Triple lock up up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by CPI back to 2015/16 prices. The scenario 'f) Government policy up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by RPI back to 2015/16 prices. The scenario 'g) Triple lock up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by RPI back to 2015/16 prices.

Source: Benefit amounts for 2015/16, see here: https://www.gov.uk/government/publications/tax-and-tax-credit-rates-and-thresholds-for-2015-16/tax-and-tax-credit-rates-and-thresholds-for-2015-16#working-and-child-credit-tax-rates-and-thresholds. Benefit amounts across the indexation scenarios based on own calculations.

Table 3: Poverty thresholds (in £ per month)

Scenario	Relative poverty threshold		Absolute 2010/11 poverty line uprated up to 2015/16 by RPI	
	Before Housing Costs	After Housing Costs	Before Housing Costs	After Housing Costs
2010/11	700	605	838	724
2015/16	774	667	838	724
a) CB and CTC uprated by CPI	776	669	838	724
b) CB and CTC uprated by RPI	778	671	838	724
c) CTC uprating package from 2010/11	784	678	838	724
d) Government policy up to 2020/21, deflated by CPI	773	666	838	724
e) Triple lock up to 2020/21, deflated by CPI	778	670	838	724
f) Government policy up to 2020/21, deflated by RPI	770	663	838	724
g) Triple lock up to 2020/21, deflated by RPI	774	668	838	724

Notes: Scenario 'a) CB uprated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by CPI since 2010. Scenario 'b) CB uprated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by RPI since 2010. Scenario 'c) CTC uprating package from 2010/11' refers to 2015/16 tax-benefit system in which CTC has been uprated since 2010 by the package promised by the government. Scenario 'd) Government policy up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'e) Triple lock up up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'f) Government policy up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by RPI back to 2015/16 prices. Scenario 'g) Triple lock up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by RPI back to 2015/16 prices.
Source: Own calculations using EUROMOD.

Table 4: Child poverty rates: 2010/11 vs 2015/16

Scenario	Poverty headcount (%)	Change in percentage point relative to 2010/11	Poverty headcount (n children)	Change in n children relative to 2010/11	Poverty headcount (%)	Change in percentage point relative to 2010/11	Poverty headcount (n children)	Change in n children relative to 2010/11
	Relative poverty				Absolute poverty - 2010/11 poverty line adjusted by RPI			
Before Housing Costs								
2010/11	15.67	n/a	2,017,857	n/a	15.67	n/a	2,017,857	n/a
2015/16	16.58	0.91	2,135,533	117,676	22.34	6.67	2,877,464	859,607
After Housing Costs								
2010/11	26.51	n/a	3,413,967	n/a	26.51	n/a	3,413,967	n/a
2015/16	27.78	1.27	3,577,511	163,544	32.50	5.99	4,185,157	771,190

Notes: The poverty rate is the percentage of people in households with equivalised disposable income below the poverty threshold. Equivalised household disposable income - before or after housing costs - is constructed using the modified OECD equivalence scale to adjust incomes for household size. The relative poverty threshold is 60% of the median equivalised disposable income in each scenario. The absolute poverty threshold is 60% of the median equivalised disposable income in 2010/11, adjusted by RPI up to 2015.
Source: Own calculations using EUROMOD.

Table 5: Child poverty rates: 2015/16 vs indexation scenarios a), b) and c)

Scenario	Poverty headcount (%)	Change in percentage point relative to 2015/16	Poverty headcount (n children)	Change in n children relative to 2015/16	Poverty headcount (%)	Change in percentage point relative to 2015/16	Poverty headcount (n children)	Change in n children relative to 2015/16
	Relative poverty				Absolute poverty - 2010/11 poverty line adjusted by RPI			
Before Housing Costs								
2015/16	16.58	n/a	2,135,533	n/a	22.34	n/a	2,877,464	n/a
a) CB and CTC uprated by CPI	16.75	0.17	2,157,664	22,131	22.29	-0.06	2,870,362	-7,102
b) CB and CTC uprated by RPI	16.13	-0.46	2,076,837	-58,696	21.16	-1.18	2,725,318	-152,146
c) CTC uprating package from 2010/11	12.86	-3.72	1,656,679	-478,854	16.40	-5.94	2,112,679	-764,785
After Housing Costs								
2015/16	27.78	n/a	3,577,511	n/a	32.50	n/a	4,185,157	n/a
a) CB and CTC uprated by CPI	27.80	0.02	3,579,737	2,226	32.43	-0.07	4,176,668	-8,489
b) CB and CTC uprated by RPI	26.96	-0.82	3,471,860	-105,651	31.53	-0.97	4,060,878	-124,279
c) CTC uprating package from 2010/11	21.96	-5.81	2,828,680	-748,831	26.77	-5.73	3,447,540	-737,617

Notes: The poverty rate is the percentage of people in households with equivalised disposable income below the poverty threshold. Equivalised household disposable income - before or after housing costs - is constructed using the modified OECD equivalence scale to adjust incomes for household size. The relative poverty threshold is 60% of the median equivalised disposable income in each scenario. The absolute poverty threshold is 60% of the median equivalised disposable income in 2010/11, adjusted by RPI up to 2015. Scenario 'a) CB uprated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by CPI since 2010. Scenario 'b) CB uprated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by RPI since 2010. Scenario 'c) CTC uprating package from 2010/11' refers to 2015/16 tax-benefit system in which CTC has been uprated since 2010 by the package promised by the government.

Source: Own calculations using EUROMOD.

Table 6: Child poverty rates: government policy vs triple lock, indexation scenarios d), e), f) and g)

Scenario	Poverty headcount (%)	Change in percentage point relative to government policy	Poverty headcount (n children)	Change in n children relative to government policy	Poverty headcount (%)	Change in percentage point relative to government policy	Poverty headcount (n children)	Change in n children relative to government policy
	Relative poverty				Absolute poverty - 2010 poverty line adjusted by RPI			
Before Housing Costs								
d) Government policy up to 2020/21, deflated by CPI	17.37	n/a	2,236,786	n/a	23.26	n/a	2,995,732	n/a
e) Triple lock up to 2020/21, deflated by CPI	15.25	-2.12	1,963,808	-272,978	20.16	-3.10	2,596,890	-398,842
f) Government policy up to 2020/21, deflated by RPI	18.77	n/a	2,417,546	n/a	24.89	n/a	3,205,987	n/a
g) Triple lock up to 2020/21, deflated by RPI	16.50	-2.27	2,124,628	-292,918	22.16	-2.73	2,854,288	-351,699
After Housing Costs								
d) Government policy up to 2020/21, deflated by CPI	28.48	n/a	3,667,629	n/a	33.29	n/a	4,287,463	n/a
e) Triple lock up to 2020/21, deflated by CPI	25.88	-2.60	3,333,262	-334,367	30.88	-2.41	3,977,086	-310,377
f) Government policy up to 2020/21, deflated by RPI	29.86	n/a	3,844,957	n/a	34.84	n/a	4,487,169	n/a
g) Triple lock up to 2020/21, deflated by RPI	27.69	-2.16	3,566,191	-278,766	32.40	-2.44	4,172,734	-314,435

Notes: The poverty rate is the percentage of people in households with equivalised disposable income below the poverty threshold. Equivalised household disposable income - before or after housing costs - is constructed using the modified OECD equivalence scale to adjust incomes for household size. The relative poverty threshold is 60% of the median equivalised disposable income in each scenario. The absolute poverty threshold is 60% of the median equivalised disposable income in 2010, adjusted by RPI up to 2015. Scenario 'd) Government

policy up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'e) Triple lock up up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'f) Government policy up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by RPI back to 2015/16 prices. Scenario 'g) Triple lock up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by RPI back to 2015/16 prices.
Source: Own calculations using EUROMOD.

Table 7: Net effect (in million £ per year, in 2015/16 prices)

Scenario	Net effect	Change relative to government policy
d) Government policy up to 2020/21, deflated by CPI	42,427	n/a
e) Triple lock up to 2020/21, deflated by CPI	39,177	-3,250
f) Government policy up to 2020/21, deflated by RPI	44,341	n/a
g) Triple lock up to 2020/21, deflated by RPI	41,349	-2,992

Notes: Net effect = Taxes + national insurance contributions – means-tested benefits – non-means-tested benefits – pensions. Scenario 'd) Government policy up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'e) Triple lock up up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'f) Government policy up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by RPI back to 2015/16 prices. Scenario 'g) Triple lock up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by RPI back to 2015/16 prices.
Source: Own calculations using EUROMOD.

Table 8: Net effect decomposed by tax and benefit instruments (in million £ per year, in 2015/16 prices)

Scenario	Spending on means-tested benefits		Spending on non-means-tested benefits		Spending on public pensions		Revenue from direct taxes		Revenue from national insurance contributions	
	Level	Change relative to government policy	Level	Change relative to government policy	Level	Change relative to government policy	Level	Change relative to government policy	Level	Change relative to government policy
d) Government policy up to 2020/21, deflated by CPI	63,305	n/a	43,293	n/a	71,772	n/a	159,067	n/a	61,730	n/a
e) Triple lock up to 2020/21, deflated by CPI	65,377	2,073	44,508	1,215	71,772	0	159,104	38	61,730	0
f) Government policy up to 2020/21, deflated by RPI	62,181	n/a	42,478	n/a	71,772	n/a	159,042	n/a	61,730	n/a
g) Triple lock up to 2020/21, deflated by RPI	64,077	1,895	43,609	1,131	71,772	0	159,077	35	61,730	0

Notes: Net effect = Taxes + national insurance contributions – means-tested benefits – non-means-tested benefits – pensions. Scenario 'd) Government policy up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'e) Triple lock up up to 2020/21, deflated by CPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by CPI back to 2015/16 prices. Scenario 'f) Government policy up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated according to government policies up to 2020/21 and then deflated by RPI back to 2015/16 prices. Scenario 'g) Triple lock up to 2020/21, deflated by RPI' refers to 2015/16 tax-benefit system in which children's benefits have been uprated by triple lock up to 2020/21 and then deflated by RPI back to 2015/16 prices.
Source: Own calculations using EUROMOD.