Child poverty cumulative impact assessment – update

Scottish Government
Riaghaltas na h-Alba

Child poverty cumulative impact assessment – update

CONTENTS

1. Summary

This report estimates the impact of Scottish Government policies on relative and absolute child poverty, updating the modelling that was originally undertaken for the second Tackling Child Poverty Delivery Plan. The report additionally estimates the impact of these policies on deep poverty, which provides an indication of how children in the poorest households are affected. Finally, the report estimates the impacts of a selection of hypothetical UK Government policies.

The report estimates that:

- Scottish Government policies will keep 100,000 children out of relative poverty and 70,000 children out of absolute poverty in 2024-25, with the respective child poverty rates 10 percentage points and 7 percentage points lower than they would have been without these policies in place.

- Scottish Government policies will also keep 70,000 children out of deep poverty in 2024-25.

- Removing the two-child limit and reinstating the family element in Universal Credit would lead to a further 10,000 fewer children in Scotland living in relative and absolute poverty in 2024-25, while introducing an Essentials Guarantee would lead to a further 30,000 fewer children living in relative and absolute poverty.

All modelling is subject to a degree of uncertainty, relying on a range of assumptions and simplifications. This uncertainty is highlighted by an update to our input data, which leads to a revision in our projections for reasons that do not necessarily reflect real-world changes in policy or the wider economy. The results presented in this report, particularly projections of outturn poverty rates, should therefore be treated with caution.

2.   Introduction

In March 2022, the Scottish Government published a Cumulative Impact Assessment (CIA) to accompany the second Tackling Child Poverty Delivery Plan, *Best Start, Bright Futures*.[1] The CIA set out projections for relative and absolute child poverty in 2023-24 and 2025-26, in addition to the estimated impact of Scottish Government policies, using the latest information available at the time. An update of the headline results accompanied the Tackling Child Poverty Progress Report in June 2023, extending the modelling to 2026-27.[2]

This note presents the latest modelling of relative and absolute child poverty, including estimates for 2024-25. The update includes the latest economic forecasts published by the Office for Budget Responsibility (OBR) in November 2023; the latest UK and Scottish Government policy announcements, including the UK Autumn Statement and the Scottish Government Budget as published on 19 December 2023; and the latest household survey information, including an additional year of data (2021-22) from the Family Resources Survey. In addition, we present new analysis on deep poverty and on UK Government welfare reform.

The original CIA sets out the full details of our methodology. As in previous modelling, we run two scenarios in each year using the UKMOD microsimulation model: a policy scenario, which represents our projection, and a counterfactual scenario, which represents a hypothetical world in which a package of Scottish Government policies did not exist. The difference between the two scenarios represents the impact of these policies. The same policies are included in the policy package as in the original CIA, along with any changes to these policies that have been announced or implemented in the interim.[3]

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[1] Scottish Government, 2022, Tackling child poverty delivery plan 2022-2026 - Annex 4: Cumulative Impact Assessment
[2] Scottish Government, 2023, Tackling Child Poverty Progress Report 2022-23 - Annex B: Cumulative Impact Assessment Update
[3] These policies are: Free School Meals; School Clothing Grant; Council Tax Reduction (including water and sewerage discount); Discretionary Housing Payments (bedroom tax and benefit cap mitigation); Carers Allowance Supplement; Best Start Grant; Best Start Foods; Scottish Child Payment; and employability services.

3.   Updates

3.1   Policy changes

Since the last update in June 2023, the modelling has incorporated the introduction of the advanced rate of Scottish income tax and the increase in the top rate from April 2024, along with the council tax freeze in 2024-25. Following our approach of modelling the impacts of entire policies rather than policy changes, the impacts of these policy changes on child poverty levels are not measured by the policy package, though such impacts are not expected to be appreciable.[4] As noted, any changes to policies within the package are incorporated in those policies.

Recent UK Government policies have also been included in the model, namely the cut to National Insurance Contributions (NICs) from January 2024 and the one-off increase in the housing element of Universal Credit from April 2024. These policies are likewise expected to be immaterial in terms of aggregate levels of child poverty. The Autumn Statement also announced a set of labour market measures and reforms to disability benefits, but the impacts of these measures cannot be known ex ante and are therefore not modelled.

3.2   Economic context

Economic growth over the past year was stronger than the OBR anticipated in March 2023, when it produced the previous set of forecasts. However, the medium-term outlook has worsened as inflation is now expected to remain higher for longer, counteracting larger expected pay rises and dampening income growth more broadly. In real terms, average household income is set to remain below its pre-pandemic level until 2027. While this represents an improvement in the forecast since March, it still amounts to an unprecedented fall in living standards, the impacts of which will vary across society.

The implications for the headline measures of child poverty are not straightforward. Higher rates of inflation will directly raise the absolute poverty line, leading to higher rates of poverty on this measure. The effect on relative poverty is more ambiguous, potentially feeding through to higher housing costs but also to higher benefit rates. On the other hand, the relative poverty line is based on median income, so we may expect stronger nominal wage growth to be associated with higher rates of relative poverty, depending on how this growth is distributed.

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[4] Including changes to policies as opposed to policies themselves raises the question of what the counterfactual should be. In general, counterfactuals can be constructed along three different lines, depending on the research question: first, we can estimate the impact of policies as a whole, which generally entails a counterfactual in which those policies do not exist; second, we can estimate the impact of policy decisions made or implemented since a certain date, including the introduction of new policies and changes to existing policies, with the counterfactual projected forwards from that date using a set of assumptions; and third, we can estimate the impact of policies relative to some contemporaneous comparator, such as UK Government provision. Thus far, the CIA has involved the first of these approaches, which cannot be straightforwardly combined with the second or third.

3.3   Input data

The most consequential change since our last update is to the input data of our model. Up to now, the modelling has been based on a three-year pool of the Family Resources Survey (FRS), covering 2017-18, 2018-19, and 2019-20. Data from 2020-21 has not been used as the FRS was unable to obtain a representative sample in that year due to the impacts of Covid-19 on the data collection process. For the first time, we are able to incorporate FRS data for 2021-22, which is considered to be representative of the Scottish population. To maintain an adequate sample while excluding 2020-21, we follow the official poverty statistics in using a two-year pool of 2019-20 and 2021-22.

While the resulting sample is sufficiently large for our purposes, it is smaller than in previous modelling – primarily due to the switch from a three-year pool to two-year pool, and secondarily because the FRS still achieved a smaller size in 2021-22 than was typical before the pandemic.[5] The pandemic also affected the composition of the 2021-22 sample, which as in 2020-21 was collected through telephone interviews rather than the usual face-to-face mode. DWP have mitigated any resulting bias by altering their weighting methodology and are confident that the data are more robust than in 2020-21. However, unobservable effects may have persisted, and DWP caution against making certain comparisons. These factors increase the uncertainty surrounding our estimates.

The inclusion of new input data also has a notable impact on our method for calibrating the outputs of the model to the official poverty statistics. Normally, this involves an upward adjustment in modelled poverty rates, but less of an adjustment is required when using the latest data. This acts to lower our projections for child poverty; indeed, it explains most of the change in our estimates since the last modelling update in June 2023.

This should be borne in mind when interpreting the results: the improvement reflects a modelling update, rather than an upgrade in the economic outlook or the impacts of new policy decisions. Furthermore, while the calibration method itself has not changed, and while fluctuations in the opposite direction are possible, Section 4 shows that alternative methods can result in higher projected poverty rates using the latest data. This further underscores the uncertainty of our estimates.

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[5] DWP, 2023, Family Resources Survey: background information and methodology.

4. Results

4.1 Relative poverty

The official statistics show that 23% of children in Scotland were living in relative poverty in 2021-22, down from 26% in 2019-20.[6] With the latest data, forecasts, and policies included, we project that the relative child poverty rate will fall from 23% in 2021-22 to around 16% by 2023-24. Meanwhile, we estimate that the counterfactual poverty rate will stay relatively constant, at around 26% in both years.

Taking the difference between these scenarios, we estimate that the child poverty rate would have been around 4 percentage points higher in 2021-22 if the policy package had not been in place, with 40,000 more children living in poverty.[7] This impact is projected to increase to around 10 percentage points by 2023-24, meaning Scottish Government policies are anticipated to keep around 100,000 children out of relative poverty. The impact is slightly higher than our previous estimates.

In 2024-25, the child poverty rate rises in the policy and counterfactual scenarios to 18% and 28% respectively, driven in part by the discontinuation of UK Government cost-of-living payments. A fall of around 1 percentage point is then projected by 2026-27 in both scenarios, to reach 17% and 27% respectively. The impact of the policy package thus remains relatively constant over time, at around 10 percentage points. In 2024-25, the Scottish Child Payment alone is projected to impact the relative child poverty rate by 6 percentage points, meaning it will keep 60,000 children out of relative poverty in that year.
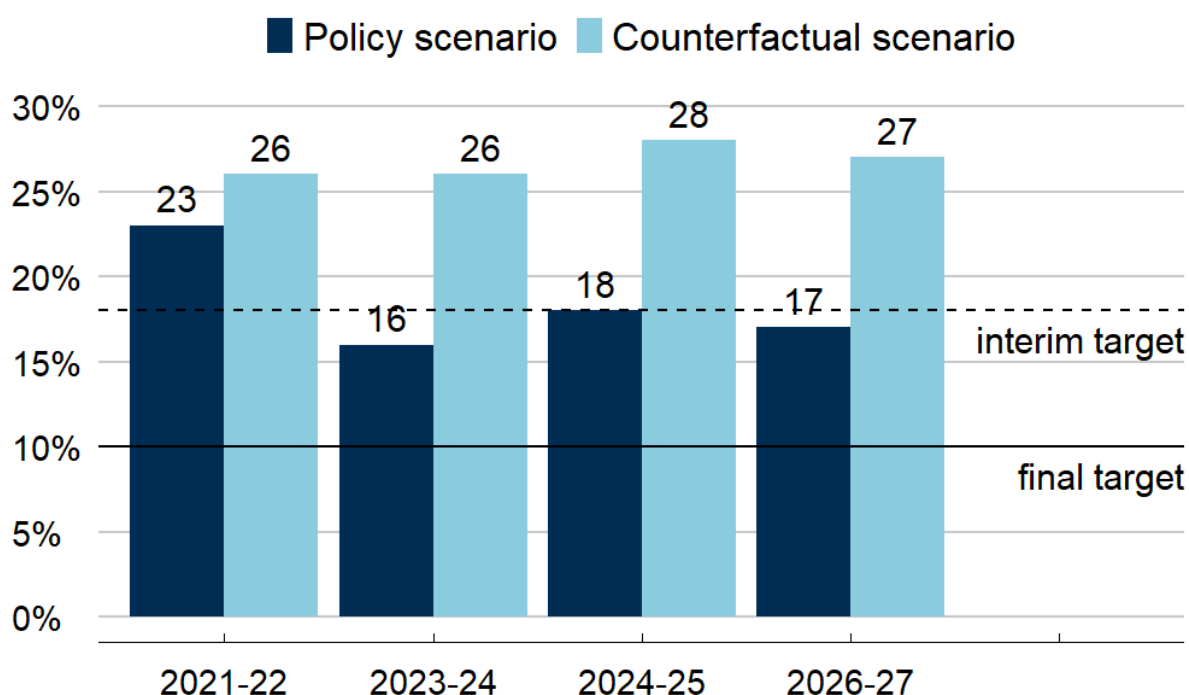
Figure 4.1 and Table 4.1 summarise the results of our analysis in terms of relative child poverty.

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[6] Scottish Government, 2023, Poverty and income inequality in Scotland 2019-22.
[7] This difference is based on unrounded estimates.

Figure 4.1: Estimated relative child poverty after housing costs

Source: Scottish Government analysis using UKMOD.

Table 4.1: Estimated relative child poverty after housing costs

Publication date	Scenario	Baseline year	2023-24 – interim targets year	2024-25	2026-27 –horizon of model
June 2023 (2019-20 baseline)	Counterfactual	29%	28%		29%
	Policy	**26%**	**19%**		**18%**
	Impact of policy package	*3 ppts*	*9 ppts*		*11 ppts*
February 2024 (2021-22 baseline)	Counterfactual	26%	26%	28%	27%
	Policy	**23%**	**16%**	**18%**	**17%**
	Impact of policy package	*4 ppts*	*10 ppts*	*10 ppts*	*10 ppts*
Interim target			**Less than 18%**		

Notes: impacts calculated using unrounded figures.
Source: Scottish Government analysis using UKMOD.

4.2   Absolute poverty

The official statistics show that 19% of children in Scotland lived in absolute poverty in 2021-22, down from 23% in 2019-20.[8] The model projects that this rate will fall to around 13% by 2023-24. Meanwhile, we estimate that the counterfactual poverty rate was 22% in 2019-20, and will remain at broadly the same level by 2023-24.

Taking the difference between these scenarios, the modelling indicates that the absolute child poverty rate would have been around 2 percentage points higher in 2021-22 if the policy package had not been in place, with around 20,000 more children living in absolute poverty.[9] This impact is projected to increase to 8 percentage points by 2023-24, meaning that Scottish Government policies could keep around 80,000 children out of absolute poverty. The impact is slightly lower than our previous estimates.

As with relative child poverty, the outlook beyond 2023-24 becomes increasingly uncertain. In 2024-25, the absolute child poverty rate rises more in the policy scenario (from 13% to 15%) than the counterfactual scenario (from 22% to 23%), reducing the impact of the policy package to around 7 percentage points. However, the projected poverty rate then falls in 2026-27, restoring an 8 percentage-point impact.
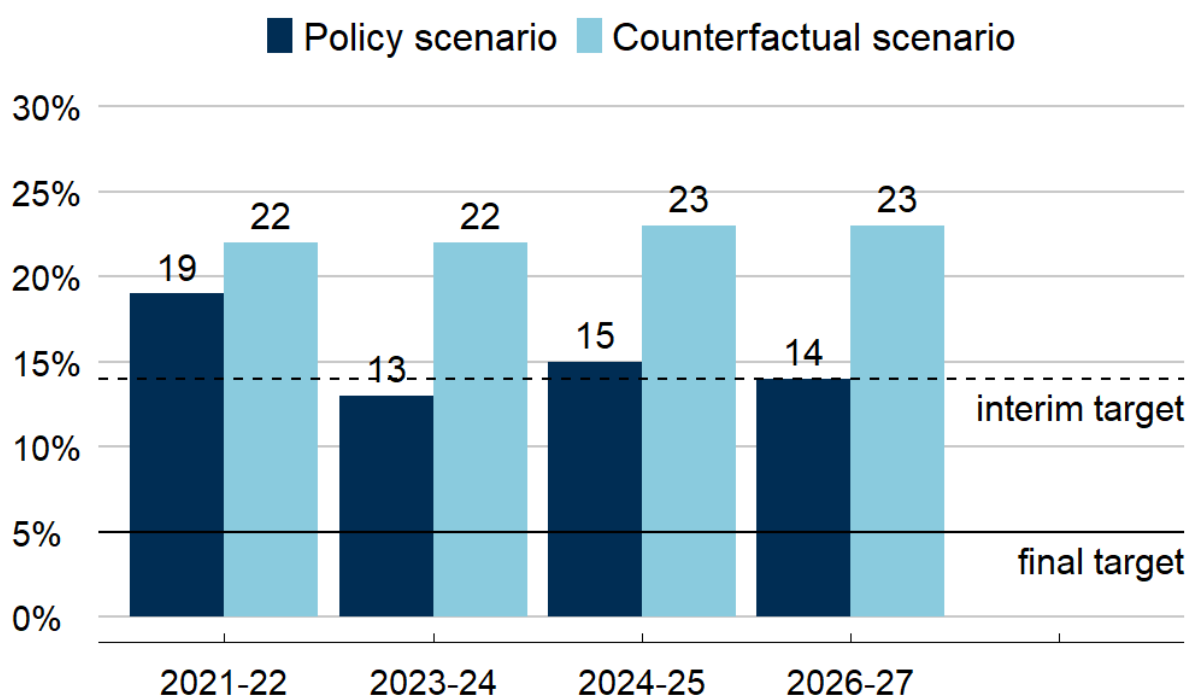
Figure 4.2 and Table 4.2 summarise the results of our analysis in terms of absolute child poverty.

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[8] Scottish Government, 2023, Poverty and income inequality in Scotland 2019-22.
[9] This difference is based on unrounded estimates.

Figure 4.2: Estimated absolute child poverty after housing costs

Source: Scottish Government analysis using UKMOD.

Table 4.2: Estimated absolute child poverty after housing costs

Publication date	Scenario	Baseline year	2023-24 – interim targets year	2024-25	2026-27 –horizon of model
June 2023 (2019-20 baseline)	Counterfactual	26%	25%		25%
	Policy	**23%**	**16%**		**15%**
	Impact of policy package	*3 ppts*	*9 ppts*		*10 ppts*
February 2024 (2021-22 baseline)	Counterfactual	22%	22%	23%	23%
	Policy	**19%**	**13%**	**15%**	**14%**
	Impact of policy package	*2 ppts*	*8 ppts*	*7 ppts*	*8 ppts*
Interim target			**Less than 14%**		

Notes: impacts calculated using unrounded figures.
Source: Scottish Government analysis using UKMOD.

5.   Calibration

The poverty rates implied by our model can differ from the official poverty statistics, which are used to measure the child poverty targets. These differences can occur for a number of reasons, including the well-known problem of survey respondents underreporting their benefit income. We therefore adjust (or 'calibrate') the model outputs so that they are consistent with the official statistics.

Our method for calibrating relative child poverty takes the percentage-point difference between the modelled poverty rate and the official poverty rate in the latest year of input data, and applies this difference to all scenarios. To calibrate absolute child poverty, we take the difference between the modelled relative and absolute poverty rates in the latest year of input data, and compare it to the difference between the official relative and absolute poverty rates in that year to give an adjustment ratio. We then ensure this ratio is held constant in all other scenarios, using the calibrated relative poverty rate as the reference point. This method ensures that we preserve the relationship between relative and absolute poverty that is evident in the official statistics, while allowing this relationship to change over time based on the outputs of our model.

Table 5.1 shows how the calibration method has been impacted by the inclusion of new input data. The outputs of the model are closer to the official statistics in the latest year of input data, meaning that less adjustment is required. Note that figures presented in the table are rounded, whereas our calculations use unrounded figures.

Table 5.1: Impact of new input data on child poverty calibration

		Previous Modelling	Latest modelling
Latest year of input data		2019-20	2021-22
Relative child poverty	1) Official rate	26%	23%
	2) Modelled rate	23%	23%
	3) Difference (1 - 2)	**3 ppts**	**0 ppts**
Absolute child poverty	4) Official rate	23%	19%
	5) Modelled rate	17%	19%
6) Difference between official rates (1 - 4)		3 ppts	4 ppts
7) Difference between modelled rates (2 - 5)		6 ppts	4 ppts
8) Adjustment ratio (7 / 6)		**2**	**1**

Note: figures rounded to nearest percentage point.
Source: Scottish Government analysis using UKMOD.

The fact that updating the input data has closed the gap between the outputs and the statistics is positive, since it means that our results rely more on the model and less on the calibration. This could be driven in part by the switch from a three-year pool to a two-year pool, which entails that a higher proportion of the input data falls in the calibration year. However, it introduces a degree of volatility, with a notable shift in projected poverty rates since our last publication for reasons that do not necessarily reflect changes in policy or the wider economy.

Calibration methods that make use of multiple years would help reduce this volatility, but would introduce other complications. Since the model simulates a single year at a time, multi-year calibration raises the question of which simulations should be calibrated to which statistics using which input data, with numerous possible permutations. Furthermore, we may consider the latest year of data to be the most reliable guide to any future discrepancies between the model and the survey. This may be particularly true during the roll-out of significant policy interventions such as the Scottish Child Payment, which was introduced in 2021.

In light of these trade-offs, we have opted not to make changes to the calibration methodology at this time. However, we acknowledge that our method generates volatility. This is shown in Table 5.2, which presents estimates using alternative input data and calibration methods. Consulting the table row-wise, we can see that, with the change of input data, estimated poverty rates in 2023-24 have shifted by around 4 percentage points when using our single-year method, but have stayed relatively constant when using a possible multi-year method.

We also acknowledge that, at present, this volatility is acting to produce lower estimated poverty rates than would likely be estimated by multi-year methods. Consulting the table column-wise, Table 5.2 shows that, using the same input data (2019-22), a possible multi-year calibration method results in estimated child poverty being two percentage points higher than our single-year method on both measures in 2023-24. Note, however, that the volatility of the single-year method can work in both directions. Indeed, Table 5.2 also shows that, using the previous input data (2017-20), the pattern is reversed: the poverty rates estimated by the single-year method are two percentage points higher than those estimated by the multi-year method.

Table 5.2: estimated child poverty rates using different calibration methods and input data, 2023-24

Child poverty measure	Calibration method	FRS 2019-22 (2 year pooled sample)	FRS 2017-20 (3 year pooled sample)
Relative	**Single year**	16%	20%
	Multi year	18%	18%
Absolute	**Single year**	13%	17%
	Multi year	15%	16%

Notes: for single-year calibration, simulation for latest year of input data is compared to latest official statistics; for multi-year calibration, the same simulation is compared to average of official statistics covering full period of input data. Single year 2017-20 estimates are higher than previous modelling due to model updates.
Source: Scottish Government analysis using UKMOD.

Note also that the latest update is irregular in that it involves switching from a two-year to a three-year pool. This particularly affects the calibration process, with a higher proportion of input data falling in the calibration year, but can also affect the modelled outputs directly. We plan to continue updating the two-year pool until FRS data is available for 2023-24, at which point we will revert back to a three-year pool.

Finally, it is worth bearing in mind that the uncertainty surrounding calibration, and the volatility resulting from our particular method, primarily affect the projections of outturn child poverty rates rather than the estimated impacts of the policy package. This is because the policy scenario and the counterfactual scenario are equally affected, leaving the difference between them relatively unchanged. More generally, we can be more confident when isolating the impacts of policies than when projecting outcomes such as child poverty rates.[10]

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[10] Goedeme, T et al., 2013, Testing the Statistical Significance of Microsimulation Results: A Plea, International Journal of Microsimulation 6(3), 50-77.

6.   Deep poverty

This section considers the impact of Scottish Government policies on deep child poverty, also known as severe child poverty. A person is considered to be in deep poverty if their equivalised household income after housing costs is below 50% of the median, as compared to 60% of the median on the relative poverty measure. Measuring deep poverty gives us a more complete picture of whether the living standards of children in the lowest income households are keeping up with the average household.

For example, a recent report by the Joseph Rowntree Foundation (JRF) found that deep poverty has not reduced in Scotland since 1994-97, while very deep poverty (below 40% of median household income) has actually increased, even while relative poverty has fallen.[11] They attribute this deepening of poverty to the failure of benefit income to keep up with earnings growth, which has also been slower for those on the lower end of the income distribution.

Using the same methodology as our main analysis, we project that in 2024-25 the Scottish Government policy package will keep 70,000 children out of deep poverty. This shows that Scottish Government policies are not only supporting children who would otherwise be close to the relative poverty line, but are acting to raise the incomes of households at the bottom end of the distribution. The percentage-point impact of the policy package is lower for deep (and absolute) child poverty than it is for relative child poverty, but these comparisons are complicated by unevenness in the income distribution, among other factors.

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[11] Joseph Rowntree Foundation, 2023, Deepening poverty in Scotland – no one left behind? | JRF

7.   Welfare reforms

The Scottish Government has produced a series of reports on the impact of UK Government welfare reforms on households in Scotland. This section briefly refreshes the last report in order to provide estimates that are up-to-date and consistent with our wider analysis.[12]

In particular, it considers two selected policy proposals in terms of their impact on child poverty in Scotland: firstly, the removal of the two-child limit and the reintroduction of the family element in Universal Credit; and secondly, the introduction of an Essentials Guarantee as set out by JRF and the Trussel Trust.[13] These impacts would be over and above those of the Scottish Government policies analysed in Section 4.

7.1   Removal of the two-child limit and reintroduction of the family element

The two-child limit restricts Child Tax Credit and the child element of Universal Credit (UC) to two children per household. The family element, a premium for the first child in the household, was removed in 2017, at the same time as the two-child limit was introduced. These policies directly target children in low-income households and the Scottish Government has called for the two-child limit to be removed.

Our latest analysis shows that removing the two-child limit and reinstating the family element could result in 10,000 fewer children in Scotland living in relative poverty in 2024-25, with around the same impact on absolute child poverty. As more children are affected by the limit over time, with an increasing proportion being born after the April 2017 cut-off, this impact will continue to grow until the policy is fully rolled out in 2035.[14]

7.2   Introduction of an Essentials Guarantee

The Scottish Government has called on the UK Government to adopt an Essentials Guarantee in UC. To ensure that claimants can afford basic necessities, JRF analysis shows that the standard allowance should be raised to £120 per month for a single person and £200 for a couple in 2023-24. Besides reducing poverty, this would address the age discrimination present in the system by allocating the same standard allowance to under-25s as older claimants, rather than the lowered rate that they currently receive.

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[12] Scottish Government, 2022, Welfare reform - impact on households with children: report
[13] Joseph Rowntree Foundation, 2023, Guarantee our Essentials: reforming Universal Credit to ensure we can all afford the essentials in hard times
[14] Our estimate compares to analysis by the Child Poverty Action Group (CPAG), which suggested that removing the two-child limit would lift between 10,000 and 15,000 children out of poverty, and unpublished House of Commons Library (HOCL) analysis commissioned by the SNP which gave a figure of 20,000. The CPAG figure is consistent with our estimate given rounding conventions. The higher HOCL figure may reflect the use of a different year of analysis, since as noted the impact will increase over time, but this cannot be verified as the analysis was not published. CPAG, 2023, Cost of living and child poverty: Scottish Government debate.

Uprated by inflation, we estimate that introducing an Essentials Guarantee as proposed by JRF could result in 30,000 fewer children in Scotland living in relative poverty in 2024-25, with around the same impact on absolute child poverty.[15] If additionally the two-child limit was abolished and the family element reinstated, the cumulative impact would be around 40,000 fewer children living in relative poverty and 30,000 fewer in absolute poverty.

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[15] This modelling assumes Universal Credit is fully rolled out, since the policy would also apply to legacy benefits. In line with JRF's modelling, deductions affected by the Essentials Guarantee are not modelled apart from the benefit cap.

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