The impact of the Scottish Child Payment on the need for food banks

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Executive summary

The Scottish Government introduced the Scottish Child Payment (SCP) in February 2021 as part of efforts to meet Scotland's child poverty targets. The benefit was initially available for children under 6 at £10 per week, per child. It rolled out to all children under 16 in qualifying households at £25 per week, per child in November 2022.

SCP is also a key part of the current Scottish Government strategy to end the need for food banks in Scotland. Better support from the social security system has been cited by the Trussell Trust as an important lever for reducing the need for food banks across the UK, with SCP given as an example.

There has been significant interest in the effects of SCP on poverty and related outcomes from policymakers, third sector organisations and the general public. It is important to understand how effective the benefit has been in reducing child poverty and related detrimental outcomes both to inform further Scottish social policy and to explore policy options for other parts of the UK.

This report presents the findings of a preliminary evaluation of the impact of SCP on food bank usage, which is closely tied to levels of deep poverty. By studying this relationship, we provide new evidence on the effects of SCP on outcomes for different types of households.

SCP remains a fairly recent addition to social security policy in Scotland. Analysis of data that covers the period up to the middle of 2023 finds evidence of impact on food bank usage across some, but not all, groups of households with children.

Household groups where we have found a statistically significant change in food back usage include single-adult households with children aged 0-4, as well as households with children aged 5-16 without younger children. The effects are largest in late 2022 and early 2023, after the SCP payment amount was raised to £25 per week, per child. There is some, more limited, evidence of a decrease in food bank usage for large households (with 3+ children) with children aged 0-4 after the increase in the payment.

We encourage the interpretation of these results as preliminary evidence. Further research with a longer data series following the increase of the SCP payment amount to £25 may identify a more widespread or stronger impact.

Continued monitoring and evaluation of the effects of SCP is therefore warranted, alongside explorations of how households have used the SCP payments since the benefit was introduced.

Contents

Glossary

Confidence interval A range in which we believe a true value to lie, usually with 95% confidence. Estimates with confidence intervals that do not include zero are considered statistically significant at the 95% level.

Destitution Not being able to meet basic physical needs to stay warm, dry, clean, and fed.

Equivalised (net) household income Household income is the sum of all money coming into the household, including earnings, benefit payments, pensions, and money earned from investments.

Net income subtracts taxes paid from total (gross) income.

Equivalised income accounts for the fact that households with more members need more money to achieve the same living standard as a household with fewer members.

See the ONS's definitions here.

Food bank An organisation that distributes free food parcels.

Food bank voucher A paper or electronic document referring a household from a partner organisation to a food bank in the Trussell Trust network.

Food insecurity Not having enough food or being worried about not having enough.

Food parcel An emergency supply of food intended to last one person between 3 and 7 days.

Large household A household with three or more children.

Single-adult household A household with only one adult.

Introduction

Since 2010, the number of people using food banks in the UK has soared, coinciding with the post-recession climate of austerity. While rates of relative poverty have stagnated, the scale of destitution has grown rapidly, indicating that living standards for those living in poverty have become materially worse.

Food insecurity has grown alongside levels of destitution. Trussell Trust food banks distributed 1.5 million food parcels from April to September 2023, a rise of 16% from the same period in 2022. The increasing use of food banks has highlighted the prevalence of food insecurity, with the ongoing cost-of-living crisis and the Covid-19 pandemic putting the problem firmly in the spotlight.

Poverty and food bank usage are deeply intertwined, with poverty serving as a root cause of food insecurity and the need for food banks. Insufficient income and low rates for key benefits in particular have been found to contribute to the need for food banks. Other key factors contributing to the relationship between poverty and food bank usage are income inequality, unemployment, rising living costs, social safety nets, financial shocks and emergencies, and health and nutrition.

The Scottish Government introduced the Scottish Child Payment (SCP) in February 2021 as part of its action plan to combat child poverty. SCP has also been cited as a key step in the Scottish Government's strategy for ending the need for food banks in Scotland. Data has slowly become available reflecting early effects of SCP on poverty and other related outcomes like food insecurity.

This paper uses administrative food bank data provided by the Trussell Trust to analyse the impact of Scottish Child Payment on food bank usage in Scotland.

We use several approaches to analyse this relationship. We start by summarising trends in deep poverty and food insecurity in survey data. We then turn to econometric analysis of administrative food bank data provided by the Trussell Trust. The methods we use compare food bank usage in Scotland before and after the introduction of SCP in February 2021 to usage in England and Wales over the same period. If SCP has affected poverty and food insecurity, we would expect to see a reduction in the proportion of food parcels delivered to households with children in Scotland after the rollout of the payment relative to the proportions in England and Wales.

We find some preliminary evidence that SCP has reduced food bank usage for specific groups. The effects are concentrated among single-adult households with children aged 0-4, and households with children aged 5-16 without younger children. Further analysis shows that the effects we find are driven by decreases in food bank usage by these groups following an increase in the SCP payment amount to £25 per week, per child.

As yet, there is little evidence on the impact of SCP to compare our result to. The most recent data on household incomes and poverty shows little impact of SCP on overall child poverty since it was introduced, but the reasons for this are unclear and could be due to underreporting of SCP in survey data.

The paper is organised as follows: we start by describing the background for this research, including the policy context and trends in both deep poverty and food insecurity. We then describe the data and methods used to analyse the effects of SCP on food bank usage and present the results. We describe the interpretation and implications of our findings and the limitations of this study, and conclude by discussing key points of context for the results and avenues for future research.

Background

Scottish child poverty targets and food insecurity strategy

In 2017, the Scottish Parliament passed new child poverty targets to be met by 2030-31. The Child Poverty Act 2017 requires the Scottish Government to meet four income-based targets and report on the actions they will take to meet those targets. Interim targets are also specified to be met during the life of this plan.

The child poverty targets for Scotland are:

- Fewer than 18% of children living in families in relative poverty in 2023-24, reducing to fewer than 10% by 2030.
- Fewer than 14% of children living in families in absolute poverty in 2023-24, reducing to fewer than 5% by 2030.
- Fewer than 8% of children living in families in combined low-income and material deprivation in 2023-24, reducing to fewer than 5% in 2030.
- Fewer than 8% of children living in families in persistent poverty in 2023-24, reducing to fewer than 5% by 2030.

Currently, Scotland is the only part of the UK to have explicit child poverty targets that are legally binding.[1]

The Scottish Government published a strategy to end the need for food banks in Scotland in June 2023. The strategy takes a human rights approach and employs mechanisms for reducing food insecurity including fair work, improved social security, reduced costs of living, and support services for households in crisis.

Scottish Child Payment

The Scottish Child Payment (SCP) was first piloted in February 2021 for households with children under 6. It has since been both increased and rolled out to children under 16 across Scotland. It is a key part of both the Scottish Government's delivery plan to reduce child poverty and strategy to end the need for food banks in Scotland.

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[1] At the UK level, the Welfare Reform and Work Act 2016 requires the UK Government to publish annual statistics on the four income measures set out in the Child Poverty Act 2010, as well as two new "life chances measures". These measures are considered indicative of the "root causes" of child poverty.

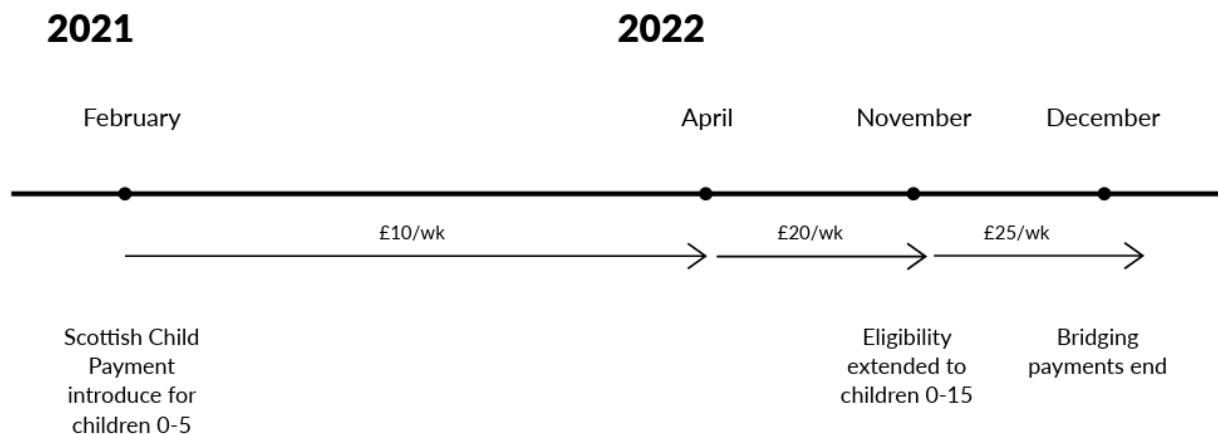*Figure 1: Timeline of the Scottish Child Payment, 2021-2022*

Figure 1 shows a timeline for the introduction and roll-out of SCP.

The payments initially amounted to £10 per week for children under 6 in eligible households, where eligibility was based on the receipt of certain benefits. There is no limit on the number of children in a household that can receive SCP.

The amount was increased in April 2022 to £20 per week and to £25 per week in November 2022. Eligibility was fully rolled out to under-16s by November 2022, and was preceded by a series of bridging payments from spring 2021 to December 2022.

Take-up of SCP among qualifying households has been very high– 87% in 2021-22 and 95% in 2022-23[2].

In 2022-23, nearly 1.4 million Scottish Child Payments were made to Scottish households, with a total value of approximately £190 million.

Payments totalled about £460 million between the introduction of SCP in 2021 and September 2023. As of September 2023, over 323,000 children under 16 were receiving SCP.

Deep poverty

SCP is one of the primary tools of child poverty reduction in Scotland. Recently, more data has become available with information on how child poverty and deep poverty changed before and after the introduction of SCP.

Very deep poverty is defined by the Joseph Rowntree Foundation as income below 40% of the UK median income after housing costs (AHC). Those in poverty are more likely to be food

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[2] This refers to take-up of Scottish Child Payment for those eligible due to receipt of qualifying benefits, and does not take into account take-up of qualifying benefits (e.g. Universal Credit).

insecure,[3] and so trends in deep poverty can offer insights into the scale of need for emergency food bank services.

In 2021-22, just under 150,000 households in Scotland were living in deep poverty – almost 6% of all Scottish households. About 28,000 of these were households with children under 16, accounting for about 67,000 children under 16 living in deep poverty.

The number of Scottish households in very deep poverty with at least one child under the age of 6 stood at just over 26,300 in 2016-17. After peaking at about 36,000 in 2019-20, the number fell to about 18,200 in 2021-22.

Chart 1: Deep poverty, Scottish households qualifying for SCP vs. those with children under 6 not qualifying, 2017-18 to 2021-22
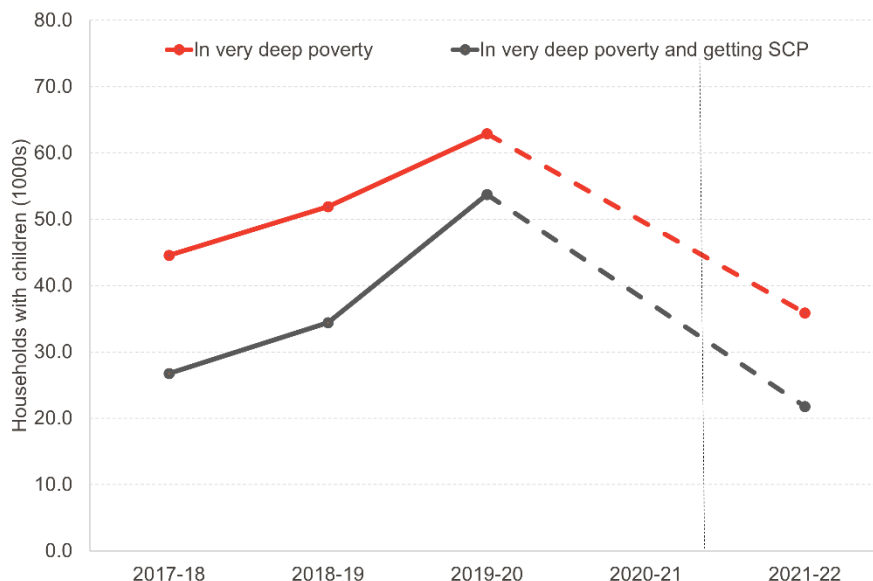
Source: *FAI calculations from FRS/HBAI data*
Notes: *Households likely getting SCP are modelled using the IPPR microsimulation model based on household characteristics and a take-up adjustment. Collection of the FRS was disrupted by the Covid-19 pandemic for 2020-21, yielding a smaller sample than usual. The dotted line reflects a trend between 2019-20 and 2021-22, and no estimate for 2020-21 is shown.*

Chart 1 shows estimated numbers of households with children under 6 experiencing deep poverty over time.[4]

The number of both of these types of households in deep poverty fell between 2019-20 and 2021-22. There were about 54,000 households modelled as qualifying for SCP in deep poverty in 2019-20, compared to about 22,000 in 2021-22. Comparable numbers for households with

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[3] Based on data from Households Below Average Income, 15% of people in poverty were also food insecure in the UK in 2021-22, compared to 7% of the overall population.

[4] In the chart, whether or not a household qualifies for SCP is determined by microsimulation modelling, which calculates total household income and applies a system of taxes and benefits to the resulting data. Benefits like SCP are also subject to a take-up rate, which assumes that not all qualifying households actually take up the benefit.

children 0-5 not qualifying for SCP were 63,000 and 36,000, respectively. These figures represent reductions of the number of households in deep poverty of about 43% for non-qualifying households and 59% for qualifying households.

Additional charts showing trends in deep poverty for different groups from 2016-17 to 2021-22 are available in Appendix C.

Food insecurity

Deep poverty and food insecurity often go hand-in-hand.

Food insecurity can be measured in different ways, but households and individuals are broadly classed as food insecure if they do not have enough food for themselves and their families or are worried about not having enough.

9% of all Scottish households were food insecure in 2020-23, a figure that rises to 21% among households in relative poverty.

Data on food insecurity is somewhat sparse in the UK, so administrative data from organisations that provide food bank services like the Trussell Trust are often used as indicators of the overall level of food insecurity.

Trussell Trust administrative data

Our primary source of data is administrative records from the Trussell Trust network of food banks. The data consist of information about vouchers used at Trussell Trust food banks from 1 April 2019 to 30 November 2023.

Households are referred to use food banks through any of a number of partners, including schools, GPs, and other public service providers. Referred households are given a voucher, which they can then redeem at a food bank. The voucher entitles the household to a given number of parcels, one per member.

Our dataset consists of voucher-level records for redeemed vouchers. We do not have data on vouchers issued but not redeemed.

Information attached to each voucher includes a unique client ID, client and food bank local authority, household age composition, and the total number of parcels distributed for that voucher. After data cleaning, nearly 12 million food parcels delivered by the Trussell Trust in the UK from April 2019 to November 2023 are represented in the dataset.

Household age composition information is available in categories including 0-4, 5-11, and 12-16. There is therefore not perfect overlap between children eligible for Scottish Child Payment and the age categories in the food bank usage data (see Figure 1). We consider households with children aged 0-4 to be potentially eligible for SCP after February 2021, and households with children 5-16 to be potentially eligible after November 2022.

The key outcome measure for our analysis is the number of parcels delivered to a certain type of household (for example, households with children aged 0-4) as a proportion of all parcels delivered in that local authority and quarter.

To separate out the effects of the initial introduction of SCP on households with children aged 0-4 and subsequent effects on households with children 5-16 that became eligible for SCP in

November 2022, our definition of households with children aged 5-16 excludes households with younger children.

Chart 2: Unique households in food bank data by household type, 2019-23
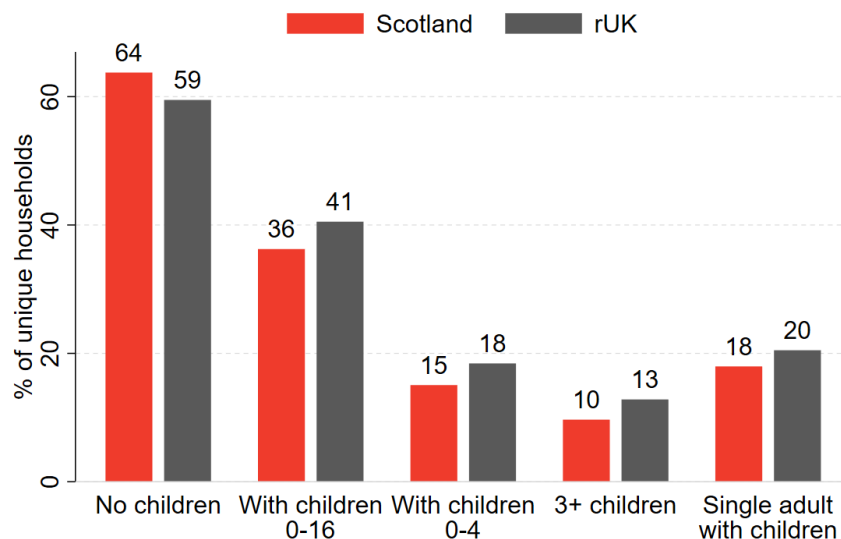
Notes: *Each unique household is identified via client ID. The number of parcels is aggregated over the period from April 2019 to November 2023. The proportions of parcels delivered to each household type are generally similar to that type's share of unique households.*

Chart 2 shows the distribution of food bank usage among types of households in Scotland and the rest of the UK from April 2019 to November 2023.

In comparison to the rest of the UK (rUK), households without children account for a greater proportion of total food parcels delivered in Scotland – about 64% vs. 59% in rUK.

Consequently, a smaller proportion of food parcels are delivered to households with children in Scotland than in rUK. For example, 15% of parcels in Scotland are delivered to households with children under 5, compared to 18% in rUK.

The number of food parcels delivered by the Trussell Trust has changed even over the last four years. Total parcels delivered in Scotland rose from 240,000 in FY 2019-20 to 263,000 in FY 2022-23 (a 10.1% increase), compared to a 63% rise for the rest of the UK.

Part of the changes in the number of parcels delivered by Trussell Trust food banks may be the result of other factors, like the presence of other food banks and other local services. Nonetheless, changes in the number of parcels delivered over time can still be illustrative of general food insecurity.

Figure 2: Indexed food parcels by household type, April 2019 – November 2023
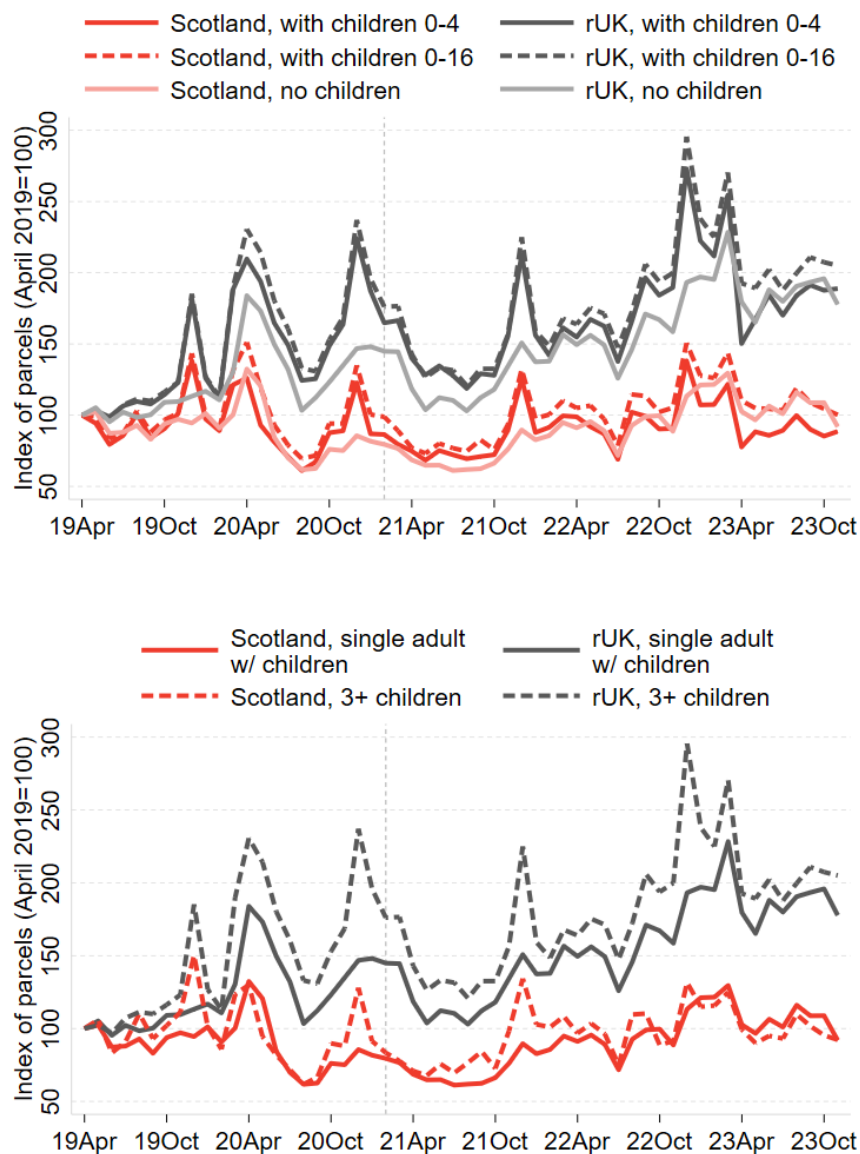
Source: FAI calculations from Trussell Trust administrative data
Notes: The number of parcels is indexed to the number delivered to each type of household in April 2019. Data tables averaged by quarter are presented in Appendix Tables A1-A2.

Figure 2 shows trends in parcels delivered by Trussell Trust food banks between April 2019 and November 2023.[5]

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[5] Each trend is indexed so that the number of parcels delivered to a particular group is set equal to 100 in April 2019, and figures in each subsequent period are relative to the initial value. For example, a value of 120 in November 2019 means that the number of parcels rose by 20% compared to April 2019. Data tables averaged by quarter are presented in Appendix Tables A1-A2.

The total number of parcels delivered to households in Scotland fell slightly (by about 3%) between April 2019 and November 2023. Households with children aged 0-4 received 11% fewer parcels in November 2023 than in April 2019, while households with any children aged 0-16 received about the same number of total parcels. Households with three or more children saw the largest growth in parcels over this period, an increase of about 9%.

Trends are very different for rUK, where the total number of food parcels delivered nearly doubled over the same period. Households without children saw the slowest growth in total parcels delivered in rUK over this period, with about 78% more parcels delivered in November 2023 than in April 2019. Households with three or more children had the highest growth at 113% over the same period.

While these patterns support slower growth in food bank usage in Scotland than in rUK, it should be understood that looking at descriptive trends in this way cannot evidence impact of Scottish Child Payment. For example, other factors like population changes could also play a role.

In the next section, we further explore administrative data from Trussell Trust food banks to investigate the impact of Scottish Child Payment on food bank usage. We control for other factors, such as population growth, so that the differences in usage calculated can be interpreted as the impact of SCP.

Methods

This section describes the methods we use to analyse the effects of SCP on food bank usage. We conduct the analysis using both the Trussell Trust administrative records discussed in the last section and a set of other factors that may influence the need for food banks.

In the following section, we use econometric methods to estimate the effects of SCP on food bank usage for key groups. These methods control for the other factors discussed below so that our estimates represent only the impact of SCP, not other differences between Scottish and other UK local authorities.

Food bank usage

Sample

The voucher data are processed to obtain the number of parcels delivered to different household types in each local authority.[6] Where local authorities are present in the data but do not report any parcels in a category for a given quarter (under 0.5% of local authority-level observations), we assume that zero parcels in that category were delivered.

Local authorities in Scotland, England, and Wales are retained in the data if they are observed at least once before and once after the introduction of Scottish Child Payment.[7]

Local authorities in Northern Ireland are excluded from our econometric analysis due to the non-availability of some control variables, but are included in the trend charts in the previous section of this paper.

Food bank usage variables

The primary variable of interest is the number of parcels distributed each quarter in each local authority.

Table 1: Household type definitions

Household type	Description
Households with children (0-4, 5-16)	Households with at least one child aged 0-4 (5-16); households of this type in Scotland are assumed to be eligible to receive Scottish Child Payment from February 2021 (November 2022)

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[6] We use the food bank's local authority to assign each voucher to a geographic area. When the food bank's local authority is missing, we use client's local authority as a proxy. 67 voucher records (0.001% of observations) are dropped because they have no geographic information.

[7] Three Scottish local authorities are omitted from the data because they are not observed post-introduction of the Scottish Child Payment: Na h-Eileanan Siar, Moray, and West Dunbartonshire. Additionally, three Scottish local authorities did not have Trussell Trust food banks between April 2019 and November 2023, and do not appear in the analysis. They are: Argyll and Bute, Clackmannanshire, and Stirling.

Single-parent households (0-4, 5-16)	Households with only one adult and at least one child aged 0-4 (5-16); assumed eligible for SCP as above
Large families (0-4, 5-16)	Households with 3+ children, including at least one child aged 0-4 (5-16); assumed eligible for SCP as above

We calculate the number of parcels overall, as well as those claimed by different types of households. Table 1 shows the different types of households we consider.

We also consider different ways of measuring total parcels delivered to each group over time. In most of this paper, we use the proportion of total parcels in each local authority delivered to that household type, and interpret the effects of SCP as percentage point changes in that proportion.

Accounting for other factors

A number of factors are likely to affect the demand faced by food banks in different local authorities. Based on information from a previous study, we include several control variables to account for economic and labour market conditions, as well as changes to social security policy.

Table 2: Description of control variables

Control variable	Description
Claimant rate	The stock of Universal Credit and Job Seekers Allowance claimants as a proportion of the population 16-64
Rate of out-of-work benefits	The proportion of DWP benefit claimants receiving out-of-work benefits
Unemployment rate	Rate of unemployment (not in work, but ready and willing to start within two weeks) among population 16-64
Inactivity rate	Rate of economic inactivity (not in work or seeking work) among population 16-64
Vacancy index	Number of vacancies, deduplicated and indexed with February 2020 = 100
Best Start Grant	Binaries for whether or not the Best Start Grant had been introduced yet (benefits in Scotland only; both Early Learning Payment and School Age Payment)
Pandemic uplift to Universal Credit	Binary for whether or not the pandemic uplift to Universal Credit was in place
Adult Disability Payment	Binary for whether or not the Adult Disability Payment had been introduced yet (benefit in Scotland only; replaces PIP and DLA)

Table 2 describes the control variables used in our analysis. All results shown account for these control variables unless otherwise specified. Our estimates are interpreted as the effects of SCP on food bank usage, omitting any differences in usage driven by these other factors.

Summary statistics for these control variables can be found in Appendix A.

Methods

This section presents a brief description of the method used to estimate the effects of Scottish Child Payment on food bank usage.

These methods are described in greater detail in Appendix B.

Difference-in-differences

We use an approach called a difference-in-differences (DiD) estimation to evaluate the effect of introducing Scottish Child Payment in Scotland. We estimate the effect by comparing changes over time in the number of food bank parcels delivered in Scottish local authorities to changes over the same period in English and Welsh local authorities.

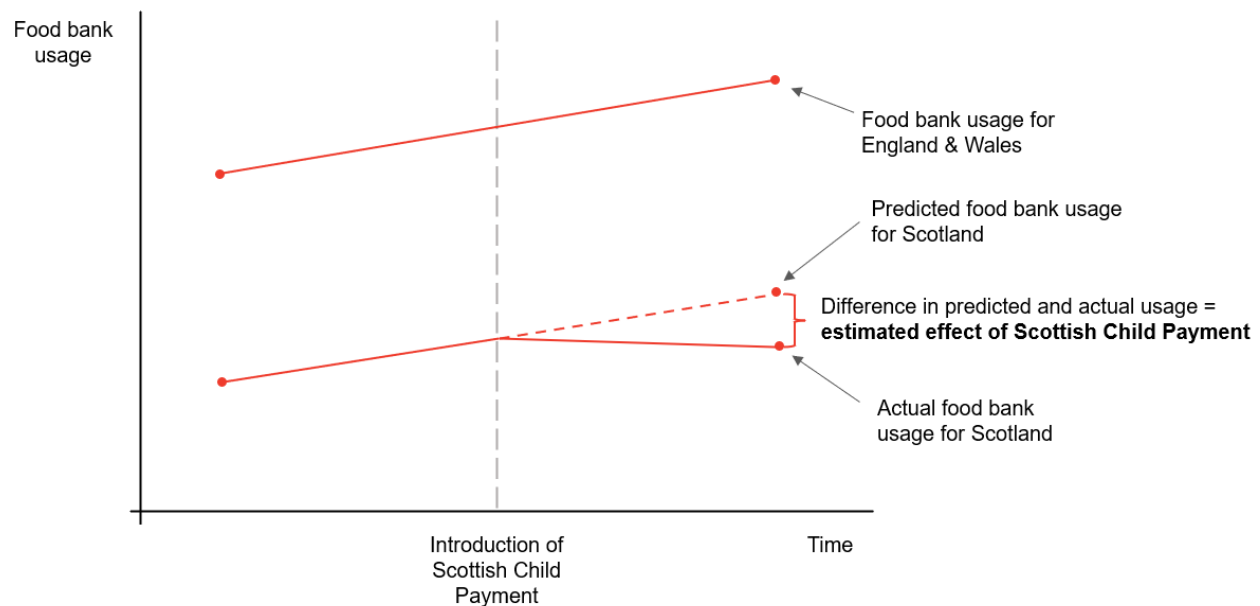*Figure 3: Illustrative example of a difference-in-differences estimation design*

Figure 3 presents a simple example of the difference-in-differences research design.

We first compare food bank usage in Scotland (the *treated* group) to usage in England and Wales (the *control* group) prior to the implementation of Scottish Child Payment. We then observe food bank usage in England and Wales after the benefit was introduced, and use that trend over time to predict what food bank usage would have been in Scotland if it followed the same trend post-treatment (the dotted blue line). We also observe what food bank usage actually was in Scotland. We assume that the only relevant difference between Scotland and

England and Wales is the availability of SCP. The difference between predicted and actual usage in Scotland is then attributed to the effects of the Scottish Child Payment.

The example in Figure 3 is simplified. In our analysis, we have more than two time periods; we have seven quarters of data before SCP was first introduced, and ten quarters after. We also control for the other factors that may be different across local authorities and over time that may influence the need for food banks (see Table 2). Our estimates are therefore attributable to the effects of SCP, and not these other factors.

More detail on this method is given in Appendix B.

Synthetic difference-in-differences

The difference-in-differences method builds a theoretical picture (called a "counterfactual") of what food bank usage would have looked like in Scotland if SCP had never been introduced using information from England and Wales, where SCP is not available.

We also use an alternative method to provide a more accurate picture of this counterfactual, called synthetic difference-in-differences (sDiD). sDiD uses statistical methods to determine which local authorities in the control group are most similar to local authorities in Scotland in terms of their food bank usage. These control local authorities then play a bigger part in estimating the counterfactual than other, less similar, local authorities. Because this method improves the counterfactual, the accuracy of the estimates should also be improved.

More detail on this method is given in Appendix B.

Event study

Finally, we use a method called an event study to look at how the effects of SCP may have changed over time.

Event studies estimate a separate effect for each period of treatment so that effects can be studied over time. The difference in the outcome between the treatment and control groups in each period is compared to their difference just prior to the start of the treatment.

Event study results are generally presented as graphs showing a point estimate and confidence intervals over time.

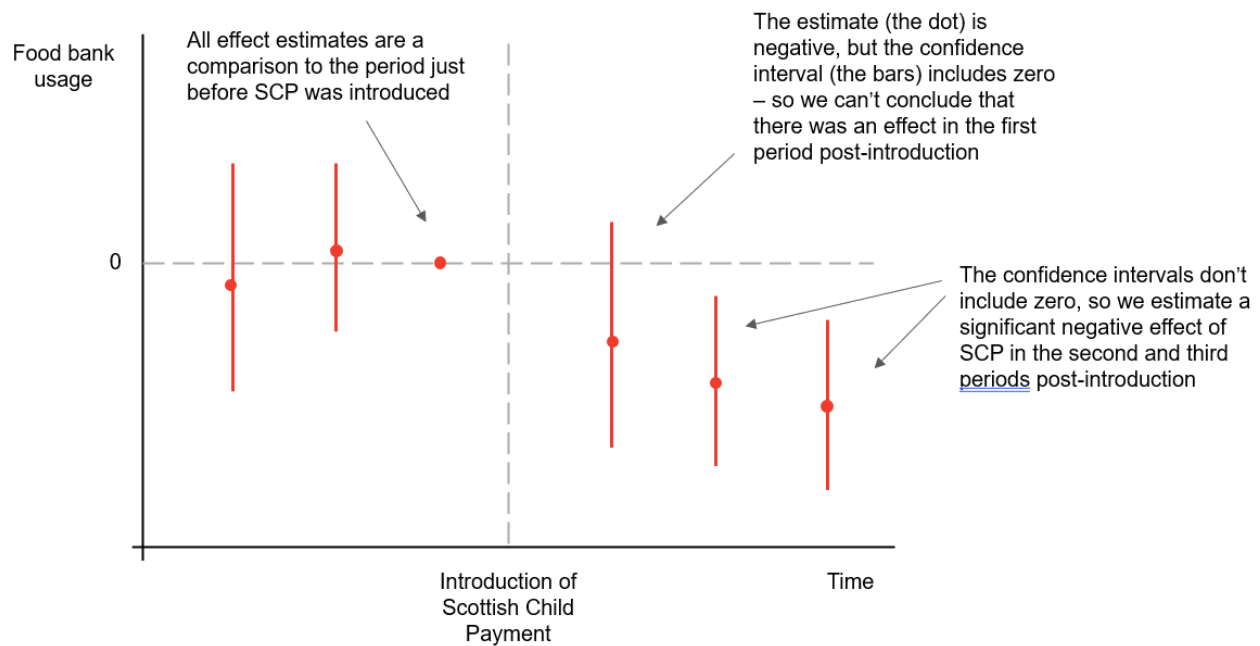*Figure 4: Illustrative example of an event study estimation design*

Figure 4 shows an example of an event study results graph. The period just before the introduction of SCP is used as the comparison for all other periods. The effects of SCP in each period are estimated by points (the estimates) and bars (the confidence intervals) to the right of the line indicating when SCP started.

Confidence intervals show an estimated range for the effects of SCP. If the confidence interval includes zero, we cannot conclude that SCP had a significant effect in that period.

In the illustrative example graph, the first period after SCP was introduced does not show a significant effect – the confidence interval includes zero. However, the second and third periods post-introduction demonstrate significant negative effects. That is, in this illustrative example, SCP reduced food bank usage in Scottish local authorities compared to local authorities in England and Wales.

The main benefit of an event study design is to show effects over time. This is useful if, for example, there is reason to think that the impact of a policy may be different at different points. In this paper, the event study helps us to consider the effects of SCP when the amount and the eligibility of the benefit changed.

Results and discussion

Results and interpretation

In this section, we present estimates of the effects of SCP on food bank usage.

The main outcome variable is the proportion of all parcels delivered in a given local authority and quarter to a particular household type (for example, single-adult households with children aged 0-4).

We estimate effects separately for households with children 0-4, who could get SCP from February 2021, and for households with children 5-16, who could get SCP from November 2022.

All estimates are presented alongside 95% confidence intervals. Estimates with confidence intervals that do not include zero are considered statistically significant at the 95% level. That is, we have a high degree of confidence that SCP affected food bank usage for the specified household type.

A negative estimate indicates a decrease in food bank usage after the introduction of SCP relative to what usage would have been if SCP had never been introduced.

Estimates should be interpreted as percentage point changes. For example, an estimate of -1 means that the proportion of parcels delivered to a particular type of household in Scotland fell by 1 percentage point as a result of SCP (e.g., from 10% to 9%).

Difference-in-differences estimates

We first estimate the effects of SCP on food bank usage using the difference-in-differences approach described in the previous section.

Figure 5 presents the results of the difference-in-differences estimation.

The upper panel shows results for households with children aged 0-4, for whom SCP was introduced in February 2021.

We estimate that SCP reduced the proportion of parcels delivered to single-parent households with children 0-4 by 1.18 percentage points, where the estimate is significant at the 95% level.

The estimate for all households with children in this age range is -0.95, although it is not statistically significant (the confidence interval includes zero). The estimate for households with 3+ children is also not significant. We cannot conclude that SCP had an effect on food bank usage here.

The lower panel shows the same estimation done for households with children aged 5-16, for whom SCP was introduced in November 2022.

We find a significant decrease of -1.78 in the share of food bank parcels to households with children aged 5-16. However, we do not find significant effects for single-adult or large households, indicating that the effects are likely concentrated among other types of households with children 5-16

Figure 5: Estimated effects of SCP on the proportion of food parcels delivered by household type and age of children – Difference-in-differences estimates

Households with children 0-4

Households with children 5-16
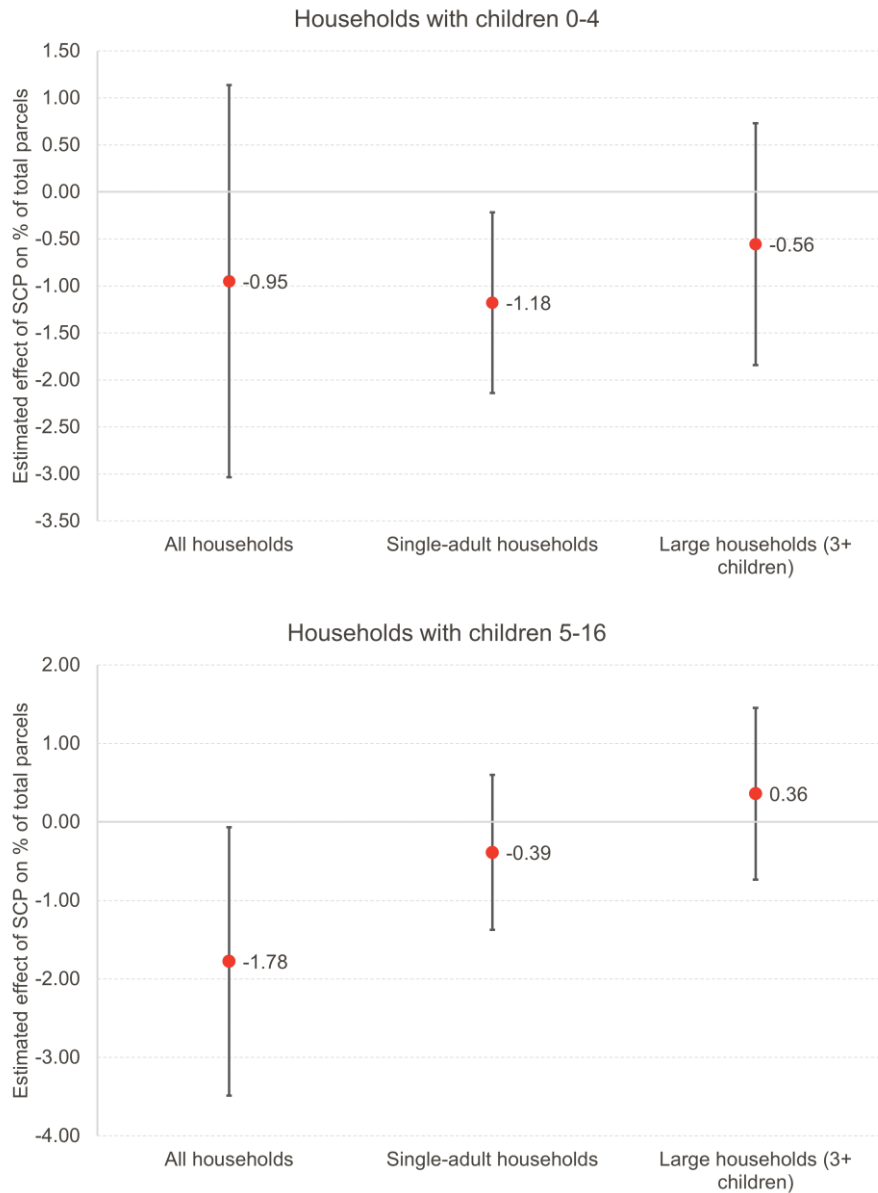
Source: *FAI estimates*
Notes: *Bars represent 95% confidence intervals. N=4,860.*

Synthetic difference-in-differences estimates

We then estimate the effects of SCP on food bank usage using a synthetic difference-in-differences approach. This method improves the extent to which trends in England and Wales represent what would have happened to food bank usage in Scotland had SCP never been introduced.

Figure 6: Estimated effects of SCP on the proportion of food parcels delivered by household type and age of children – Synthetic difference-in-differences estimates
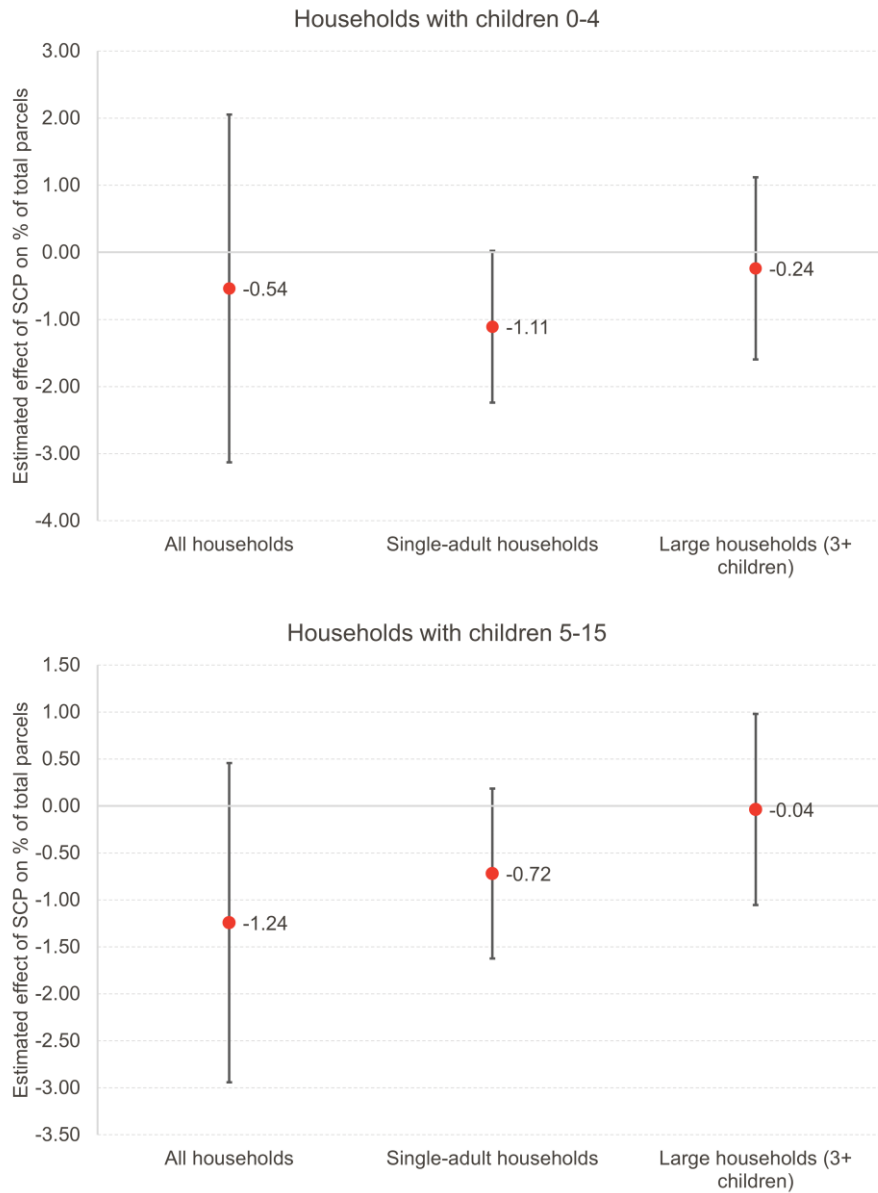
Households with children 0-4

Households with children 5-15

Source: *FAI estimates*
Notes: *Bars represent 95% confidence intervals. N = 4,860.*

Figure 6 summarises results of the synthetic difference-in-differences (sDiD) analysis.

The results are broadly similar to those found using the original DiD method, with slightly smaller estimates in most cases. That is, the sDiD method results show a slightly reduced impact of SCP across groups.

The estimate for single-adult households with children aged 0-4 is now not significant at the 95% level of confidence (although it is significant at the 90% level). That is, we cannot conclude that SCP decreased food bank usage for these households. Results for other household types are similarly not significant.

Event study estimates

Finally, we estimate the effects of SCP over time using an event study design. This design shows how the effects of SCP may have changed over time, for example, when the payment amount increased.

Figure 7: Estimated effects of SCP on the proportion of food parcels delivered by household type for children aged 0-4 – Selected event study estimates
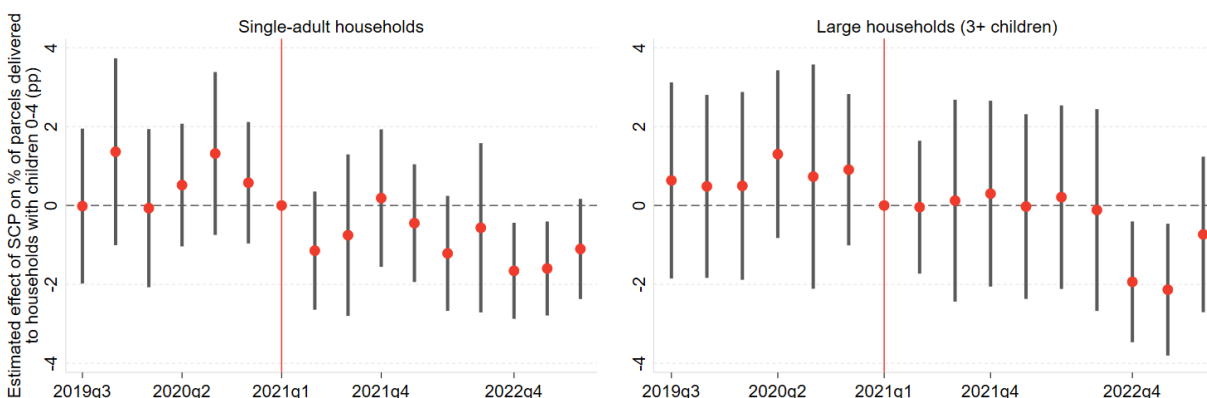
Source: FAI calculations
Notes: Bars show 95% confidence intervals. N = 4,860.

Figure 7 shows selected event study results for households with children aged 0-4. Results for all households, and for all household groups with children 5-16, are available in Appendix Figures C1-C2.

In the left-hand panel, the proportion of food parcels delivered to single-adult households with children 0-4 fell by about 1.6 percentage points relative to what it would have been without SCP in late 2022 and early 2023. This decrease comes just after the increase of the SCP payment amount to £25 per week, per child.

Significant decreases in later periods, when the SCP payment amount was higher, likely drive the DiD finding that food bank usage shifted away from single-parent households with children 0-4 as a result of SCP.

In the right-hand panel, the proportion of food parcels delivered to large households with children 0-4 fell by about 2 percentage points at the end of 2022 and the beginning of 2023. There is little sign of an effect before then, probably driving the null results in the DiD models for this household type.

These findings provide some evidence that only higher amounts of SCP significantly decreased food bank usage by these groups, but possibly only temporarily.

Within Scotland analysis

We carried out one final piece of analysis looking at trends among different groups within Scotland, for example, by comparing households with children to households that only have adults.

Chart 3: Estimated change in food bank usage compared to households without children, pre vs. post SCP, by household type
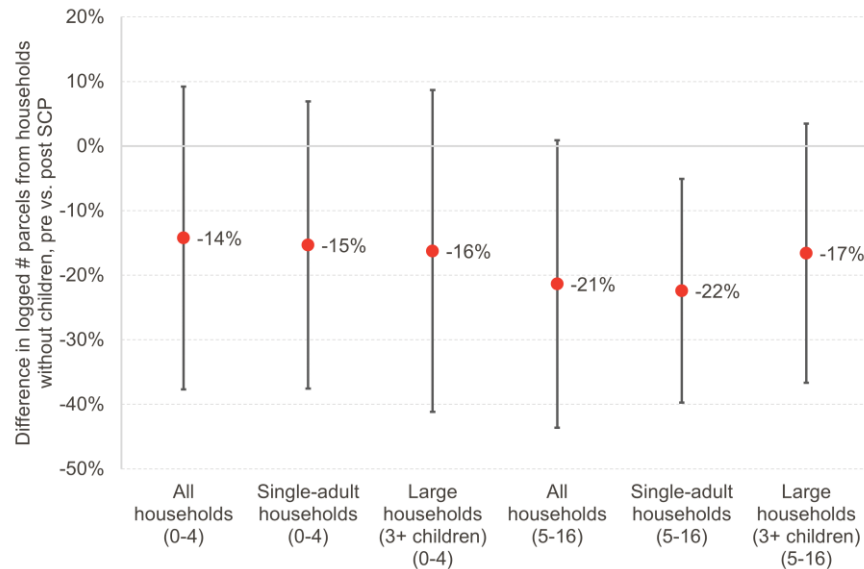
Source: *FAI calculations from Trussell Trust data*
Notes: *The estimates are the result of difference-in-differences estimates. The bars represent 95% confidence intervals. N=936.*

Chart 3 shows usage before vs. after the introduction of SCP for households with children (0-4 or 5-16) compared to households without children.

These estimates show that food parcels delivered to households with children aged 0-4 were 14-16% lower than they would have been if they followed the same trend as households without children after the introduction of SCP. However, the difference is not significantly different from zero.

Food parcels delivered to households with children aged 5-16 were 17-22% lower than they would have been if they followed the same trend as households without children. Differences for single-adult households with children 5-16 are significant and may indicate some shift in food bank usage for this group relative to households without children after SCP was introduced.

While these trends are suggestive, there are also other factors that may explain the differences in food bank usage for different types of households over this period (2019-2023). These within Scotland results are less robust than the previous results as we haven't been able to control for factors such as employment levels for households with and without children. We would therefore not be confident in saying that the SCP caused the change in food bank usage for households with children aged 5-16.

Discussion and limitations

Our results show some limited evidence that SCP has effectively reduced the need for food banks among single-adult households with children aged 0-4 and among households in general with children aged 5-16.

When we consider average effects over the period following the introduction of SCP, we find a 1.8 percentage point (pp) decrease in the share of total food parcels delivered to households with children aged 5-16, and a 1.1-1.2 pp decrease in the share delivered to single-adult households with children 0-4.

Analysis of effects over time shows that decreases in the share of food parcels delivered to single-adult and large households with children 0-4 were about 1.6pp and 2.0pp, respectively, in the fourth quarter of 2022 and the first quarter of 2023.

These decreases in food bank usage caused by the introduction of SCP are all concentrated after November 2022, when the payment amount was raised to £25 per week, per child, and extended to households with children under 16.

It is interesting that effects among households with children aged 0-4 are concentrated among households with the highest rates of poverty, while effects found for households with older children do not seem to extend to these groups at the highest risk of poverty. This may suggest underlying dynamics of other support available for these groups, or other factors changing, that we are not able to account for in this paper. Further work should consider what may drive differences for households with older vs. younger children, and possibly consider what would support households with older children to reduce food insecurity.

There are a number of factors that likely limit our ability to detect significant changes in food bank usage as a result of SCP.

It has not been long since SCP was introduced. Our data cover two and a half years (ten quarters) after the introduction of SCP for children under 6. Between February 2021 and November 2022, the SCP payment amount more than doubled and rolled out to all children under 16. We have less than a year of data (three quarters) covering the period of full SCP roll-out. There are possible explanations for why there may be a lag between SCP roll out and outcomes, including for example the need to pay down accumulated debt or other urgent expenditure.

It is therefore possible that more time is required before we will have enough information to conclude a strong impact on food bank usage for all households from SCP. Further research with additional data over a longer period, possibly focusing more strongly on the period of full roll-out at £25 per week, per child, might find more evidence that SCP has reduced food bank usage.

Additionally, there are several limitations to this study that reduce the likelihood of precisely identifying effects from SCP.

- **Data aggregation over local authorities** – An ideal study would observe both households that use food banks and ones that do not. We are not able to assume that people who have received support from food banks in the Trussell Trust network at one point do not need food bank services at another point in time. They could potentially have used a non-Trussell food bank, moved, or been unable to obtain a voucher for various reasons. Aggregation leads to greater uncertainty in the estimates.

For these reasons, we study usage over time within local authorities. While we control for some local authority-level factors that may influence food bank usage, there may be others we cannot account for.

- **Data aggregation over time –** Food bank usage data is collected daily, but our control variables are monthly or quarterly measures. We therefore create a quarterly dataset of local authority-level data. Doing so increases the uncertainty around the estimated effects of SCP, widening confidence intervals. This seems to be particularly true for estimates of effects on households with children 5-16, where there is higher uncertainty in the estimates.

- **Lack of information on other food banks' operation –** There is also likely to be some bias from omission of data on usage of other food banks through the period under study. Particularly during the Covid-19 pandemic, non-Trussell food banks opened to meet acute needs. These providers are not accounted for in our data. If the extent to which people in Scotland used non-Trussell food banks changed over time differently from households in the rest of the UK, the estimates in this paper may be biased.

While the effects we find are relatively small, they represent meaningful decreases in food bank usage.

Children in single-parent households and large families (those with three or more children) have much higher poverty rates than the average – 38% and 34%, respectively, compared to 24% for all children in Scotland.

It is these types of households, specifically those with children 0-4, that stand out as having been affected by the introduction of SCP, particularly after full roll-out. Households with older children also show signs of decreased food bank usage following the extension of SCP to all children under 16.

Prior to the introduction of SCP, 9.9% of food bank parcels in Scotland were delivered to single-parent households with children aged 0-4 per local authority on average. The same figure is 13.6% for large households with children 0-4, and 27% for all households with children aged 5-16 without younger children.

We estimate decreases in food bank usage of around 1-2pp for these groups. The decrease is equivalent to about 10% of the pre-SCP share for single-parents households with children 0-4, about 15% for large households with children 0-4, and about 7% for households with children aged only 5-16.

Conclusion

This exploratory research finds some evidence to suggest that SCP successfully reduced food bank usage for specific types of households. The strongest evidence is for single-adult households, although there is also some support for a decrease among households with three or more children. We also find a significant decrease in food bank usage among households with children 5-16 after full roll-out of SCP.

Estimated decreases in the share of food bank parcels delivered to these types of households are around 1-2 percentage points (pp).

Decreases in food bank usage caused by SCP among these types of households are concentrated at the end of 2022 and the beginning of 2023, when the level of the payment increased and rolled out to all children under 16. This may provide some evidence that higher SCP payments would be needed to achieve reductions in food insecurity.

Conclusions are limited by how little time has passed since SCP was introduced in February 2021, and particularly since it was fully rolled out in November 2022.

Revisiting analysis of the effects of SCP over time may show stronger or more persistent effects. We would therefore advocate for continued monitoring and evaluation of the effects of SCP, as well as analysis of how households have used SCP payments since it was introduced.

Appendices

A. Data

Table A 1: Indexes of food bank usage, Scotland, 2019Q2 – 2023Q3

Quarter	All households	Large households (3+ children)	Households without children	Single-adult households with children 0-15	All households with children 0-16	All households with children 0-4
2019 Q2	100	100	100	100	100	100
2019 Q3	95	103	91	102	99	99
2019 Q4	111	136	99	126	121	120
2020 Q1	108	128	101	107	114	112
2020 Q2	123	139	116	106	129	110
2020 Q3	73	88	67	69	78	73
2020 Q4	101	140	82	106	114	109
2021 Q1	94	113	82	87	102	92
2021 Q2	76	95	68	74	82	80
2021 Q3	75	95	64	80	83	78
2021 Q4	95	120	80	106	107	105
2022 Q1	101	121	91	108	109	102
2022 Q2	103	119	95	102	109	101
2022 Q3	101	119	91	102	109	99
2022 Q4	117	141	104	108	127	117
2023 Q1	136	149	128	123	141	123
2023 Q2	110	124	105	98	113	92
2023 Q3	115	131	112	105	117	102

Source: FAI calculations from Trussell Trust data
Notes: Values are indexed so that 2019 Q2 = 100.

Table A 2: Indexes of food bank usage, rUK, 2019Q2 – 2023Q3

Quarter	All households	Large households (3+ children)	Households without children	Single-adult households with children 0-15	All households with children 0-16	All households with children 0-4
2019 Q2	100	100	100	100	100	100
2019 Q3	106	115	100	112	110	107
2019 Q4	130	151	110	140	142	139
2020 Q1	135	151	119	140	144	141
2020 Q2	194	221	169	172	209	188
2020 Q3	132	151	116	120	142	132
2020 Q4	168	202	135	171	187	178
2021 Q1	170	191	146	159	183	172
2021 Q2	126	149	111	116	135	133
2021 Q3	121	139	108	120	129	124
2021 Q4	158	188	134	162	172	164
2022 Q1	153	167	144	150	159	152
2022 Q2	164	177	151	161	171	160
2022 Q3	165	182	147	167	176	165
2022 Q4	209	244	173	212	230	214
2023 Q1	231	253	207	223	245	228
2023 Q2	189	201	177	176	195	166
2023 Q3	195	203	188	181	200	181

Source: FAI calculations from Trussell Trust data
Notes: Values are indexed so that 2019 Q2 = 100.

Table A 3: Control variable descriptive statistics

	Mean	St. dev.	Min	Max
Benefit claimants (as % of population 16-64)	3.9	1.8	0.6	11.3
Out-of-work claimants (as % of population 16-64)	57.6	4.5	37.3	70.5
Unemployment rate (%)	4.2	.9	2.5	7.3
Inactivity rate (%)	20.9	2.1	16.8	26.1
Index of vacancies (Feb 2020 = 100)	101.5	25.6	42.0	163.2

Source: FAI calculations from DWP, ONS data

B. Methodology

Difference-in-differences estimation

The food bank usage data are processed to produce a variable representing the total number of food parcels delivered to different types of households (e.g. with or without children) in each local authority on a quarterly basis. This frequency will match the availability of the labour market controls.

The basic difference-in-differences specification is then:

$$FBU_{lt} = \beta_0 + \beta_1 SCOT_l + \beta_2 POST_t + \delta_{DD} SCOT_l \times POST_t + \beta_3 \mathbf{X_{lt}} + \lambda_1 Quarter_t + \lambda_2 LA_l + \epsilon_{lt}$$

Where:

- FBU_{lt} is the rate of food bank usage in local authority l in quarter t, operationalised as the number of parcels distributed[8] to different types of households (e.g. all households; households with children in the eligible age range; single-adult households with children in the eligible age range; households with three or more children in the eligible age range)

- $SCOT_l$ is a binary variable that is equal to one if the local authority is in Scotland

- $POST_t$ is a binary variable that is equal to one if quarter t is after the SCP policy was introduced

- $\mathbf{X_{lt}}$ is a vector of time-varying local authority-level control variables as explained below

- $Quarter_t$ and LA_l are quarter and local authority fixed effects that account for unobserved differences in rates of food bank usage over time and across geographic units

The parameter of interest is δ_{DD}, which represents the average difference in rates of food bank usage in Scottish vs. rUK local authorities after the introduction of the Scottish Child Payment.

Our difference-in-differences estimation accounts for many time periods (both pre- and post-implementation) and variation in the amount of and eligibility for the Scottish Child Payment.

It also controls for other factors that could affect food bank usage. The control variables are summarised in Table 2.

We then re-estimate the difference-in-differences (DiD) model separately for different household groups. This approach yields information about the impact on different types of households, and also highlights the limitations of the Scottish Child Payment. For instance, the payment targets families with children, but rates of food bank usage by other groups are likely to be less affected.

One challenge to achieving a robust estimate of the effects of the Scottish Child Payment is that English and Welsh local authorities may have different trends in food bank usage prior to the introduction of the benefit (non-parallel trends) and are therefore not a good comparison group. This could be the case if, for instance, food provision by non-Trussell Trust food banks changed differently in Scotland and England and Wales, particularly during the Covid-19 pandemic.

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[8] We test different specifications of this model with different ways of measuring food bank usage. These include logged number of parcels, so that δ_{DD} is interpreted as the percentage change in parcels distributed in response to the introduction of Scottish Child Payment.

Non-parallel trends is also addressed in our second approach, a synthetic difference-in-differences (sDiD) estimation. This method constructs a "synthetic" estimate of the counterfactual – what food bank usage in Scottish local authorities would have been had the policy not been introduced.

The main difference between DiD and sDiD is that in a standard DiD model, all control units are weighted equally to construct an estimate of the counterfactual. In sDiD, the weights are allowed to vary based on how similar the pre-policy trends were between the treatment units and each control unit. In this case, local authorities in rUK that better match Scottish pre-treatment trends in food bank usage will receive higher weights and those whose pre-treatment trends deviate too much from the treatment group are excluded from the control group.

The advantage of this method over the standard difference-in-differences method is that we can construct a synthetic control group that meets the requirement of parallel trend assumption instead of relying on the raw data of all local authorities. This approach *de facto* selects control local authorities that represent a better counterfactual for Scotland absent the policy.

## C. Additional charts and tables

Trends in deep poverty

Chart C 1: Very deep poverty among all households, 2016-17 to 2021-22 (2016-17 = 100)
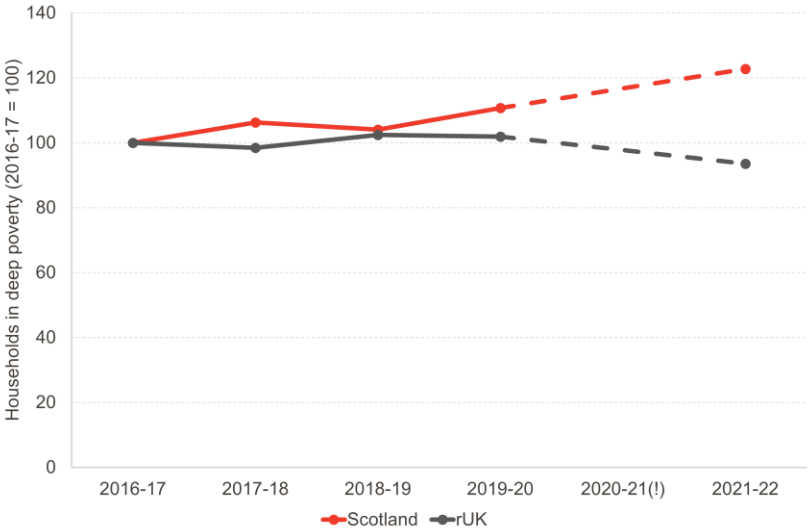
D.

Source*: FAI calculations from FRS/HBAI data*
Notes*: Level of deep poverty is indexed to the level in 2016-17. Collection of the FRS was disrupted by the Covid-19 pandemic for 2020-21, yielding a smaller sample than usual. The dotted line reflects a trend between 2019-20 and 2021-22, and no estimate for 2020-21 is shown.*
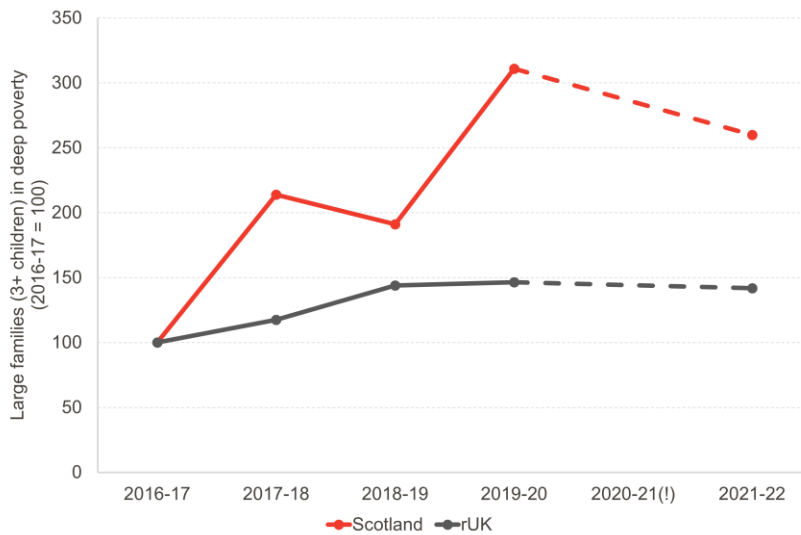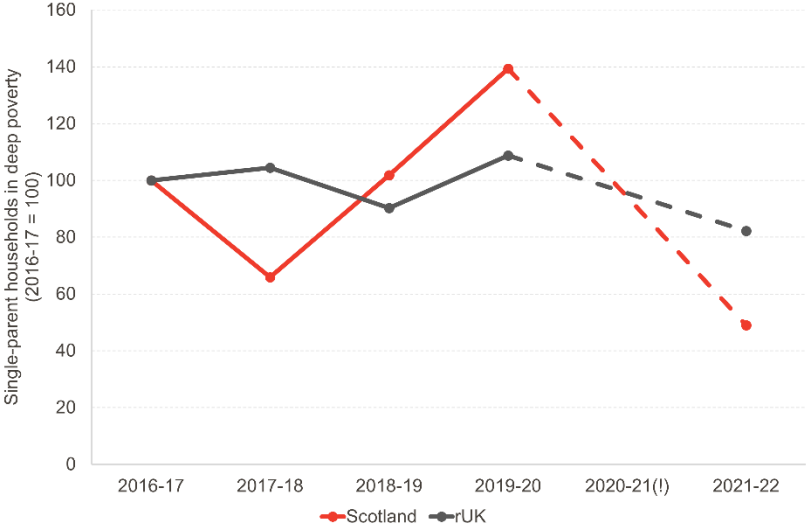
Chart C 2: Very deep poverty among households with children 0-5, Scotland vs. rUK, 2016-17 to 2021-22
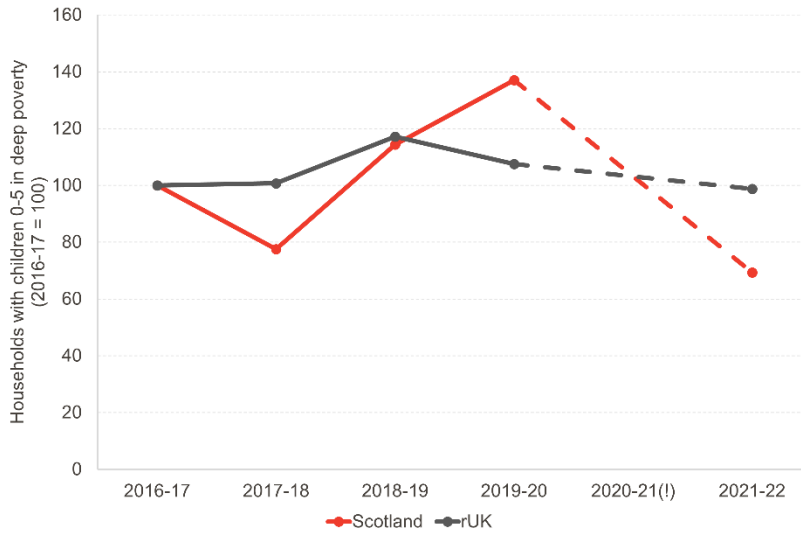
Source: FAI calculations from FRS/HBAI data
Notes: Level of deep poverty is indexed to the level in 2016-17. Collection of the FRS was disrupted by the Covid-19 pandemic for 2020-21, yielding a smaller sample than usual. The dotted line reflects a trend between 2019-20 and 2021-22, and no estimate for 2020-21 is shown.

Chart C 3: Deep poverty among households with 3+ children, Scotland vs. rUK, 2016-17 to 2021-22

Source: FAI calculations from FRS/HBAI data
Notes: Level of deep poverty is indexed to the level in 2016-17. Collection of the FRS was disrupted by the Covid-19 pandemic for 2020-21, yielding a smaller sample than usual. The dotted line reflects a trend between 2019-20 and 2021-22, and no estimate for 2020-21 is shown.

Chart C 4: Deep poverty in single-parent households, Scotland vs. rUK, 2016-17 to 2021-22

Source: FAI calculations from FRS/HBAI data
Notes: Level of deep poverty is indexed to the level in 2016-17. Collection of the FRS was disrupted by the Covid-19 pandemic for 2020-21, yielding a smaller sample than usual. The dotted line reflects a trend between 2019-20 and 2021-22, and no estimate for 2020-21 is shown.

DiD results

Figure C 1: DiD results for all households

Source: FAI calculations
Notes: The left-hand chart is for households with children 0-4 and the right-hand chart is for households with children 5-16. The treated group is comprised of Scottish local authorities.
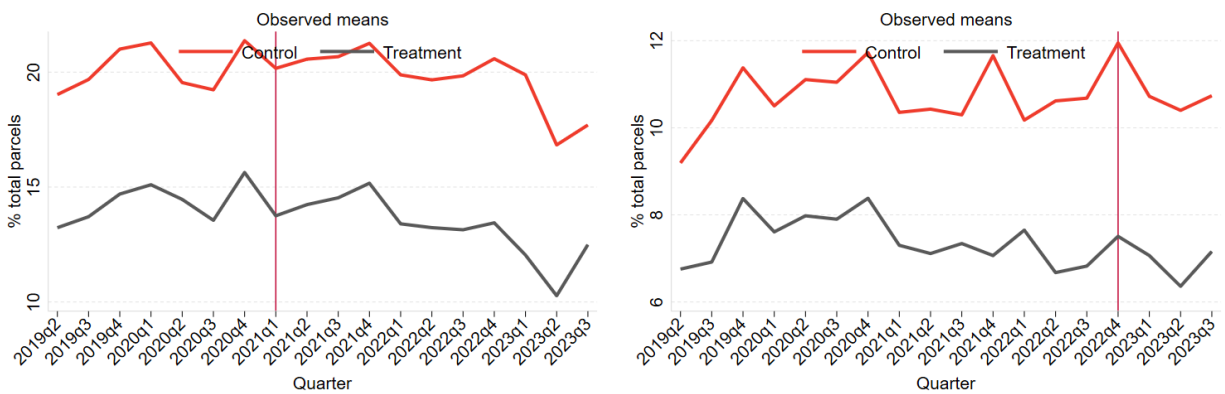
Figure C 2: DiD results for single-adult households

Source: *FAI calculations*
Notes: *The left-hand chart is for households with children 0-4 and the right-hand chart is for households with children 5-16. The treated group is comprised of Scottish local authorities.*

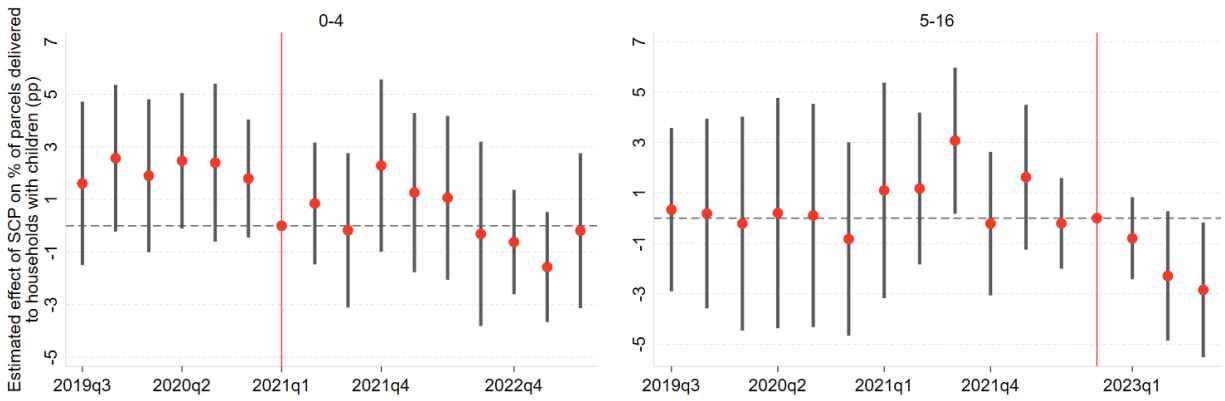*Figure C 3: DiD results for large households (3+ children)*

Source: *FAI calculations*
Notes: *The left-hand chart is for households with children 0-4 and the right-hand chart is for households with children 5-16. The treated group is comprised of Scottish local authorities.*
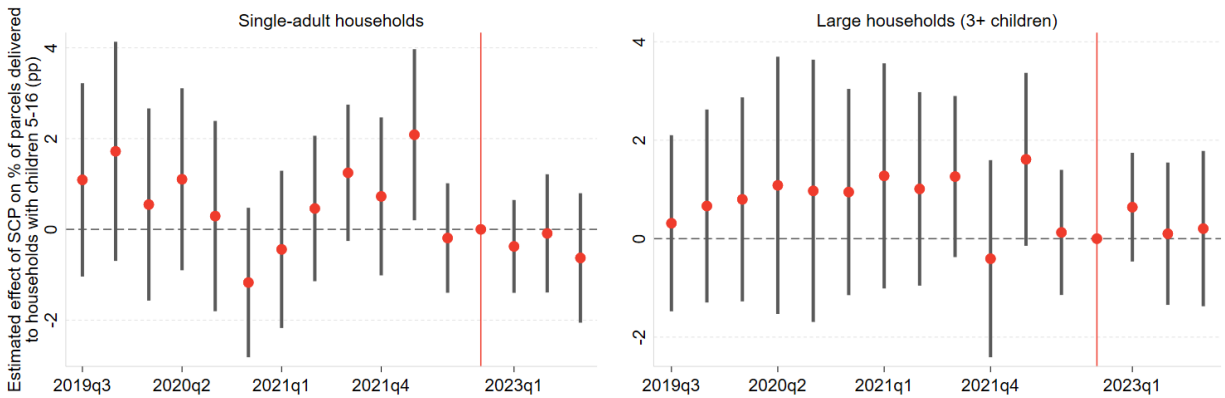
Event study results

Figure C 4: Event study results for all households

Source: FAI calculations
Notes: Bars show 95% confidence intervals. N = 4,860.

Figure C 5: Event study results for selected households with children 5-16

Source: FAI calculations
Notes: Bars show 95% confidence intervals. N = 4,860.