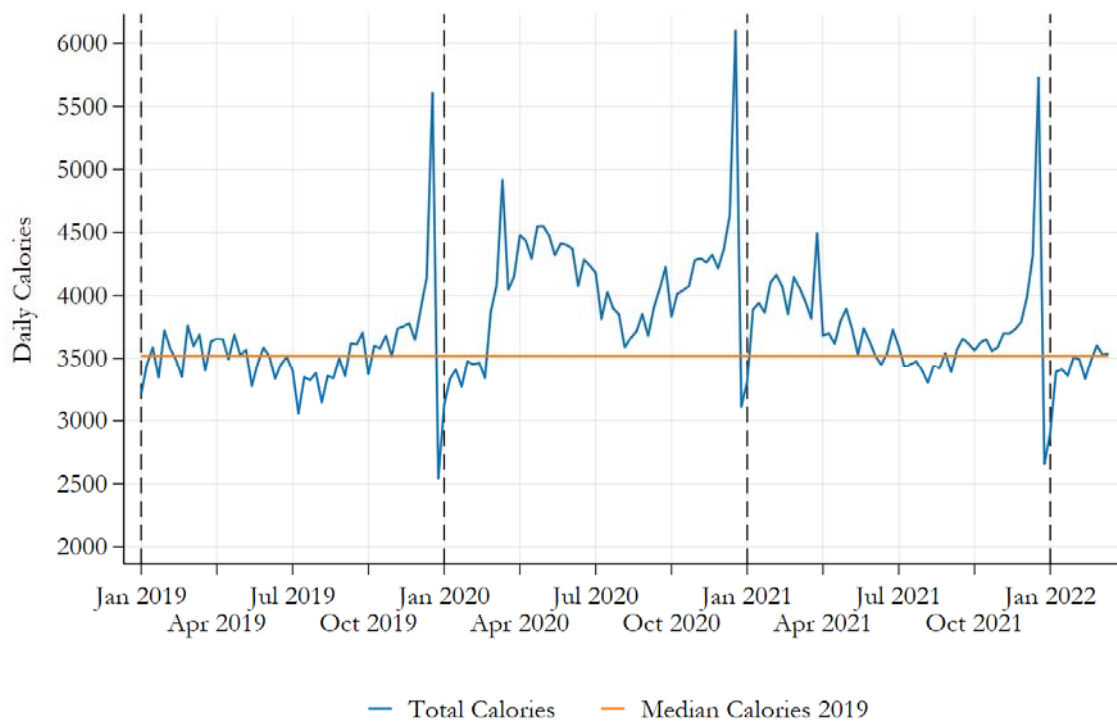


## Appendix A. Imputing out-of-home calories from the LCFS

Further information on the use of the Living Costs and Food Survey (LCFS) for imputing calories can be found in Section 2.2 and in online appendix A.2 of O’Connell et al. (2022). In essence, average expenditure per calorie is computed in the LCFS for a set of food types (‘takeaway or not, and category of food and drink’) across four groups (highly skilled, semi-skilled, low-skilled and retired). This is then used to map expenditure into calories in the Kantar data. First, the same groupings by food type and socio-economic status are constructed in the Kantar data. Then, a given calorie amount is given to foods that have the same price when purchased by the same type of household. This gives an estimate of the calories associated with out-of-home purchases in the Kantar data. Whilst imperfect, the alternative would be no calorie information. They show that expenditure per calorie is stable over time prior to the pandemic. Further information can be found in O’Connell et al. (2022).

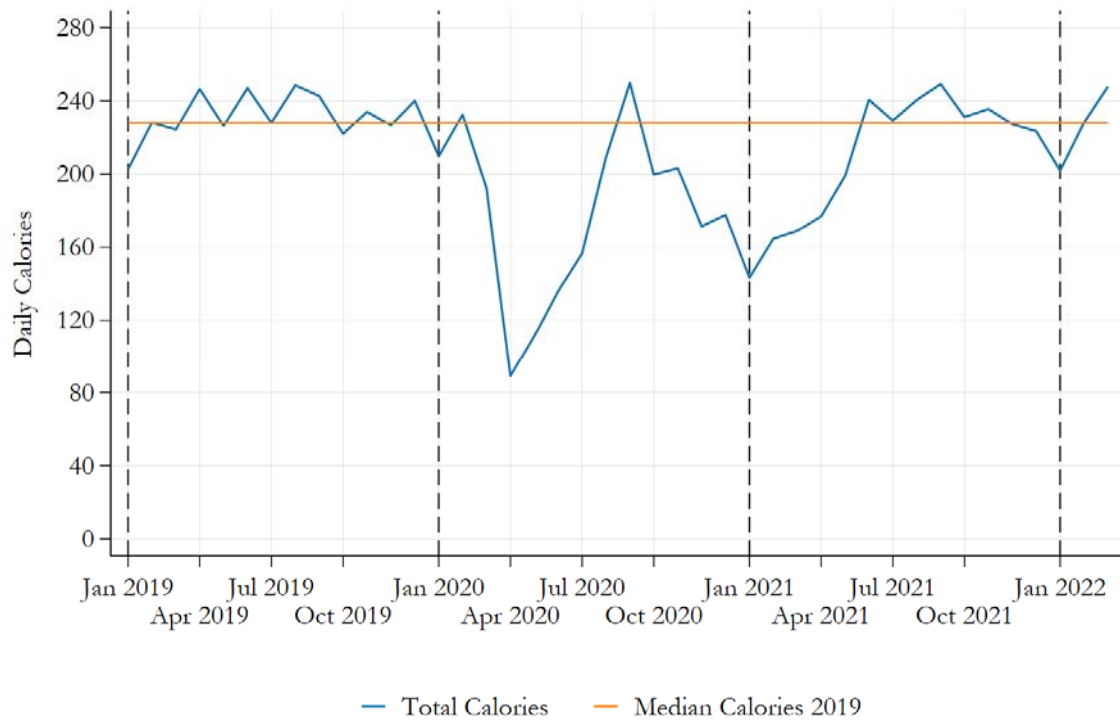
## Appendix B. Non-equivalised calorie purchases

Figure B.1. At-home calorie purchases, non-equivalised, 2019–22



Note: Based on Kantar Worldpanel OOH data for January 2019 to March 2022. The orange line represents median calories in 2019.

Figure B.2. Out-of-home calorie purchases, non-equivalised, 2019–22

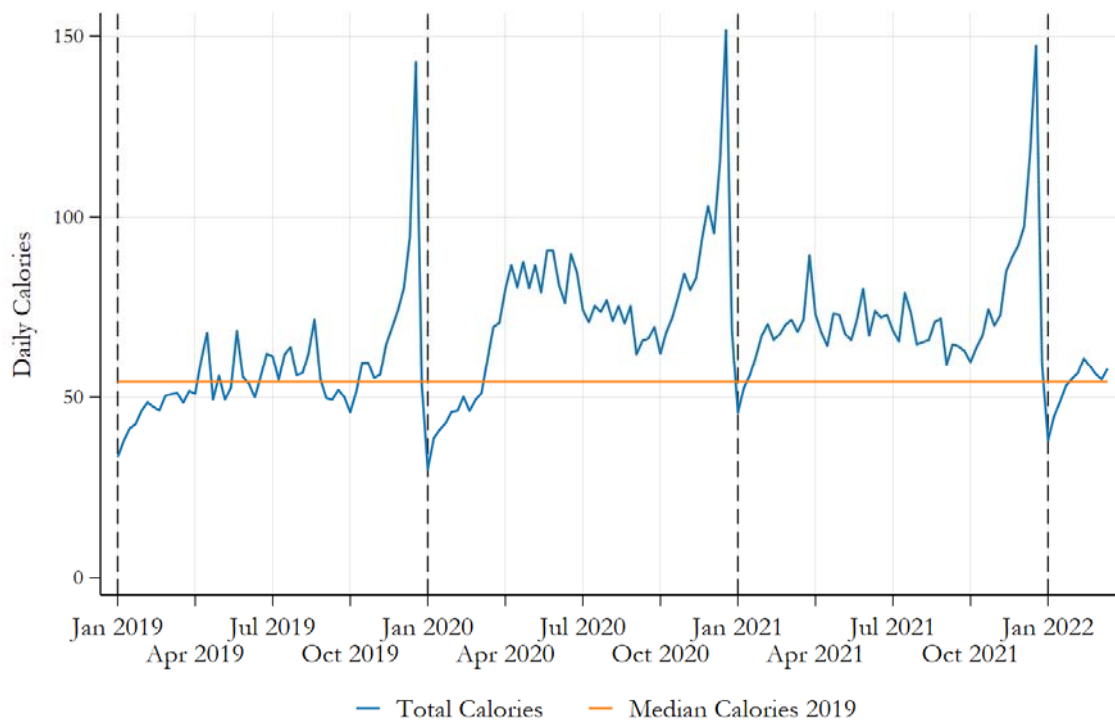


Note: Based on Kantar Worldpanel OOH data for January 2019 to March 2022. The orange line represents median calories in 2019.

## Appendix C. Into-home calorie purchases from alcohol

Figure C.1 shows the evolution of into-home alcohol purchases over the period of analysis. One can see an upward shift in 2020 that is slightly reduced in 2021, and average calories of alcohol purchased into the home in the first quarter of 2022 remain higher than in the first quarter of 2019.

Figure C.1. Calories from alcohol consumed at home



Note: Based on Kantar Worldpanel Take Home data for January 2019 to March 2022. The orange line represents the median value of alcohol calorie purchases for 2019.

## Appendix D. Sample restrictions

Table D.1 presents summary statistics (as in Table 2.1) but for the full and balanced panel samples along with the analysis sample. The full sample does not place restrictions on the sample beyond the requirements that households are present four weeks before and after the onset of the pandemic, do not have periods of non-reporting that last more than 14 days, and do not have extreme mean calorie values across a year. The balanced panel sample requires that a household is in the sample for the whole time period, but it does not impose restrictions on the household composition or age of main shopper as in the analysis sample.

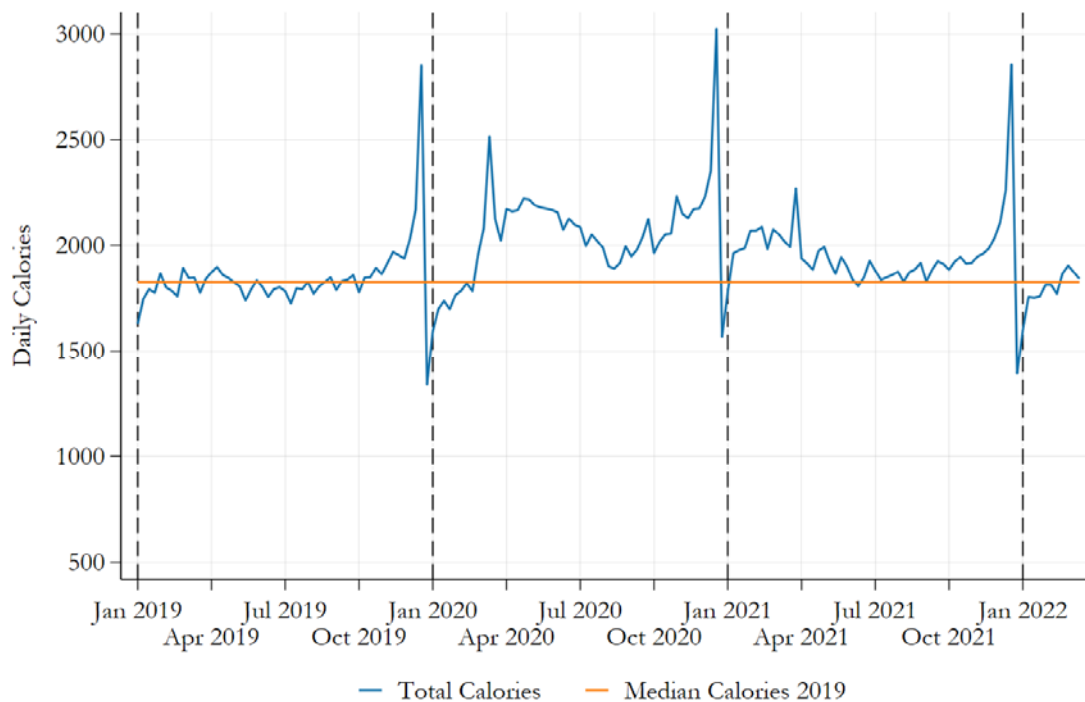
**Table D.1. Summary statistics for full Kantar sample, balanced panel sample and analysis sample**

		At-home			Out-of-home		
		Full	Balanced	Analysis	Full	Balanced	Analysis
Number of households		17,525	14,859	7,431	4,359	1,671	936
Daily calories	Mean	1,941	1,955	1,962	120	183	111
(kcal, equivalised)	SD	1,329	1,329	1,344	270	320	202
Weekly spending	Mean	24	24	25	8	13	8
(£, equivalised, Jan 2019 prices)	SD	17	17	17	19	23	14

Note: Data based on the Kantar Worldpanel Take Home and Out of Home data. Values equivalised relative to adult reference intake of calories.

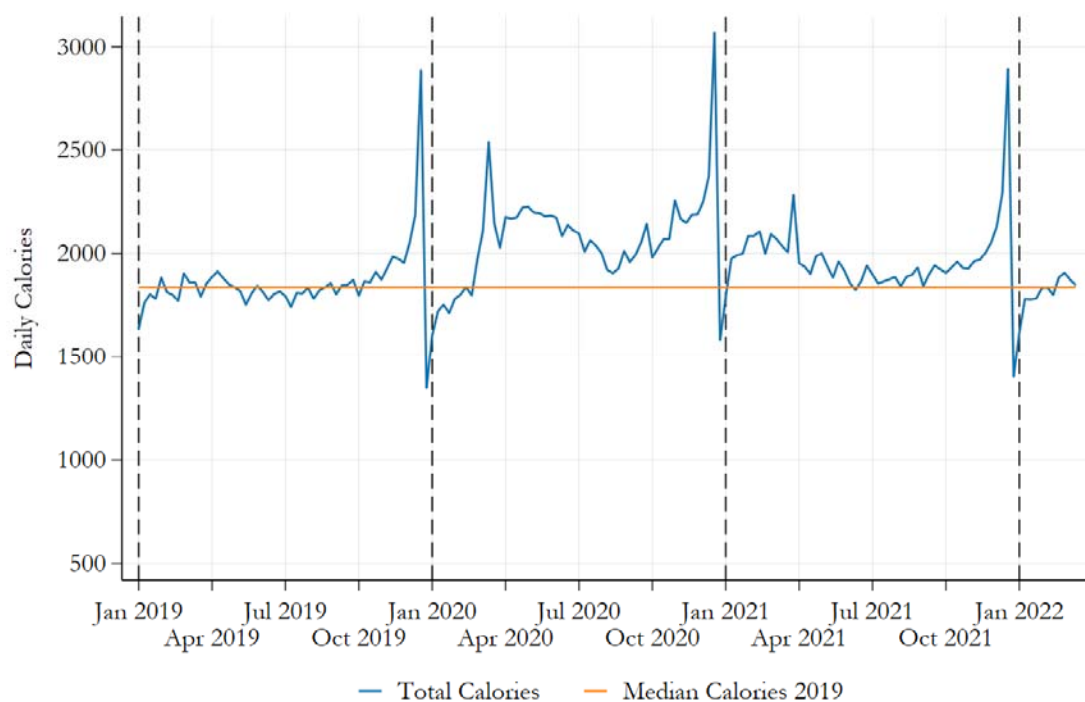
Figures D.1 and D.2 repeat Figure 3.1 using different underlying samples. Figure D.1 shows results for the full sample (defined above) whilst Figure D.2 shows results for the full balanced panel. Likewise, Figures D.3 and D.4 do the same for out-of-home purchases.

Figure D.1. Total at-home calories: full sample



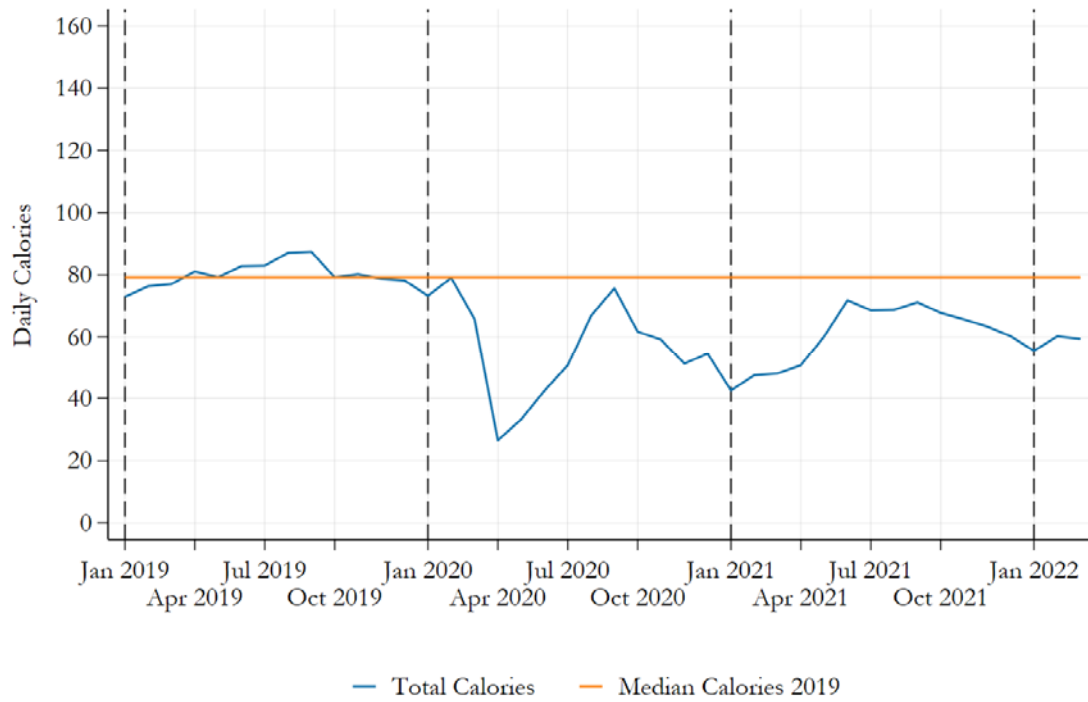
Note: Based on Kantar Worldpanel Take Home data for January 2019 to March 2022. The orange line shows the median calorie value for 2019.

Figure D.2. Total at-home calories: full balanced panel



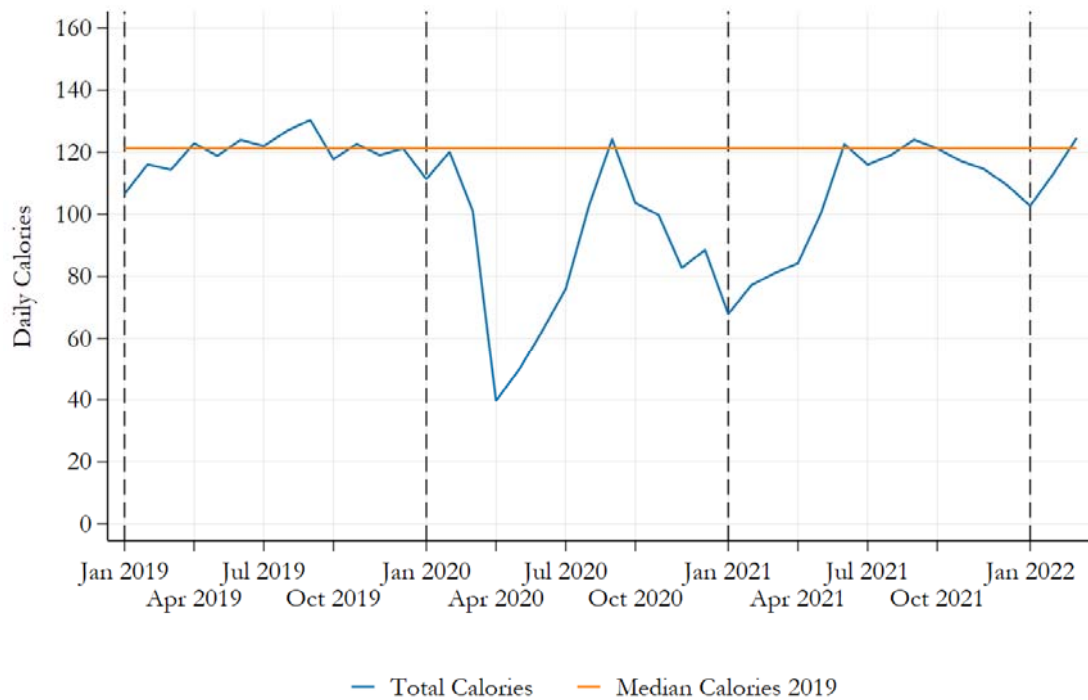
Note: Based on Kantar Worldpanel Take Home data for January 2019 to March 2022. The orange line shows the median calorie value for 2019.

Figure D.3. Total out-of-home calories: full sample



Note: Based on Kantar Worldpanel Out of Home data for January 2019 to March 2022. The orange line shows the median calorie value for 2019.

Figure D.4. Total out-of-home calories: full balanced panel

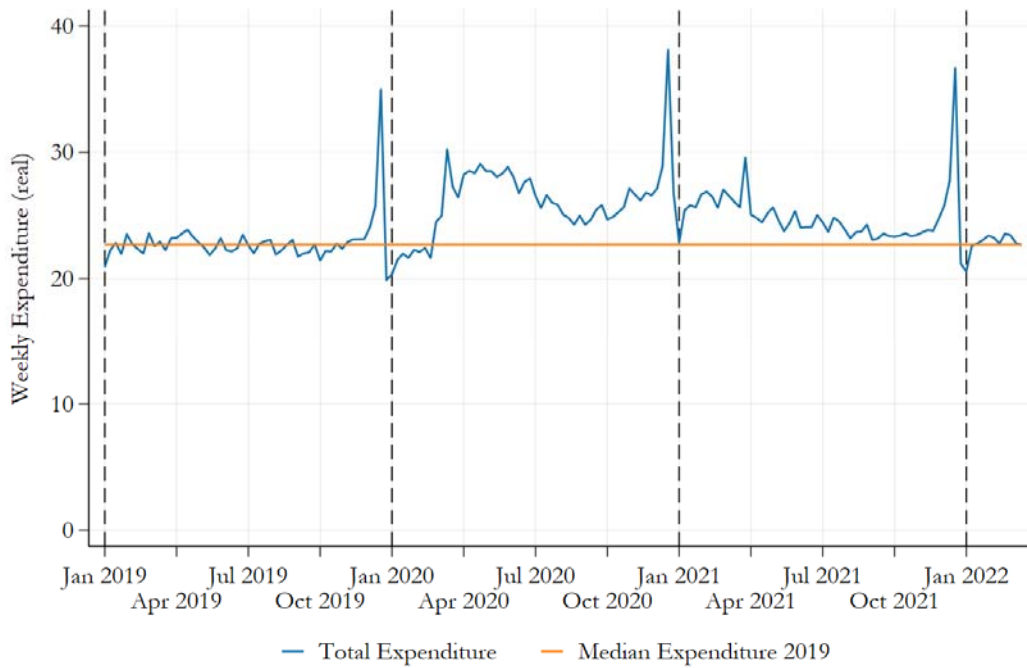


Note: Based on Kantar Out of Home data for January 2019 to March 2022. The orange line shows the median calorie value for 2019.

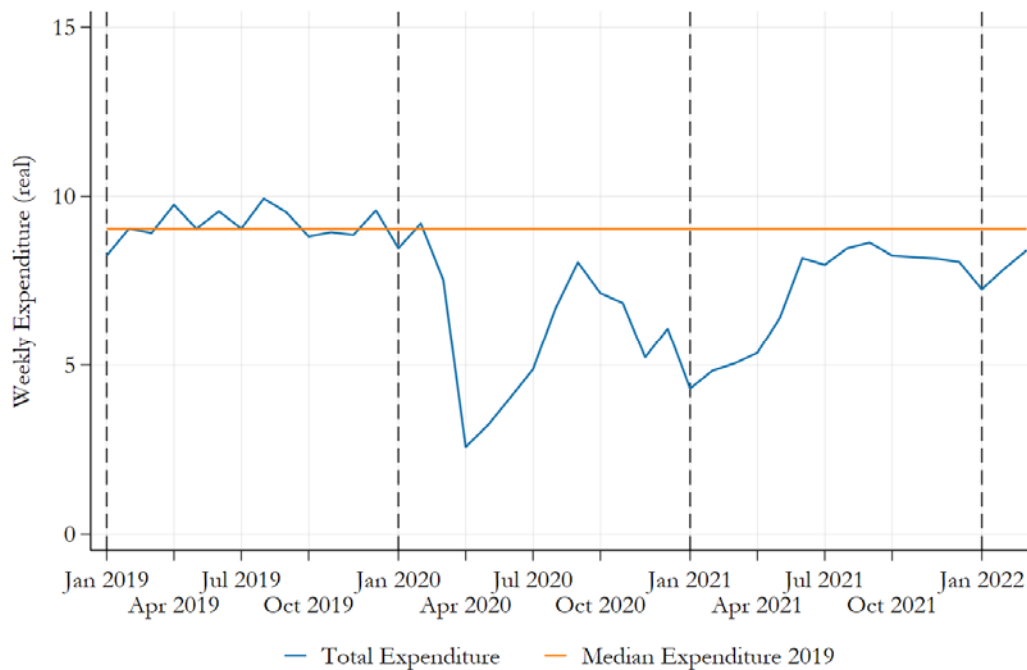
# Appendix E. Expenditures

Figure E.1. Food expenditures

(a) At-home expenditures



(b) Out-of-home expenditures

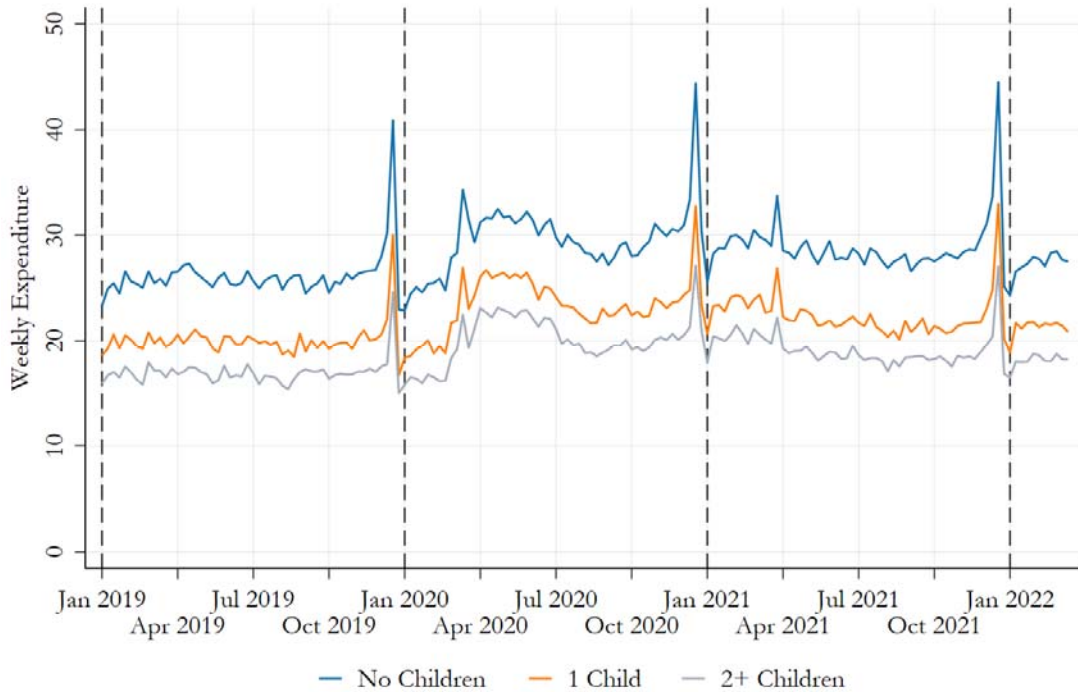


Note: Based on Kantar Take Home and Out of Home data for January 2019 to March 2022. Orange lines are median values for 2019. Values are per equivalent adult in the at-home case (panel a) and individual level in the out-of-home case (panel b). Note that the y-axis scales are not the same.

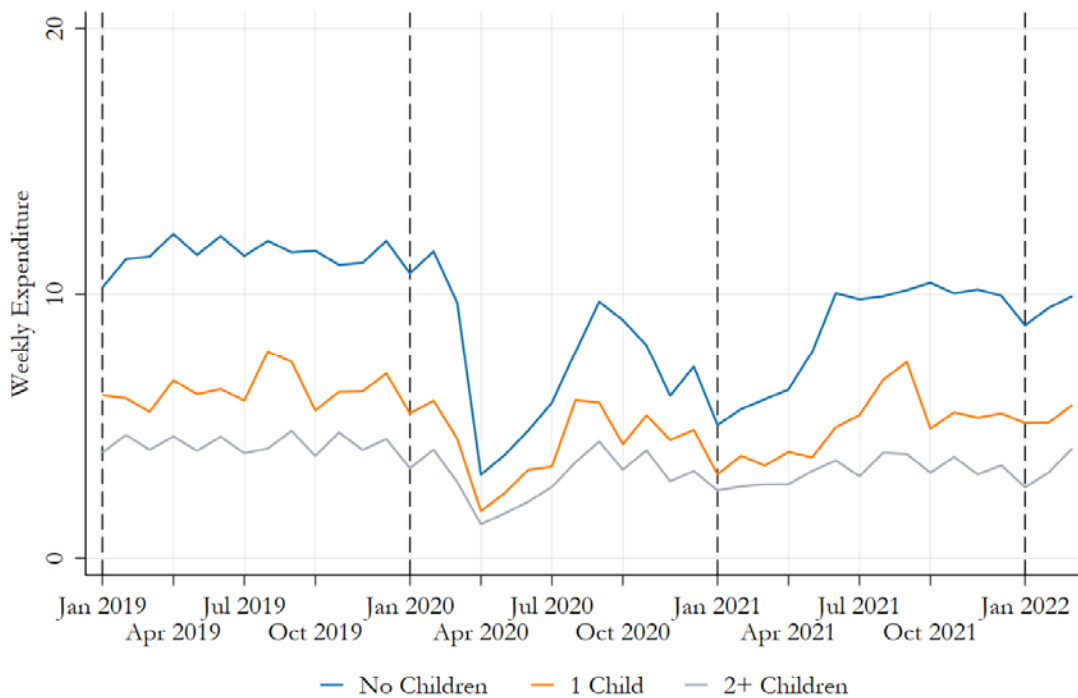


Figure E.2. Food expenditures by household type

(a) At-home expenditures



(b) Out-of-home expenditures



Note: Based on Kantar Take Home and Out of Home data for January 2019 to March 2022. Values are per equivalent adult in the at-home case (panel a) and individual level in the out-of-home case (panel b).

## Appendix F. Calculating the nutrient profiling model scores

We use the UK nutrient profiling model, which was developed by the Food Standards Agency (FSA) in 2004–05 as a tool to enable the Office of Communications (Ofcom), the UK broadcast regulator, to identify ‘less healthy’ foods and drinks that are subject to restrictions during children’s television programming. Ofcom has been using this model for broadcast media since the restrictions came into force in April 2007 and for non-broadcast media (including print, cinema, online and in social media) since July 2017.

The model is a scoring system where points are allocated on the basis of the nutrient content per 100g of a food or drink. The model assigns ‘negative nutrient points’ to foods that are high in calories, sugar, salt and saturated fat content, and ‘positive nutrient points’ to fruit, vegetables, nuts and foods that are protein-rich or have a high fibre content. We calculate the nutrient profiling score by summing up the number of ‘negative’ nutrient points, which is then offset by the points for ‘positive’ nutrients.<sup>25</sup> Table F.1 shows the points for each nutrient content per 100g.

<sup>25</sup> If a food scores fewer than 11 ‘negative’ points, or if it scores 11 or more ‘negative’ points, but 5 or more points for fruit, vegetables and nuts, the overall score is calculated as ‘negative’ points minus ‘positive’ points. If the food scores 11 or more ‘negative’ points and fewer than 5 points for fruit, vegetables and nuts, the overall score is calculated as ‘negative’ points minus the sum of fibre points and fruit and fruit/vegetable/nuts only (i.e., ignoring scores for protein).

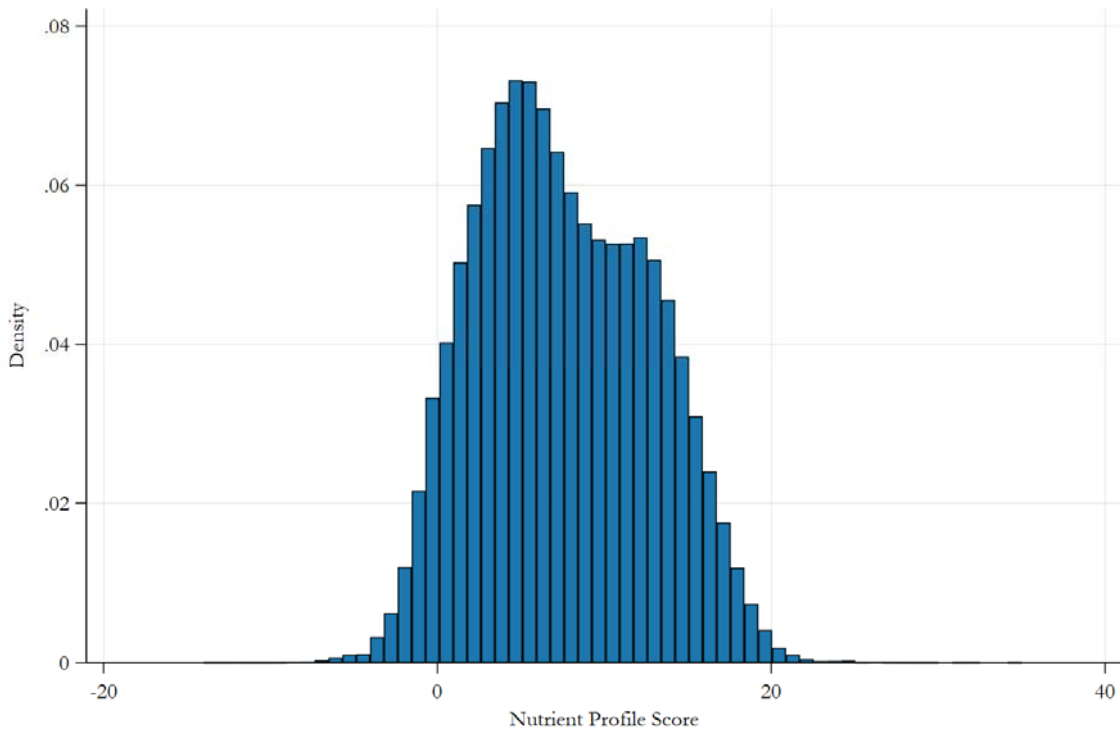
Table F.1. Scores applied to nutrient content per 100g of food/drink in the nutrient profiling model

Points	Energy (kJ)	Negative nutrients			Positive nutrients		
		Saturated fats (g)	Total sugar (g)	Sodium (mg)	Fruit/veg/nuts (%)	NSP fibre (g)	Protein (g)
0	≤335	≤1	≤4.5	≤90	≤40	≤0.7	≤1.6
1	>335	>1	>4.5	>90	>40	>0.7	>1.6
2	>670	>2	>9	>180	>60	>1.4	>3.2
3	>1,005	>3	>13.5	>270	–	>2.1	>4.8
4	>1,340	>4	>18	>360	–	>2.8	>6.4
5	>1,675	>5	>22.5	>450	>80	>3.5	>8.0
6	>2,010	>6	>27	>540			
7	>2,345	>7	>31	>630			
8	>2,680	>8	>36	>720			
9	>3,015	>9	>40	>810			
10	>3,350	>10	>45	>900			

The nutrient profiling model allows all individual foods and beverages to be scored, indicating their ‘healthiness’. This single score can then be used to understand whether one product is nutritionally more valuable than another. Food products scoring 4 or more points, or drinks scoring 1 or more points, are considered less healthy.

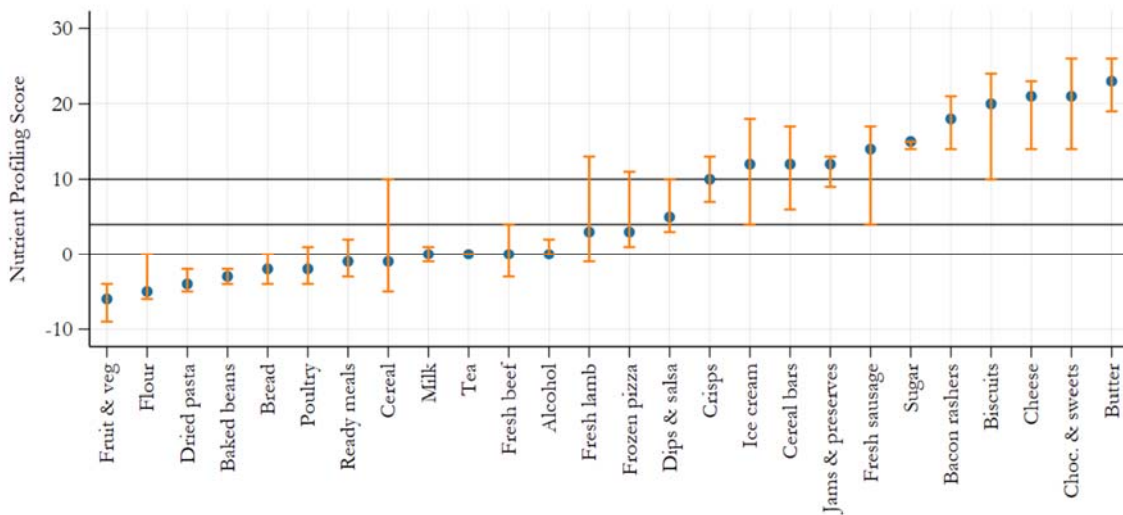
Figure F.1 plots the overall nutrient profiling scores for the at-home purchases of households, whilst Figure F.2 shows how nutrient profiling scores vary across different foods.

Figure F1. Overall nutrient profiling score for household at-home calories purchases



Note: Based on Kantar Worldpanel Take Home data for January 2019 to March 2022. Less healthy is defined as a nutrient profiling score above 4.

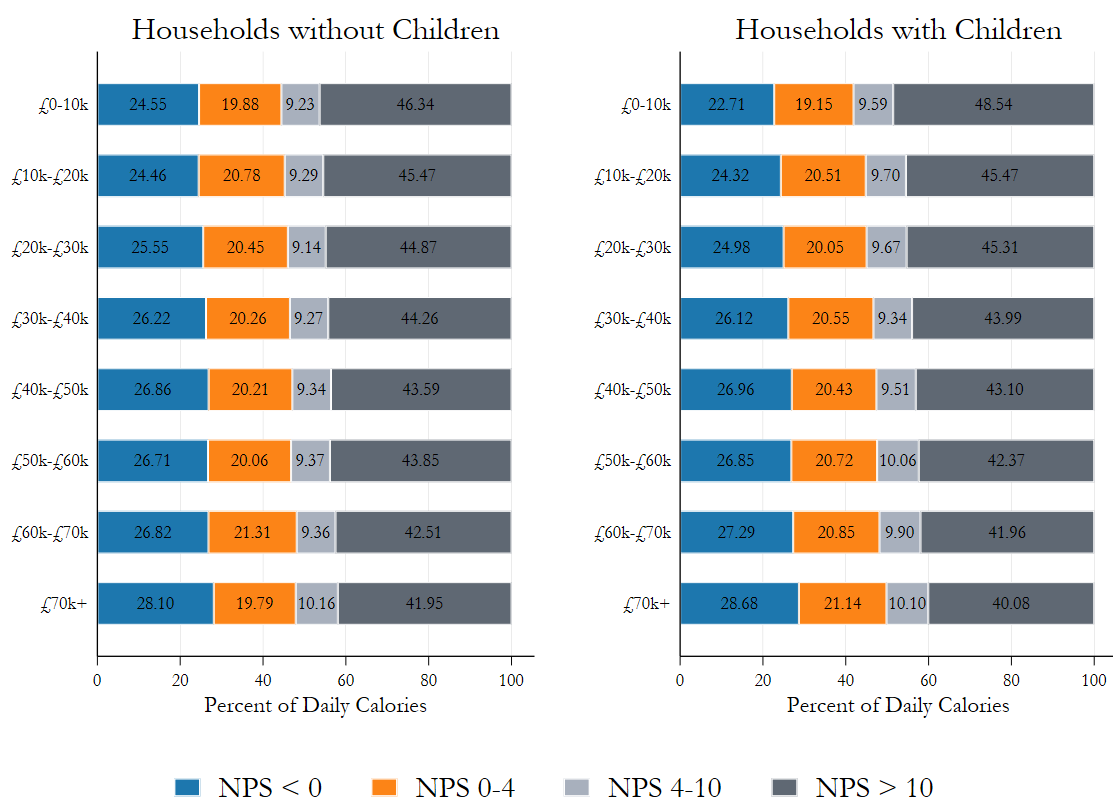
Figure F.2. Nutrient profiling score of different food products



Note: Based on Kantar Worldpanel Take Home data for January 2019 to March 2022. Less healthy is defined as a nutrient profiling score above 4. The blue points represent the median nutrient profiling model score for each category, whilst the orange intervals show the 10<sup>th</sup> and 90<sup>th</sup> percentile.

# Appendix G. Income gradient in nutrient profiling score by presence of children in household

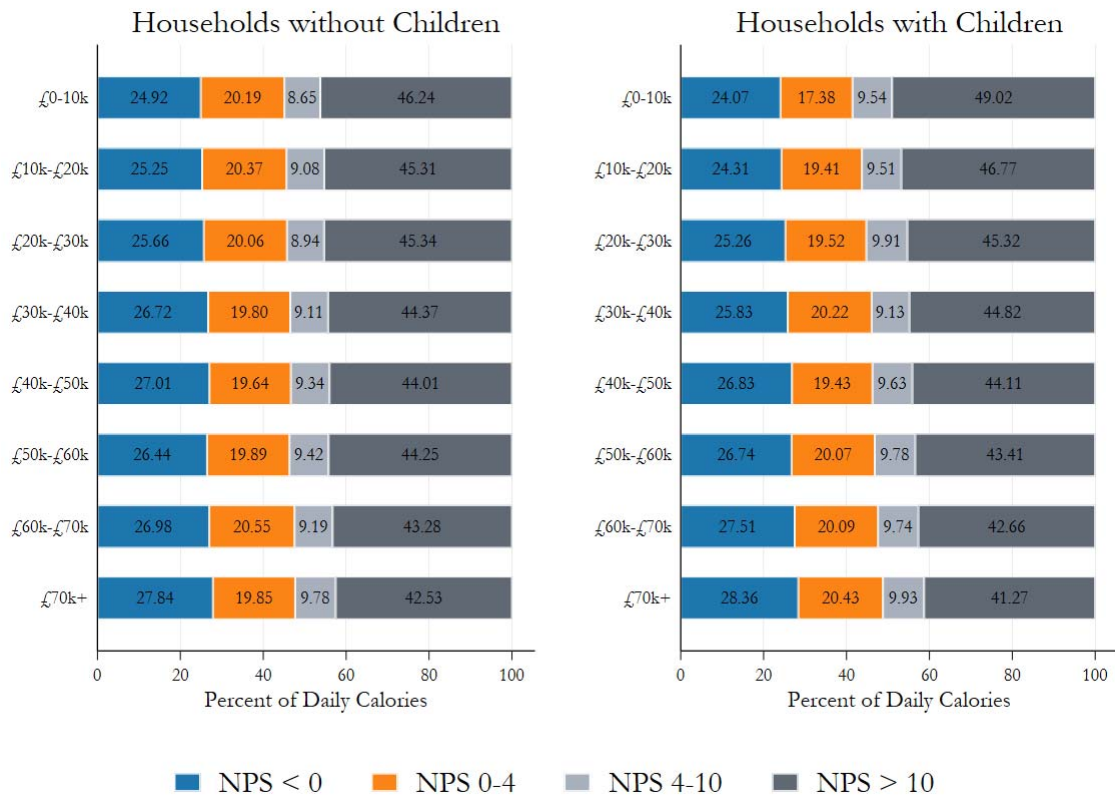
Figure G.1. Healthiness of calories purchased by household type and income, 2019



Note: Based on Kantar Worldpanel Take Home data for 2019. Less healthy is defined as a nutrient profiling score above 4.

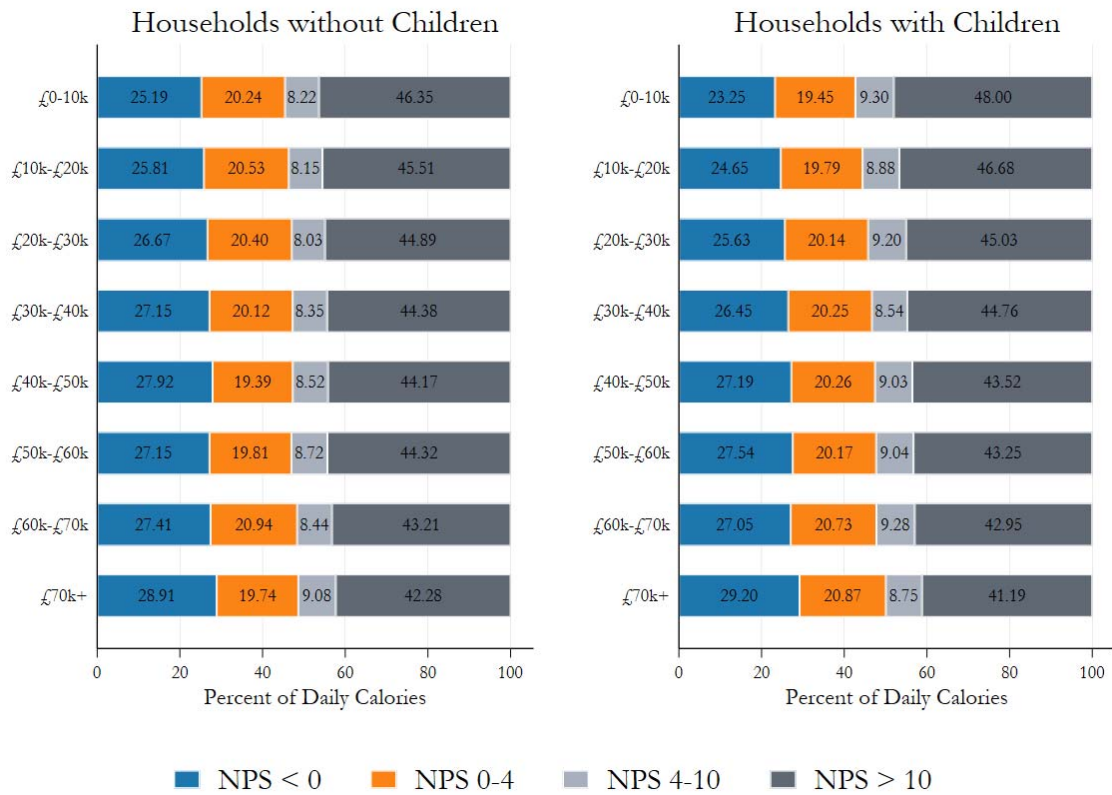
45 Longer-term impacts of the COVID-19 pandemic on the dietary purchasing choices of British households

Figure G.2. Healthiness of calories purchased by household type and income, 2020



Note: Based on Kantar Worldpanel Take Home data for 2020. Less healthy is defined as a nutrient profiling score above 4.

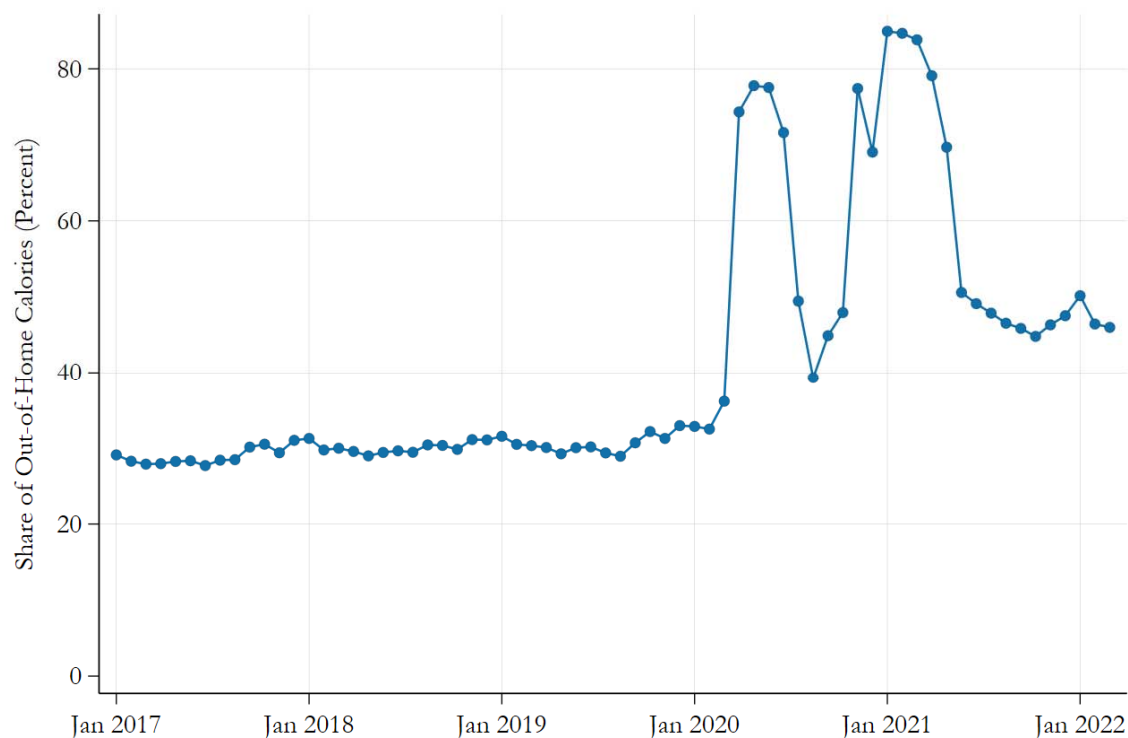
Figure G.3. Healthiness of calories purchased by household type and income, 2021



Note: Based on Kantar Worldpanel Take Home data for 2021. Less healthy is defined as a nutrient profiling score above 4.

## Appendix H. Trend in takeaways

Figure H.1. Share of out-of-home calories from takeaways, 2017–22



Note: Data on the proportion of out-of-home purchases from takeaways, based on Kantar Worldpanel Take Home data for January 2017 to March 2022.



## Appendix I. At-home calorie purchases by household type

Table I.1. Differences in adult equivalent calories by presence of children

	Outcome = at-home calories			
	No additional controls		Additional controls	
	(1)	(2)	(1)	(2)
Children in HH	-470.3***	(2.716)	-304.6***	(3.597)
£10,000–£19,999			-18.19**	(9.007)
£20,000–£29,999			-32.60***	(8.949)
£30,000–£39,999			-104.7***	(9.085)
£40,000–£49,999			-173.9***	(9.099)
£50,000–£59,999			-250.2***	(9.340)
£60,000–£69,999			-195.2***	(9.919)
£70,000+			-268.9***	(9.475)
Main shopper age			-7.232***	(1.629)
Main shopper age squared			0.179***	(0.017)
North West			-4.837	(7.708)
Yorkshire and Humber			56.53***	(7.834)
East Midlands			50.60***	(7.873)
West Midlands			35.68***	(8.176)
East of England			72.31***	(7.724)
London			-108.6***	(8.445)
South East			80.34***	(7.401)
South West			56.12***	(7.808)
Wales			108.7***	(9.895)
Scotland			1.243	(7.892)
Highly skilled			71.59***	(6.511)
Semi-skilled			82.12***	(5.736)
Unskilled			121.0***	(6.753)
Observations	821,123		821,123	
$R^2$	0.027		0.040	

Note: Robust standard errors in parentheses. \*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*  $p < 0.1$ . Household income is in reference to earnings under £10,000. Region is in reference to the North East of England. Employment class is in reference to retired. Results are based on Kantar Worldpanel Take Home data for 2019 to March 2022.