

Supplementary Material 3: Subgroup analysis results

It is important to note that the following results should be seen as hypothesis generating rather than testing. Tables below present marginal mean differences where interactions have been detected ($p < 0.05$). Below the tables, coefficients from the underlying models are presented.

Region

Region moderated the association between pandemic restrictions and purchased take-home energy from fruit & vegetables, with a decrease observed in the North of England (-10.1%, 95% CI -14.7 to -5.5), but not in London.

Presence of children

Having one or more children moderated the association between pandemic restrictions and total energy purchased, energy from HFSS products, UPF, savoury snacks, medium-sugar soft drinks, as well as alcohol volume. Total energy purchased increased more in households with children (22.3%, 95% CI 18.1 to 26.6 vs 15.9%, 95% CI 12.8 to 18.9). Households with children purchased more energy from HFSS products (3.0%, 95% CI 1.4 to 4.7), and decreased energy from savoury snacks (-5.7%, 95% CI -11.4 to -0.1) and medium-sugar soft drinks (-39.9%, 95% CI -76.9 to -2.9), while there was no change observed for households without children. Reductions in energy from UPF were greater in households without children (-3.8%, 95% CI -5.0 to -2.6 vs -1.8%, 95% CI -3.3 to -0.2). While both households with and without children increased purchased volume of alcoholic beverages, the increase was greater for those with children (64.7%, 95% CI 38.2 to 89.2 vs 28.9%, 16.3 to 41.5).

Age

Age of the main shopper moderated the association between pandemic restrictions and most purchase outcomes. Main shoppers aged 65 years and older were associated with the smallest increase in total energy purchased during pandemic restrictions compared to other age groups (4.7%, 95% CI 0.3 to 9.0). Only among this age group, a decrease in energy purchased from chocolate & confectionery (-9.7%, 95% CI -18.5 to -1.0), and no change in volume of alcoholic beverages was observed. Households with main shoppers aged 45-54 years saw the largest increase in purchased alcohol volume of 63.2% (95% CI 38.2 to 88.2). Main shoppers aged between 45 and 64 years purchased less energy from fruit & vegetables (45-54 years -9.4%, 95% CI -15.2 to -3.5; 55-64 years -6.6%, 95% CI -12.5 to -0.8), while there was no change in

the youngest and oldest age groups. Energy purchased from HFSS products increased only among main shoppers under the age of 55 years (< 45 years 2.7%, 95% CI 0.7 to 4.6; 45-54 years 3.4%, 95% CI 1.5 to 5.4). Furthermore, 55- to 64-year-old main shoppers were the only group linked to a reduction of energy purchased from savoury snacks (-8.6%, 95% CI -16.6 to -0.5). Despite effect modification by age, purchased energy from low-sugar soft drinks did not change during pandemic restrictions in any age group. Energy from high-sugar soft drinks decreased in all but the oldest age group, potentially due to the already low consumption levels of this group, with the highest decrease observed in the youngest age group (-13.5%, 95% CI -43.4 to -16.5). OOH purchasing fell in all age groups, but most in the oldest group (-67.1%, 95% CI -106.4 to -27.9).

Social grade

Social grade of the main shopper moderated the relationship between pandemic restrictions and total energy purchased, energy purchased from fruit & vegetables, UPF, savoury snacks, chocolate & confectionery, and low-sugar soft drinks, alcohol volume, and OOH purchasing. The highest increase in total energy purchased was observed among households in social grade AB (22.4%, 95% CI 16.9 to 27.9). Social grade C1C2 was the only group associated with a reduction in energy purchased from fruit & vegetables (-10.1%, 95% CI -14.6 to -5.7). Energy purchased from UPF fell in all social grades, but those in the AB grades had the largest reduction (-5.0%, 95% CI 7.0 to -3.1). While main shoppers in group AB reported the greatest increase in purchased alcoholic beverages (39.1%, 95% CI 17.9 to 60.2) during pandemic restrictions, there was no change for group DE. Similarly, no change in OOH purchasing was observed among group DE. Despite effect modification by social grade, purchased energy from savoury snacks, chocolate & confectionery as well as low-sugar soft drinks did not change during pandemic restrictions in any group.

Usual purchasing

Usual purchasing levels moderated the relationship between pandemic restrictions and all purchasing outcomes, with varying directions of the relationship. For most outcomes we observed that higher usual purchasing levels were linked to greater reductions during pandemic restrictions, and lower usual purchasing was associated with greater increases during pandemic restrictions. While total energy purchased, for example, increased in the overall sample, households in the lowest quartile of usual purchasing had the largest increase of 41.2% (95% CI 35.8 to 46.5), while those in the highest quartile did not change the amount of energy

purchased during pandemic restrictions. Energy from fruit & vegetables, which decreased in the overall sample, increased for those in the lowest quartile of usual purchasing (23.5%, 95% CI 14.4 to 32.6), but decreased for those in the upper two quartiles (second-highest quartile: -9.2%, 95% CI -14.2 to -4.2; highest quartile: -14.2%, 95% CI -19.2 to -9.2). While the relative increase in purchasing of alcoholic beverages also followed this pattern, the absolute increases did not. Higher usual purchasing of alcoholic beverages was linked to a greater absolute increase during pandemic restrictions (lowest tertile 123.2 ml, 95% CI 71.3 to 175.0; highest tertile 708.3 ml, 95% CI 381.3 to 1035.3).

Table S1. Marginal mean differences in purchase outcomes by region

| Outcome | | London | North of England |
|-------------------------------------------------|---------------|-------------------------|---------------------------|
| Total energy purchased | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Energy purchased from fruit & vegetables | kcal (95% CI) | -58.69 (-138.34, 20.96) | -120.22 (-175.19, -65.25) |
| | % (95% CI) | -3.74 (-8.80, 1.33) | -10.08 (-14.69, -5.47) |
| Energy purchased from HFSS products | kcal (95% CI) | | – |
| | % (95% CI) | | |
| Energy purchased from UPF | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Energy purchased from savoury snacks | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Energy purchased from chocolate & confectionery | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Energy purchased from low-sugar soft drinks | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Energy purchased from medium-sugar soft drinks | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Energy purchased from high-sugar soft drinks | kcal (95% CI) | – | |
| | % (95% CI) | | |
| Volume of alcoholic beverages purchased | ml (95% CI) | – | |
| | % (95% CI) | | |
| OOH purchasing | days (95% CI) | – | |
| | % (95% CI) | | |

95% CI = 95% confidence interval; HFSS = high in fat, salt and sugar; OOH = out-of-home; UPF = ultra-processed foods. Results shown from models were interaction terms with pandemic restrictions in either count or zero component had $p < 0.05$. Models were adjusted for season, festivals, age, sex, and occupational social grade of the main shopper, number of adults, and presence of children.

Table S2. Marginal mean differences in purchase outcomes by presence of children

| Outcome | | Children | No children |
|-------------------------------------------------|---------------|----------------------------|----------------------------|
| Total energy purchased | kcal (95% CI) | 6330.17 (5130.97, 7529.37) | 5602.85 (4522.00, 6683.71) |
| | % (95% CI) | 22.32 (18.09, 26.55) | 15.85 (12.80, 18.91) |
| Energy purchased from fruit & vegetables | kcal (95% CI) | – | – |
| | % (95% CI) | – | – |
| Energy purchased from HFSS products | kcal (95% CI) | 418.18 (192.01, 644.34) | 85.77 (-98.54, 270.08) |
| | % (95% CI) | 3.04 (1.39, 4.68) | 0.64 (-0.73, 2.00) |
| Energy purchased from UPF | kcal (95% CI) | -300.23 (-566.75, -33.71) | -618.65 (-818.81, -418.49) |
| | % (95% CI) | -1.75 (-3.31, -0.20) | -3.81 (-5.04, -2.58) |
| Energy purchased from savoury snacks | kcal (95% CI) | 35.83 (-30.96, 102.63) | 3.50 (-3.03, 10.03) |
| | % (95% CI) | -60.28 (-119.51, -1.04) | -5.74 (-11.39, -0.10) |
| Energy purchased from chocolate & confectionery | kcal (95% CI) | – | – |
| | % (95% CI) | – | – |
| Energy purchased from low-sugar soft drinks | kcal (95% CI) | – | – |
| | % (95% CI) | – | – |
| Energy purchased from medium-sugar soft drinks | kcal (95% CI) | 5.61 (-4.76, 15.98) | -5.86 (-11.30, -0.42) |
| | % (95% CI) | 49.42 (-41.90, 140.75) | -39.86 (-76.86, -2.87) |
| Energy purchased from high-sugar soft drinks | kcal (95% CI) | – | – |
| | % (95% CI) | – | – |
| Volume of alcoholic beverages purchased | ml (95% CI) | 635.90 (381.03, 890.77) | 418.33 (236.06, 600.59) |
| | % (95% CI) | 63.67 (38.15, 89.19) | 28.93 (16.33, 41.54) |
| OOH purchasing | days (95% CI) | – | – |
| | % (95% CI) | – | – |

95% CI = 95% confidence interval; HFSS = high in fat, salt and sugar; OOH = out-of-home; UPF = ultra-processed foods. Results shown from models were interaction terms with pandemic restrictions in either count or zero component had $p < 0.05$. Models were adjusted for season, region, festivals, age, sex, and occupational social grade of the main shopper, and number of adults.

Table S3. Marginal mean differences in purchase outcomes by age of the main shopper

| Outcome | | < 45 years | 45–54 years | 55–64 years | 65+ years |
|-------------------------------------------------|---------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|
| Total energy purchased | kcal (95% CI) | 6700.39 (5385.97, 8014.82) | 7579.26 (6189.58, 8968.93) | 5684.45 (4216.67, 7152.22) | 1704.19 (112.49, 3295.89) |
| | % (95% CI) | 24.81 (19.95, 29.68) | 16.09 (19.62, 28.44) | 16.09 (11.93, 20.24) | 4.66 (0.31, 9.01) |
| Energy purchased from fruit & vegetables | kcal (95% CI) | -85.49 (-175.51, 4.53) | -115.73 (-187.71, -43.75) | -78.68 (-148.27, -9.10) | -67.46 (-137.77, 2.85) |
| | % (95% CI) | -6.47 (-13.29, 0.34) | -9.36 (-15.18, -3.54) | -6.64 (-12.51, -0.77) | -5.50 (-11.24, 0.23) |
| Energy purchased from HFSS products | kcal (95% CI) | 356.26 (95.74, 616.77) | 458.75 (197.13, 720.36) | 104.75 (-147.52, 357.02) | -232.38 (-490.46, 25.70) |
| | % (95% CI) | 2.67 (0.72, 4.62) | 3.41 (1.46, 5.35) | 0.78 (-1.09, 2.64) | -1.71 (-3.61, 0.19) |
| Energy purchased from UPF | kcal (95% CI) | – | | | |
| Energy purchased from savoury snacks | kcal (95% CI) | 28.43 (-66.90, 123.77) | 4.82 (-80.33, 89.97) | -90.15 (-174.71, -5.60) | -21.66 (-88.43, 45.10) |
| | % (95% CI) | 2.32 (-5.47, 10.11) | 0.40 (-6.71, 7.51) | -8.55 (-16.56, -0.53) | -2.65 (-10.82, 5.52) |
| Energy purchased from chocolate & confectionery | kcal (95% CI) | 42.56 (-73.71, 158.84) | 67.47 (-47.38, 182.33) | -26.02 (-142.09, 90.05) | -129.73 (-246.60, -12.86) |
| | % (95% CI) | 3.14 (-5.44, 11.72) | 4.62 (-3.24, 12.48) | -1.75 (-9.57, 6.06) | -9.72 (-18.48, -0.96) |
| Energy purchased from low-sugar soft drinks | kcal (95% CI) | -2.70 (-30.16, 24.77) | 12.03 (-11.18, 35.24) | -16.03 (-45.36, 13.31) | 7.99 (-14.23, 30.21) |
| | % (95% CI) | 1.82 (-20.32, 16.68) | 10.52 (-9.78, 30.82) | -12.43 (-35.19, 10.32) | 9.33 (-16.63, 35.29) |
| Energy purchased from medium-sugar soft drinks | kcal (95% CI) | – | | | |
| Energy purchased from high-sugar soft drinks | % (95% CI) | – | | | |
| Volume of alcoholic beverages purchased | ml (95% CI) | 565.93 (357.03, 774.84) | 878.11 (530.92, 1225.30) | 368.54 (160.64, 576.45) | 118.60 (-42.38, 279.59) |

| | | | | | |
|----------------|---------------|----------------------------|----------------------------|----------------------------|-----------------------------|
| | % (95% CI) | 56.49 (35.64, 77.34) | 63.20 (38.21, 88.19) | 25.34 (11.05, 39.64) | 9.61 (-3.43, 22.66) |
| OOH purchasing | days (95% CI) | -0.61 (-0.90, -0.33) | -0.54 (-0.78, -0.30) | -0.80 (-1.11, -0.48) | -0.79 (-1.25, -0.33) |
| | % (95% CI) | -39.67 (-58.24, -21.09) | -38.35 (-55.23, -21.48) | -48.26 (-67.39, -29.14) | -67.12 (-106.35, -27.88) |

95% CI = 95% confidence interval; HFSS = high in fat, salt and sugar; OOH = out-of-home; UPF = ultra-processed foods. Results shown from models were interaction terms with pandemic restrictions in either count or zero component had $p < 0.05$. Models were adjusted for season, region, festivals, sex, and occupational social grade of the main shopper, number of adults, and presence of children.

Table S4. Marginal mean differences in purchase outcomes by occupational social grade of the main shopper

| Outcome | | DE (lowest) | C1C2 | AB (highest) |
|-------------------------------------------------|---------------|---------------------------|----------------------------|-----------------------------|
| Total energy purchased | kcal (95% CI) | 2478.74 (934.64, 4022.84) | 6563.27 (5452.24, 7674.30) | 7217.35 (5449.77, 8984.94) |
| | % (95% CI) | 6.94 (2.62, 11.27) | 18.65 (15.49, 21.80) | 22.37 (16.89, 27.85) |
| Energy purchased from fruit & vegetables | kcal (95% CI) | -26.65 (-104.32, 51.01) | -120.64 (-173.77, -67.52) | -34.12 (-127.42, 59.19) |
| | % (95% CI) | -2.73 (-10.69, 5.23) | -10.11(-14.56, -5.66) | -2.31 (-8.62, 4.00) |
| Energy purchased from HFSS products | kcal (95% CI) | – | | |
| | % (95% CI) | | | |
| Energy purchased from UPF | kcal (95% CI) | -451.40 (-807.77, -95.03) | -476.07 (-676.09, -276.06) | -769.99 (-1071.18, -468.80) |
| | % (95% CI) | -2.66 (-4.75, -0.56) | -2.94 (-4.17, -1.70) | -5.03 (-7.00, -3.06) |
| Energy purchased from savoury snacks | kcal (95% CI) | -94.16 (-194.98, 6.66) | -18.38 (-79.13, 42.37) | -0.66 (-80.86, 79.55) |
| | % (95% CI) | -8.47 (-17.54, 0.60) | -1.76 (-7.60, 4.07) | -0.07 (-8.16, 8.03) |
| Energy purchased from chocolate & confectionery | kcal (95% CI) | -44.60 (-214.24, 125.04) | -12.60 (-102.61, 77.40) | -65.41 (-183.98, 53.17) |
| | % (95% CI) | -2.63 (-12.65, 7.39) | -0.85 (-6.92, 5.22) | -4.34 (-12.21, 3.53) |
| Energy purchased from low-sugar soft drinks | kcal (95% CI) | 12.37 (-34.97, 59.71) | -1.95 (-23.65, 19.75) | 3.94 (-13.70, 21.58) |
| | % (95% CI) | 7.57 (-21.39, 36.53) | -1.54 (-18.72, 15.64) | 4.53 (-15.76, 24.83) |
| Energy purchased from medium-sugar soft drinks | kcal (95% CI) | – | | |
| | % (95% CI) | | | |
| Energy purchased from high-sugar soft drinks | kcal (95% CI) | – | | |
| | % (95% CI) | | | |
| Volume of alcoholic beverages purchased | ml (95% CI) | 160.93 (-78.79, 400.65) | 583.50 (374.97, 792.02) | 501.04 (230.05, 772.04) |
| | % (95% CI) | 10.09 (-4.94, 25.11) | 41.04 (26.38, 55.71) | 39.07 (17.94, 60.21) |
| OOH purchasing | days (95% CI) | -0.36 (-0.76, 0.03) | -0.63 (-0.85, -0.42) | -0.56 (-0.92, -0.21) |
| | % (95% CI) | -27.07 (-56.41, 2.26) | -44.55 (-59.67, -29.42) | -41.99 (-68.20, -15.79) |

95% CI = 95% confidence interval; HFSS = high in fat, salt and sugar; OOH = out-of-home; UPF = ultra-processed foods. Results shown from models were interaction terms with pandemic restrictions in either count or zero component had $p < 0.05$. Models were adjusted for season, region, festivals, age and sex of the main shopper, number of adults, and presence of children.

Table S5. Marginal mean differences in purchase outcomes by usual purchasing (in quartiles/tertiles/dichotomised)

| Outcome | | 1 (lowest) | 2 | 3 | 4 (highest) |
|-------------------------------------------------|---------------|-------------------------------|-------------------------------|-------------------------------|---------------------------------|
| Total energy purchased | kcal (95% CI) | 7408.10 (6440.51, 8375.69) | 6130.26 (5009.32, 7251.20) | 5053.41 (3829.31, 6277.52) | 1938.95 (-66.50, 3944.40) |
| | % (95% CI) | 41.15 (35.77, 46.52) | 23.53 (19.23, 27.83) | 15.32 (11.61, 19.04) | 4.07 (-0.14, 8.29) |
| Energy purchased from fruit & vegetables | kcal (95% CI) | 139.90 (85.77, 194.04) | 17.96 (-47.46, 83.38) | -123.06 (-189.70, -56.43) | -328.30 (-444.59, -212.01) |
| | % (95% CI) | 23.50 (14.40, 32.59) | 1.90 (-5.03, 8.84) | -9.24 (-14.24, -4.24) | -14.17 (-19.20, -9.15) |
| Energy purchased from HFSS products | kcal (95% CI) | 691.78 (428.58, 954.97) | 475.10 (236.83, 713.37) | 343.09 (111.34, 574.83) | -724.25 (-985.73, -462.77) |
| | % (95% CI) | 6.33 (3.92, 8.74) | 3.75 (1.87, 5.63) | 2.45 (0.79, 4.10) | -4.58 (-6.23, -2.93) |
| Energy purchased from UPF | kcal (95% CI) | 57.62 (-212.36, 327.61) | -312.18 (-576.07, -48.28) | -620.99 (-897.04, -344.94) | -1041.20 (-1334.91, -747.50) |
| | % (95% CI) | 0.48 (-1.76, 2.71) | -2.07 (-3.82, -0.32) | -3.65 (-5.27, -2.03) | -5.30 (-6.80, -3.81) |
| Energy purchased from savoury snacks | kcal (95% CI) | 128.88 (63.90, 193.86) | 41.37 (-22.12, 104.86) | -5.12 (-85.28, 75.03) | -223.46 (-345.79, -101.14) |
| | % (95% CI) | 30.31 (15.03, 45.60) | 5.49 (-2.93, 13.91) | -0.42 (-7.03, 6.18) | -10.77 (-16.66, -4.87) |
| Energy purchased from chocolate & confectionery | kcal (95% CI) | 193.54 (121.26, 265.82) | 100.74 (7.73, 193.76) | -5.00 (-117.47, 107.48) | -294.82 (-451.63, -138.00) |
| | % (95% CI) | 35.91 (22.50, 49.32) | 10.24 (0.79, 19.69) | -0.34 (-7.94, 7.26) | -11.82 (-18.10, -5.53) |
| Energy purchased from low-sugar soft drinks | kcal (95% CI) | 19.31 (-1.22, 39.84) | 21.44 (8.68, 34.20) | 23.85 (6.14, 41.56) | -67.39 (-115.56, -19.22) |
| | % (95% CI) | 69.01 (-4.39, 142.41) | 46.47 (18.81, 74.13) | 27.19 (7.00, 47.39) | -21.66 (-37.14, -6.17) |
| Energy purchased from medium-sugar soft drinks | | 1 (low) | 2 (high) | | |
| | kcal (95% CI) | 0.41 (-3.02, 3.83) | -21.47 (-40.76, -2.18) | | |
| | % (95% CI) | 6.11 (-45.12, 57.34) | -44.38 (-84.24, -4.51) | | |

| | | | | |
|----------------------------------------------|---------------|-------------------------|-------------------------|--------------------------|
| Energy purchased from high-sugar soft drinks | kcal (95% CI) | 6.31 (0.47, 12.1) | -27.0 (-55.5, 1.49) | |
| | % (95% CI) | 80.91 (6.08, 155.74) | -20.41 (-41.95, 1.12) | |
| OOH purchasing | days (95% CI) | -0.17 (-0.27, -0.07) | -0.68 (-0.97, -0.38) | |
| | % (95% CI) | -32.92 (-52.39, -13.45) | -32.71 (-46.81, -18.61) | |
| | | 1 (lowest) | 2 | 3 (highest) |
| Volume of alcoholic beverages purchased | ml (95% CI) | 123.15 (71.34, 174.95) | 354.24 (241.84, 466.64) | 708.28 (381.26, 1035.30) |
| | % (95% CI) | 153.16 (88.73, 217.60) | 86.29 (58.91, 113.67) | 25.90 (13.94, 37.85) |

95% CI = 95% confidence interval; HFSS = high in fat, salt and sugar; OOH = out-of-home; UPF = ultra-processed foods. Results shown from models were interaction terms with pandemic restrictions in either count or zero component had $p < 0.05$. Models were adjusted for season, region, festivals, age, sex, and occupational social grade of the main shopper, number of adults, and presence of children.

Model coefficients from secondary analysis; interactions with region

HFSS = high in fat, salt and sugar; UPF = ultra-processed food; OOH = out-of-home

Due to multicollinearity, the variables region, presence of children, and age of the main shopper were not included in the OOH models

| Term | Outcome | Total Energy purchased | | | | Energy purchased from fruit & vegetables | | | | | |
|-----------------------------------|---------|------------------------|-------|-----------|------------|------------------------------------------|---------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 15111.616 | 1.047 | 14757.438 | 15474.295 | <0.001 | 0.082 | 1.089 | 0.079 | 0.085 | <0.001 |
| count Time | | 1.001 | 1.000 | 1.000 | 1.001 | <0.001 | 0.999 | 1.000 | 0.998 | 0.999 | <0.001 |
| count Pandemic - during pandemic | | 1.203 | 1.017 | 1.168 | 1.238 | <0.001 | 0.939 | 1.027 | 0.903 | 0.976 | 0.018 |
| count Season - 2 | | 1.007 | 1.006 | 0.993 | 1.021 | 0.208 | 1.029 | 1.012 | 1.010 | 1.048 | 0.023 |
| count Season - 3 | | 0.970 | 1.007 | 0.956 | 0.983 | <0.001 | 1.025 | 1.013 | 1.006 | 1.045 | 0.052 |
| count Season - 4 | | 1.071 | 1.007 | 1.054 | 1.087 | <0.001 | 0.894 | 1.013 | 0.876 | 0.913 | <0.001 |
| count Age - 45-54 yrs | | 1.147 | 1.029 | 1.131 | 1.163 | <0.001 | 0.911 | 1.051 | 0.894 | 0.929 | 0.061 |
| count Age - 55-64 yrs | | 1.256 | 1.032 | 1.237 | 1.275 | <0.001 | 0.862 | 1.060 | 0.844 | 0.880 | 0.011 |
| count Age - 65+ yrs | | 1.271 | 1.032 | 1.252 | 1.291 | <0.001 | 0.867 | 1.061 | 0.849 | 0.886 | 0.017 |
| count Sex - male | | 0.971 | 1.023 | 0.961 | 0.981 | 0.199 | 0.971 | 1.038 | 0.958 | 0.985 | 0.432 |
| count Social grade - C1C2 | | 1.002 | 1.029 | 0.990 | 1.014 | 0.946 | 1.144 | 1.045 | 1.125 | 1.164 | 0.002 |
| count Social grade - AB | | 0.928 | 1.034 | 0.914 | 0.941 | 0.026 | 1.422 | 1.053 | 1.393 | 1.451 | <0.001 |
| count - Number of adults | | 0.864 | 1.012 | 0.859 | 0.868 | <0.001 | 0.890 | 1.021 | 0.883 | 0.896 | <0.001 |
| count Presence of children - Yes | | 0.806 | 1.026 | 0.796 | 0.817 | <0.001 | 0.826 | 1.046 | 0.812 | 0.841 | <0.001 |
| count Region - North of England | | 1.045 | 1.021 | 1.034 | 1.055 | 0.037 | 0.765 | 1.036 | 0.755 | 0.776 | <0.001 |
| count Festival - Valentine's Day | | 0.998 | 1.012 | 0.970 | 1.027 | 0.877 | 0.926 | 1.020 | 0.890 | 0.963 | <0.001 |
| count Festival - Easter | | 1.042 | 1.013 | 1.011 | 1.074 | 0.001 | 0.983 | 1.025 | 0.943 | 1.024 | 0.471 |
| count Festival - Halloween | | 0.922 | 1.017 | 0.884 | 0.961 | <0.001 | 1.067 | 1.039 | 1.008 | 1.131 | 0.084 |
| count Festival - Christmas | | 0.855 | 1.025 | 0.819 | 0.893 | <0.001 | 1.077 | 1.046 | 1.014 | 1.144 | 0.104 |
| count Interaction Time*Pandemic | | 0.999 | 1.001 | 0.996 | 1.002 | 0.330 | 1.000 | 1.003 | 0.996 | 1.004 | 0.994 |
| count Interaction Pandemic*Region | | 0.987 | 1.019 | 0.963 | 1.011 | 0.480 | 0.942 | 1.027 | 0.911 | 0.973 | 0.024 |
| zero Constant | | 0.079 | 1.175 | 0.068 | 0.093 | <0.001 | 0.478 | 1.199 | 0.427 | 0.534 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.996 | 1.001 | 0.146 | 1.000 | 1.001 | 0.999 | 1.002 | 0.895 |
| zero Pandemic - during pandemic | | 1.336 | 1.097 | 1.104 | 1.616 | 0.002 | 0.779 | 1.091 | 0.667 | 0.910 | 0.004 |
| zero Season - 2 | | 1.060 | 1.045 | 0.964 | 1.165 | 0.185 | 0.977 | 1.033 | 0.913 | 1.046 | 0.478 |
| zero Season - 3 | | 1.411 | 1.041 | 1.289 | 1.545 | <0.001 | 1.040 | 1.037 | 0.972 | 1.113 | 0.283 |
| zero Season - 4 | | 1.120 | 1.053 | 1.005 | 1.247 | 0.029 | 1.182 | 1.037 | 1.100 | 1.271 | <0.001 |
| zero Age - 45-54 yrs | | 0.737 | 1.098 | 0.677 | 0.802 | 0.001 | 0.833 | 1.120 | 0.779 | 0.891 | 0.107 |
| zero Age - 55-64 yrs | | 0.549 | 1.122 | 0.499 | 0.605 | <0.001 | 0.694 | 1.139 | 0.646 | 0.744 | 0.005 |
| zero Age - 65+ yrs | | 0.466 | 1.123 | 0.422 | 0.516 | <0.001 | 0.472 | 1.141 | 0.438 | 0.509 | <0.001 |
| zero Sex - male | | 0.871 | 1.083 | 0.812 | 0.934 | 0.085 | 1.335 | 1.094 | 1.273 | 1.401 | 0.001 |
| zero Social grade - C1C2 | | 0.979 | 1.106 | 0.900 | 1.066 | 0.836 | 0.631 | 1.111 | 0.597 | 0.667 | <0.001 |
| zero Social grade - AB | | 1.108 | 1.121 | 1.005 | 1.222 | 0.369 | 0.550 | 1.143 | 0.512 | 0.591 | <0.001 |
| zero - Number of adults | | 0.922 | 1.044 | 0.889 | 0.956 | 0.057 | 0.689 | 1.066 | 0.669 | 0.710 | <0.001 |
| zero Presence of children - Yes | | 0.866 | 1.092 | 0.799 | 0.939 | 0.101 | 0.662 | 1.116 | 0.620 | 0.707 | <0.001 |
| zero Region - North of England | | 0.968 | 1.072 | 0.905 | 1.036 | 0.642 | 1.087 | 1.088 | 1.035 | 1.142 | 0.324 |
| zero Festival - Valentine's Day | | 0.937 | 1.114 | 0.758 | 1.160 | 0.547 | 1.099 | 1.061 | 0.959 | 1.260 | 0.112 |
| zero Festival - Easter | | 1.252 | 1.098 | 1.043 | 1.501 | 0.016 | 0.965 | 1.080 | 0.824 | 1.130 | 0.638 |
| zero Festival - Halloween | | 1.641 | 1.122 | 1.298 | 2.077 | <0.001 | 0.879 | 1.099 | 0.718 | 1.076 | 0.173 |
| zero Festival - Christmas | | 2.543 | 1.103 | 2.073 | 3.119 | <0.001 | 1.327 | 1.093 | 1.106 | 1.591 | 0.002 |
| zero Interaction Time*Pandemic | | 0.979 | 1.010 | 0.959 | 0.999 | 0.029 | 0.987 | 1.009 | 0.970 | 1.004 | 0.115 |
| zero Interaction Pandemic*Region | | 1.161 | 1.091 | 0.991 | 1.360 | 0.086 | 1.142 | 1.089 | 0.999 | 1.304 | 0.121 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from HFSS | | | | | Energy purchased from UPF | | | | |
|-----------------------------------|---------|----------------------------|-------|-----------|------------|---------|---------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.520 | 1.021 | 0.512 | 0.527 | <0.001 | 0.603 | 1.026 | 0.594 | 0.611 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.000 | 0.775 | 1.000 | 1.000 | 1.000 | 1.000 | 0.763 |
| count Pandemic - during pandemic | | 1.006 | 1.008 | 0.989 | 1.024 | 0.424 | 0.964 | 1.008 | 0.948 | 0.980 | <0.001 |
| count Season - 2 | | 1.033 | 1.003 | 1.025 | 1.042 | <0.001 | 1.017 | 1.003 | 1.009 | 1.025 | <0.001 |
| count Season - 3 | | 1.039 | 1.004 | 1.031 | 1.048 | <0.001 | 1.024 | 1.003 | 1.016 | 1.032 | <0.001 |
| count Season - 4 | | 1.073 | 1.004 | 1.064 | 1.083 | <0.001 | 1.026 | 1.003 | 1.017 | 1.036 | <0.001 |
| count Age - 45-54 yrs | | 0.998 | 1.013 | 0.990 | 1.007 | 0.901 | 1.019 | 1.017 | 1.011 | 1.027 | 0.268 |
| count Age - 55-64 yrs | | 0.993 | 1.015 | 0.985 | 1.002 | 0.662 | 0.994 | 1.020 | 0.986 | 1.003 | 0.775 |
| count Age - 65+ yrs | | 0.997 | 1.016 | 0.988 | 1.006 | 0.864 | 0.985 | 1.020 | 0.977 | 0.994 | 0.454 |
| count Sex - male | | 1.006 | 1.011 | 1.000 | 1.013 | 0.545 | 0.998 | 1.013 | 0.992 | 1.004 | 0.887 |
| count Social grade - C1C2 | | 0.971 | 1.012 | 0.964 | 0.978 | 0.017 | 0.955 | 1.015 | 0.948 | 0.962 | 0.002 |
| count Social grade - AB | | 0.940 | 1.015 | 0.932 | 0.949 | <0.001 | 0.900 | 1.018 | 0.893 | 0.908 | <0.001 |
| count - Number of adults | | 0.992 | 1.006 | 0.989 | 0.995 | 0.159 | 0.992 | 1.007 | 0.989 | 0.995 | 0.212 |
| count Presence of children - Yes | | 1.015 | 1.012 | 1.007 | 1.023 | 0.215 | 1.055 | 1.015 | 1.047 | 1.063 | <0.001 |
| count Region - North of England | | 1.013 | 1.009 | 1.007 | 1.019 | 0.175 | 1.058 | 1.012 | 1.051 | 1.064 | <0.001 |
| count Festival - Valentine's Day | | 1.022 | 1.007 | 1.005 | 1.040 | 0.001 | 1.014 | 1.006 | 0.998 | 1.031 | 0.016 |
| count Festival - Easter | | 0.982 | 1.007 | 0.965 | 1.000 | 0.011 | 0.999 | 1.006 | 0.982 | 1.017 | 0.917 |
| count Festival - Halloween | | 0.994 | 1.010 | 0.970 | 1.019 | 0.574 | 1.012 | 1.008 | 0.987 | 1.036 | 0.170 |
| count Festival - Christmas | | 0.994 | 1.012 | 0.969 | 1.019 | 0.588 | 0.991 | 1.011 | 0.967 | 1.017 | 0.416 |
| count Interaction Time*Pandemic | | 1.000 | 1.001 | 0.998 | 1.002 | 0.709 | 1.000 | 1.001 | 0.998 | 1.002 | 0.732 |
| count Interaction Pandemic*Region | | 1.015 | 1.008 | 1.000 | 1.029 | 0.056 | 1.010 | 1.008 | 0.996 | 1.025 | 0.187 |
| zero Constant | | 0.103 | 1.240 | 0.082 | 0.128 | <0.001 | 0.026 | 1.320 | 0.018 | 0.036 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.995 | 1.001 | 0.226 | 0.997 | 1.002 | 0.992 | 1.001 | 0.153 |
| zero Pandemic - during pandemic | | 1.161 | 1.145 | 0.894 | 1.507 | 0.271 | 1.327 | 1.207 | 0.908 | 1.941 | 0.133 |
| zero Season - 2 | | 0.966 | 1.065 | 0.850 | 1.097 | 0.578 | 1.014 | 1.108 | 0.837 | 1.230 | 0.889 |
| zero Season - 3 | | 0.967 | 1.067 | 0.848 | 1.103 | 0.608 | 1.164 | 1.101 | 0.960 | 1.412 | 0.115 |
| zero Season - 4 | | 0.814 | 1.084 | 0.697 | 0.950 | 0.010 | 0.893 | 1.117 | 0.705 | 1.130 | 0.306 |
| zero Age - 45-54 yrs | | 0.619 | 1.153 | 0.543 | 0.706 | 0.001 | 0.651 | 1.238 | 0.541 | 0.785 | 0.044 |
| zero Age - 55-64 yrs | | 0.520 | 1.170 | 0.453 | 0.596 | <0.001 | 0.487 | 1.227 | 0.399 | 0.595 | <0.001 |
| zero Age - 65+ yrs | | 0.562 | 1.167 | 0.493 | 0.641 | <0.001 | 0.530 | 1.226 | 0.438 | 0.642 | 0.002 |
| zero Sex - male | | 1.228 | 1.115 | 1.119 | 1.347 | 0.060 | 1.215 | 1.156 | 1.061 | 1.392 | 0.179 |
| zero Social grade - C1C2 | | 1.059 | 1.144 | 0.935 | 1.200 | 0.671 | 1.300 | 1.190 | 1.063 | 1.589 | 0.131 |
| zero Social grade - AB | | 1.337 | 1.166 | 1.161 | 1.540 | 0.059 | 1.852 | 1.217 | 1.488 | 2.305 | 0.002 |
| zero - Number of adults | | 0.663 | 1.074 | 0.624 | 0.703 | <0.001 | 0.788 | 1.089 | 0.727 | 0.854 | 0.005 |
| zero Presence of children - Yes | | 0.454 | 1.147 | 0.396 | 0.522 | <0.001 | 0.345 | 1.195 | 0.280 | 0.426 | <0.001 |
| zero Region - North of England | | 0.663 | 1.109 | 0.602 | 0.731 | <0.001 | 0.604 | 1.144 | 0.522 | 0.698 | <0.001 |
| zero Festival - Valentine's Day | | 0.819 | 1.155 | 0.610 | 1.099 | 0.165 | 0.985 | 1.237 | 0.647 | 1.500 | 0.944 |
| zero Festival - Easter | | 0.976 | 1.149 | 0.734 | 1.298 | 0.863 | 1.130 | 1.216 | 0.760 | 1.681 | 0.533 |
| zero Festival - Halloween | | 0.992 | 1.250 | 0.638 | 1.543 | 0.970 | 1.026 | 1.393 | 0.535 | 1.968 | 0.938 |
| zero Festival - Christmas | | 2.002 | 1.197 | 1.426 | 2.810 | <0.001 | 3.124 | 1.247 | 2.048 | 4.765 | <0.001 |
| zero Interaction Time*Pandemic | | 0.963 | 1.016 | 0.933 | 0.993 | 0.016 | 0.996 | 1.025 | 0.954 | 1.040 | 0.878 |
| zero Interaction Pandemic*Region | | 1.268 | 1.161 | 1.003 | 1.602 | 0.113 | 0.962 | 1.220 | 0.688 | 1.346 | 0.847 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from savoury snacks | | | | | Energy purchased from chocolate & confectionery | | | | |
|-----------------------------------|---------|--------------------------------------|-------|-----------|------------|---------|-------------------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.138 | 1.078 | 0.133 | 0.144 | <0.001 | 0.151 | 1.064 | 0.145 | 0.157 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.001 | 0.176 | 1.001 | 1.000 | 1.000 | 1.001 | 0.021 |
| count Pandemic - during pandemic | | 0.930 | 1.030 | 0.889 | 0.973 | 0.013 | 0.952 | 1.033 | 0.907 | 0.999 | 0.125 |
| count Season - 2 | | 1.012 | 1.013 | 0.991 | 1.034 | 0.336 | 1.039 | 1.014 | 1.015 | 1.063 | 0.005 |
| count Season - 3 | | 1.065 | 1.013 | 1.042 | 1.089 | <0.001 | 1.046 | 1.016 | 1.022 | 1.072 | 0.003 |
| count Season - 4 | | 1.079 | 1.015 | 1.053 | 1.105 | <0.001 | 1.174 | 1.016 | 1.144 | 1.204 | <0.001 |
| count Age - 45-54 yrs | | 0.919 | 1.044 | 0.900 | 0.938 | 0.050 | 0.997 | 1.045 | 0.974 | 1.020 | 0.944 |
| count Age - 55-64 yrs | | 0.813 | 1.052 | 0.795 | 0.833 | <0.001 | 0.936 | 1.044 | 0.913 | 0.960 | 0.125 |
| count Age - 65+ yrs | | 0.734 | 1.060 | 0.716 | 0.752 | <0.001 | 0.870 | 1.046 | 0.847 | 0.893 | 0.002 |
| count Sex - male | | 1.132 | 1.037 | 1.114 | 1.151 | 0.001 | 1.040 | 1.032 | 1.022 | 1.059 | 0.215 |
| count Social grade - C1C2 | | 0.906 | 1.041 | 0.888 | 0.923 | 0.014 | 0.899 | 1.038 | 0.880 | 0.917 | 0.004 |
| count Social grade - AB | | 0.921 | 1.046 | 0.900 | 0.943 | 0.067 | 0.975 | 1.045 | 0.951 | 1.000 | 0.571 |
| count - Number of adults | | 0.898 | 1.017 | 0.891 | 0.905 | <0.001 | 0.872 | 1.018 | 0.865 | 0.880 | <0.001 |
| count Presence of children - Yes | | 0.804 | 1.043 | 0.789 | 0.820 | <0.001 | 0.876 | 1.039 | 0.857 | 0.894 | 0.001 |
| count Region - North of England | | 0.879 | 1.030 | 0.865 | 0.893 | <0.001 | 0.979 | 1.029 | 0.963 | 0.997 | 0.475 |
| count Festival - Valentine's Day | | 1.078 | 1.026 | 1.031 | 1.127 | 0.004 | 1.043 | 1.030 | 0.994 | 1.094 | 0.155 |
| count Festival - Easter | | 0.969 | 1.026 | 0.924 | 1.015 | 0.207 | 1.192 | 1.030 | 1.137 | 1.249 | <0.001 |
| count Festival - Halloween | | 1.006 | 1.041 | 0.942 | 1.075 | 0.879 | 1.124 | 1.040 | 1.051 | 1.202 | 0.003 |
| count Festival - Christmas | | 1.243 | 1.043 | 1.160 | 1.332 | <0.001 | 1.168 | 1.057 | 1.081 | 1.263 | 0.005 |
| count Interaction Time*Pandemic | | 1.000 | 1.003 | 0.995 | 1.005 | 0.993 | 0.988 | 1.003 | 0.983 | 0.994 | <0.001 |
| count Interaction Pandemic*Region | | 1.004 | 1.028 | 0.967 | 1.042 | 0.895 | 1.025 | 1.031 | 0.985 | 1.067 | 0.415 |
| zero Constant | | 1.712 | 1.133 | 1.593 | 1.839 | <0.001 | 1.651 | 1.123 | 1.538 | 1.774 | <0.001 |
| zero Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.144 | 0.999 | 1.001 | 0.998 | 1.000 | 0.068 |
| zero Pandemic - during pandemic | | 0.959 | 1.047 | 0.879 | 1.047 | 0.366 | 0.732 | 1.049 | 0.671 | 0.799 | <0.001 |
| zero Season - 2 | | 0.915 | 1.020 | 0.878 | 0.954 | <0.001 | 0.901 | 1.021 | 0.865 | 0.939 | <0.001 |
| zero Season - 3 | | 0.967 | 1.022 | 0.928 | 1.008 | 0.124 | 0.938 | 1.022 | 0.900 | 0.978 | 0.003 |
| zero Season - 4 | | 0.871 | 1.024 | 0.831 | 0.912 | <0.001 | 0.712 | 1.024 | 0.680 | 0.746 | <0.001 |
| zero Age - 45-54 yrs | | 0.882 | 1.086 | 0.845 | 0.920 | 0.127 | 0.843 | 1.082 | 0.809 | 0.879 | 0.031 |
| zero Age - 55-64 yrs | | 0.922 | 1.094 | 0.881 | 0.965 | 0.367 | 0.721 | 1.090 | 0.689 | 0.755 | <0.001 |
| zero Age - 65+ yrs | | 1.223 | 1.096 | 1.167 | 1.280 | 0.029 | 0.807 | 1.090 | 0.771 | 0.845 | 0.013 |
| zero Sex - male | | 1.011 | 1.067 | 0.981 | 1.043 | 0.861 | 1.286 | 1.063 | 1.248 | 1.326 | <0.001 |
| zero Social grade - C1C2 | | 0.907 | 1.081 | 0.874 | 0.942 | 0.210 | 1.057 | 1.075 | 1.018 | 1.097 | 0.446 |
| zero Social grade - AB | | 1.037 | 1.094 | 0.991 | 1.084 | 0.691 | 1.249 | 1.089 | 1.195 | 1.306 | 0.009 |
| zero - Number of adults | | 0.805 | 1.034 | 0.791 | 0.818 | <0.001 | 0.888 | 1.033 | 0.873 | 0.902 | <0.001 |
| zero Presence of children - Yes | | 0.595 | 1.080 | 0.572 | 0.619 | <0.001 | 0.676 | 1.075 | 0.650 | 0.703 | <0.001 |
| zero Region - North of England | | 0.978 | 1.059 | 0.948 | 1.008 | 0.692 | 0.747 | 1.057 | 0.724 | 0.770 | <0.001 |
| zero Festival - Valentine's Day | | 0.870 | 1.041 | 0.798 | 0.950 | 0.001 | 0.797 | 1.040 | 0.731 | 0.869 | <0.001 |
| zero Festival - Easter | | 1.021 | 1.043 | 0.932 | 1.119 | 0.616 | 0.695 | 1.045 | 0.633 | 0.764 | <0.001 |
| zero Festival - Halloween | | 1.097 | 1.059 | 0.966 | 1.245 | 0.106 | 0.949 | 1.061 | 0.835 | 1.078 | 0.369 |
| zero Festival - Christmas | | 1.227 | 1.064 | 1.078 | 1.396 | 0.001 | 1.699 | 1.067 | 1.493 | 1.933 | <0.001 |
| zero Interaction Time*Pandemic | | 0.990 | 1.005 | 0.980 | 1.000 | 0.029 | 1.009 | 1.005 | 0.999 | 1.019 | 0.055 |
| zero Interaction Pandemic*Region | | 1.013 | 1.049 | 0.941 | 1.091 | 0.783 | 1.090 | 1.052 | 1.012 | 1.174 | 0.089 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from low-sugar soft drinks | | | | | Energy from medium-sugar soft drinks | | | | |
|-----------------------------------|---------|---------------------------------------------|-------|-----------|------------|---------|--------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.021 | 1.210 | 0.019 | 0.022 | <0.001 | 0.038 | 1.259 | 0.030 | 0.048 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.421 | 1.004 | 1.002 | 1.001 | 1.007 | 0.079 |
| count Pandemic - during pandemic | | 0.837 | 1.110 | 0.758 | 0.923 | 0.088 | 0.755 | 1.220 | 0.571 | 0.999 | 0.157 |
| count Season - 2 | | 1.005 | 1.046 | 0.960 | 1.053 | 0.910 | 0.892 | 1.087 | 0.780 | 1.021 | 0.171 |
| count Season - 3 | | 1.119 | 1.045 | 1.068 | 1.172 | 0.010 | 0.954 | 1.103 | 0.834 | 1.092 | 0.634 |
| count Season - 4 | | 1.000 | 1.042 | 0.949 | 1.054 | 0.997 | 0.910 | 1.127 | 0.790 | 1.048 | 0.426 |
| count Age - 45-54 yrs | | 0.739 | 1.116 | 0.707 | 0.772 | 0.006 | 1.229 | 1.179 | 1.073 | 1.406 | 0.212 |
| count Age - 55-64 yrs | | 0.860 | 1.148 | 0.819 | 0.903 | 0.275 | 1.179 | 1.159 | 1.015 | 1.369 | 0.265 |
| count Age - 65+ yrs | | 0.674 | 1.140 | 0.639 | 0.710 | 0.003 | 0.973 | 1.176 | 0.837 | 1.130 | 0.865 |
| count Sex - male | | 1.105 | 1.095 | 1.067 | 1.144 | 0.271 | 1.080 | 1.104 | 0.976 | 1.195 | 0.439 |
| count Social grade - C1C2 | | 0.742 | 1.124 | 0.712 | 0.773 | 0.010 | 0.655 | 1.221 | 0.577 | 0.743 | 0.033 |
| count Social grade - AB | | 0.621 | 1.136 | 0.590 | 0.653 | <0.001 | 0.689 | 1.219 | 0.593 | 0.800 | 0.059 |
| count - Number of adults | | 0.909 | 1.047 | 0.895 | 0.923 | 0.037 | 0.843 | 1.062 | 0.803 | 0.884 | 0.005 |
| count Presence of children - Yes | | 0.725 | 1.098 | 0.697 | 0.754 | 0.001 | 1.119 | 1.174 | 0.982 | 1.274 | 0.485 |
| count Region - North of England | | 0.865 | 1.104 | 0.834 | 0.896 | 0.144 | 0.964 | 1.110 | 0.875 | 1.062 | 0.722 |
| count Festival - Valentine's Day | | 1.080 | 1.078 | 0.977 | 1.193 | 0.309 | 1.440 | 1.236 | 1.086 | 1.911 | 0.085 |
| count Festival - Easter | | 1.106 | 1.103 | 1.002 | 1.220 | 0.305 | 0.802 | 1.131 | 0.596 | 1.080 | 0.074 |
| count Festival - Halloween | | 0.983 | 1.138 | 0.852 | 1.134 | 0.892 | 1.232 | 1.307 | 0.799 | 1.899 | 0.436 |
| count Festival - Christmas | | 1.789 | 1.239 | 1.527 | 2.095 | 0.007 | 0.644 | 1.226 | 0.455 | 0.912 | 0.031 |
| count Interaction Time*Pandemic | | 1.009 | 1.007 | 0.999 | 1.020 | 0.186 | 1.038 | 1.030 | 1.007 | 1.069 | 0.215 |
| count Interaction Pandemic*Region | | 1.066 | 1.098 | 0.983 | 1.156 | 0.492 | 0.860 | 1.232 | 0.686 | 1.077 | 0.470 |
| zero Constant | | 3.428 | 1.175 | 3.167 | 3.711 | <0.001 | 51.109 | 1.328 | 40.165 | 65.035 | <0.001 |
| zero Time | | 1.000 | 1.001 | 0.999 | 1.001 | 0.794 | 0.996 | 1.002 | 0.993 | 0.999 | 0.069 |
| zero Pandemic - during pandemic | | 0.873 | 1.051 | 0.793 | 0.961 | 0.006 | 1.367 | 1.184 | 1.017 | 1.839 | 0.064 |
| zero Season - 2 | | 0.868 | 1.022 | 0.830 | 0.908 | <0.001 | 0.799 | 1.076 | 0.694 | 0.921 | 0.002 |
| zero Season - 3 | | 0.803 | 1.023 | 0.767 | 0.840 | <0.001 | 0.852 | 1.086 | 0.740 | 0.981 | 0.051 |
| zero Season - 4 | | 0.946 | 1.024 | 0.899 | 0.995 | 0.018 | 0.737 | 1.082 | 0.638 | 0.853 | <0.001 |
| zero Age - 45-54 yrs | | 0.873 | 1.113 | 0.834 | 0.914 | 0.204 | 0.839 | 1.177 | 0.730 | 0.964 | 0.279 |
| zero Age - 55-64 yrs | | 1.021 | 1.124 | 0.972 | 1.072 | 0.861 | 0.849 | 1.222 | 0.730 | 0.986 | 0.413 |
| zero Age - 65+ yrs | | 1.292 | 1.124 | 1.228 | 1.359 | 0.029 | 0.984 | 1.219 | 0.841 | 1.151 | 0.935 |
| zero Sex - male | | 1.183 | 1.084 | 1.144 | 1.223 | 0.037 | 1.289 | 1.152 | 1.160 | 1.432 | 0.073 |
| zero Social grade - C1C2 | | 0.956 | 1.104 | 0.918 | 0.995 | 0.645 | 0.822 | 1.197 | 0.723 | 0.936 | 0.277 |
| zero Social grade - AB | | 1.343 | 1.123 | 1.279 | 1.410 | 0.011 | 0.844 | 1.213 | 0.725 | 0.982 | 0.379 |
| zero - Number of adults | | 0.758 | 1.046 | 0.744 | 0.772 | <0.001 | 0.943 | 1.076 | 0.896 | 0.992 | 0.423 |
| zero Presence of children - Yes | | 0.654 | 1.103 | 0.626 | 0.682 | <0.001 | 1.194 | 1.156 | 1.048 | 1.360 | 0.221 |
| zero Region - North of England | | 0.549 | 1.076 | 0.531 | 0.568 | <0.001 | 1.223 | 1.150 | 1.107 | 1.352 | 0.149 |
| zero Festival - Valentine's Day | | 1.035 | 1.041 | 0.941 | 1.139 | 0.392 | 0.911 | 1.158 | 0.679 | 1.222 | 0.524 |
| zero Festival - Easter | | 0.953 | 1.044 | 0.862 | 1.052 | 0.260 | 1.088 | 1.156 | 0.794 | 1.490 | 0.562 |
| zero Festival - Halloween | | 0.996 | 1.063 | 0.867 | 1.144 | 0.943 | 1.515 | 1.238 | 0.961 | 2.390 | 0.051 |
| zero Festival - Christmas | | 1.216 | 1.069 | 1.054 | 1.402 | 0.004 | 0.918 | 1.203 | 0.635 | 1.327 | 0.643 |
| zero Interaction Time*Pandemic | | 0.983 | 1.005 | 0.973 | 0.994 | <0.001 | 0.968 | 1.016 | 0.938 | 0.999 | 0.040 |
| zero Interaction Pandemic*Region | | 1.108 | 1.054 | 1.023 | 1.201 | 0.051 | 1.086 | 1.174 | 0.858 | 1.376 | 0.605 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy from high-sugar soft drinks | | | | Alcohol volume | | | | | |
|-----------------------------------|---------|------------------------------------|-------|-----------|------------|----------------|---------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.103 | 1.176 | 0.091 | 0.117 | <0.001 | 3715.743 | 1.173 | 3475.589 | 3972.492 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.001 | 0.377 | 1.001 | 1.001 | 1.000 | 1.002 | 0.058 |
| count Pandemic - during pandemic | | 0.771 | 1.106 | 0.652 | 0.911 | 0.010 | 1.104 | 1.051 | 1.025 | 1.190 | 0.045 |
| count Season - 2 | | 0.926 | 1.056 | 0.856 | 1.002 | 0.162 | 1.098 | 1.022 | 1.060 | 1.138 | <0.001 |
| count Season - 3 | | 1.146 | 1.074 | 1.056 | 1.244 | 0.056 | 1.093 | 1.027 | 1.055 | 1.133 | 0.001 |
| count Season - 4 | | 0.932 | 1.068 | 0.851 | 1.020 | 0.285 | 1.126 | 1.024 | 1.083 | 1.170 | <0.001 |
| count Age - 45-54 yrs | | 0.753 | 1.114 | 0.702 | 0.809 | 0.009 | 1.160 | 1.096 | 1.116 | 1.206 | 0.107 |
| count Age - 55-64 yrs | | 0.630 | 1.141 | 0.584 | 0.681 | <0.001 | 1.060 | 1.111 | 1.018 | 1.104 | 0.577 |
| count Age - 65+ yrs | | 0.668 | 1.198 | 0.609 | 0.733 | 0.025 | 0.919 | 1.131 | 0.881 | 0.958 | 0.491 |
| count Sex - male | | 1.151 | 1.104 | 1.082 | 1.224 | 0.156 | 1.112 | 1.075 | 1.084 | 1.141 | 0.144 |
| count Social grade - C1C2 | | 0.829 | 1.116 | 0.776 | 0.887 | 0.088 | 0.791 | 1.117 | 0.766 | 0.817 | 0.034 |
| count Social grade - AB | | 0.796 | 1.116 | 0.730 | 0.866 | 0.038 | 0.722 | 1.121 | 0.695 | 0.750 | 0.004 |
| count - Number of adults | | 0.853 | 1.056 | 0.832 | 0.876 | 0.003 | 0.695 | 1.038 | 0.686 | 0.704 | <0.001 |
| count Presence of children - Yes | | 0.690 | 1.091 | 0.645 | 0.738 | <0.001 | 0.885 | 1.091 | 0.854 | 0.917 | 0.160 |
| count Region - North of England | | 0.836 | 1.103 | 0.787 | 0.888 | 0.068 | 1.351 | 1.073 | 1.315 | 1.389 | <0.001 |
| count Festival - Valentine's Day | | 0.840 | 1.088 | 0.706 | 0.998 | 0.038 | 0.911 | 1.038 | 0.847 | 0.980 | 0.012 |
| count Festival - Easter | | 0.952 | 1.094 | 0.819 | 1.106 | 0.579 | 1.085 | 1.040 | 1.009 | 1.167 | 0.038 |
| count Festival - Halloween | | 0.834 | 1.120 | 0.653 | 1.064 | 0.108 | 0.911 | 1.058 | 0.821 | 1.011 | 0.099 |
| count Festival - Christmas | | 0.837 | 1.124 | 0.674 | 1.039 | 0.127 | 1.036 | 1.064 | 0.934 | 1.150 | 0.564 |
| count Interaction Time*Pandemic | | 1.014 | 1.011 | 0.995 | 1.032 | 0.231 | 0.995 | 1.005 | 0.987 | 1.002 | 0.275 |
| count Interaction Pandemic*Region | | 1.107 | 1.139 | 0.965 | 1.269 | 0.436 | 1.092 | 1.052 | 1.029 | 1.160 | 0.084 |
| zero Constant | | 10.376 | 1.334 | 8.962 | 12.013 | <0.001 | 8.343 | 1.189 | 7.698 | 9.043 | <0.001 |
| zero Time | | 1.001 | 1.001 | 0.999 | 1.003 | 0.304 | 0.999 | 1.001 | 0.998 | 1.000 | 0.320 |
| zero Pandemic - during pandemic | | 1.013 | 1.103 | 0.841 | 1.219 | 0.898 | 0.863 | 1.055 | 0.785 | 0.949 | 0.006 |
| zero Season - 2 | | 0.844 | 1.048 | 0.773 | 0.922 | <0.001 | 0.829 | 1.022 | 0.793 | 0.867 | <0.001 |
| zero Season - 3 | | 0.891 | 1.048 | 0.813 | 0.976 | 0.014 | 0.816 | 1.024 | 0.779 | 0.854 | <0.001 |
| zero Season - 4 | | 0.843 | 1.054 | 0.763 | 0.933 | 0.001 | 0.687 | 1.025 | 0.654 | 0.721 | <0.001 |
| zero Age - 45-54 yrs | | 1.691 | 1.201 | 1.558 | 1.835 | 0.004 | 0.765 | 1.125 | 0.730 | 0.801 | 0.022 |
| zero Age - 55-64 yrs | | 1.792 | 1.249 | 1.641 | 1.957 | 0.009 | 0.675 | 1.135 | 0.643 | 0.709 | 0.002 |
| zero Age - 65+ yrs | | 3.134 | 1.268 | 2.824 | 3.477 | <0.001 | 0.725 | 1.138 | 0.689 | 0.762 | 0.013 |
| zero Sex - male | | 0.888 | 1.157 | 0.832 | 0.949 | 0.416 | 1.011 | 1.092 | 0.978 | 1.044 | 0.903 |
| zero Social grade - C1C2 | | 1.562 | 1.185 | 1.453 | 1.680 | 0.008 | 0.782 | 1.119 | 0.751 | 0.815 | 0.029 |
| zero Social grade - AB | | 1.992 | 1.213 | 1.814 | 2.189 | <0.001 | 0.801 | 1.139 | 0.763 | 0.841 | 0.087 |
| zero - Number of adults | | 0.810 | 1.078 | 0.785 | 0.835 | 0.005 | 0.843 | 1.048 | 0.829 | 0.857 | <0.001 |
| zero Presence of children - Yes | | 1.238 | 1.197 | 1.147 | 1.338 | 0.234 | 1.337 | 1.115 | 1.281 | 1.396 | 0.007 |
| zero Region - North of England | | 1.369 | 1.145 | 1.283 | 1.462 | 0.021 | 0.622 | 1.085 | 0.601 | 0.643 | <0.001 |
| zero Festival - Valentine's Day | | 0.963 | 1.087 | 0.794 | 1.168 | 0.649 | 0.820 | 1.039 | 0.747 | 0.901 | <0.001 |
| zero Festival - Easter | | 0.715 | 1.078 | 0.604 | 0.848 | <0.001 | 0.975 | 1.039 | 0.887 | 1.073 | 0.512 |
| zero Festival - Halloween | | 1.052 | 1.125 | 0.801 | 1.382 | 0.667 | 1.198 | 1.056 | 1.048 | 1.369 | 0.001 |
| zero Festival - Christmas | | 0.738 | 1.126 | 0.578 | 0.943 | 0.011 | 1.198 | 1.068 | 1.048 | 1.371 | 0.006 |
| zero Interaction Time*Pandemic | | 0.988 | 1.010 | 0.968 | 1.008 | 0.226 | 0.986 | 1.004 | 0.976 | 0.996 | 0.001 |
| zero Interaction Pandemic*Region | | 0.978 | 1.110 | 0.839 | 1.140 | 0.833 | 0.921 | 1.059 | 0.852 | 0.995 | 0.153 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | OOH purchasing | | | | p value |
|-----------------------------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | |
| count Constant | | 1.375 | 1.352 | 1.250 | 1.513 | 0.290 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.000 | 0.037 |
| count Pandemic - during pandemic | | 0.495 | 1.102 | 0.434 | 0.563 | <0.001 |
| count Season - 2 | | 0.962 | 1.025 | 0.913 | 1.013 | 0.121 |
| count Season - 3 | | 0.995 | 1.024 | 0.945 | 1.047 | 0.824 |
| count Season - 4 | | 0.995 | 1.024 | 0.940 | 1.053 | 0.829 |
| count Age - 45-54 yrs | | 0.913 | 1.181 | 0.871 | 0.957 | 0.582 |
| count Age - 55-64 yrs | | 1.046 | 1.191 | 0.993 | 1.102 | 0.797 |
| count Age - 65+ yrs | | 0.718 | 1.261 | 0.668 | 0.772 | 0.154 |
| count Sex - male | | 1.503 | 1.137 | 1.446 | 1.562 | 0.001 |
| count Social grade - C1C2 | | 1.024 | 1.218 | 0.971 | 1.079 | 0.905 |
| count Social grade - AB | | 1.031 | 1.299 | 0.963 | 1.104 | 0.907 |
| count - Number of adults | | 1.005 | 1.078 | 0.983 | 1.027 | 0.948 |
| count Presence of children - Yes | | 0.995 | 1.173 | 0.950 | 1.042 | 0.975 |
| count Region - North of England | | 1.106 | 1.126 | 1.064 | 1.149 | 0.398 |
| count Festival - Valentine's Day | | 1.006 | 1.027 | 0.906 | 1.117 | 0.827 |
| count Festival - Easter | | 0.874 | 1.042 | 0.772 | 0.990 | 0.001 |
| count Festival - Halloween | | 1.012 | 1.041 | 0.872 | 1.175 | 0.767 |
| count Festival - Christmas | | 0.727 | 1.060 | 0.616 | 0.859 | <0.001 |
| count Interaction Time*Pandemic | | 1.018 | 1.008 | 1.004 | 1.033 | 0.026 |
| count Interaction Pandemic*Region | | 1.023 | 1.128 | 0.918 | 1.139 | 0.852 |
| zero Constant | | 0.073 | 3.975 | 0.031 | 0.170 | 0.058 |
| zero Time | | 1.008 | 1.013 | 0.993 | 1.023 | 0.543 |
| zero Pandemic - during pandemic | | 2.599 | 2.056 | 0.953 | 7.091 | 0.185 |
| zero Season - 2 | | 2.529 | 1.643 | 1.444 | 4.428 | 0.062 |
| zero Season - 3 | | 1.050 | 1.435 | 0.574 | 1.920 | 0.893 |
| zero Season - 4 | | 1.305 | 1.473 | 0.705 | 2.415 | 0.491 |
| zero Age - 45-54 yrs | | - | | | | |
| zero Age - 55-64 yrs | | - | | | | |
| zero Age - 65+ yrs | | - | | | | |
| zero Sex - male | | 8.395 | 3.566 | 4.992 | 14.119 | 0.094 |
| zero Social grade - C1C2 | | 0.001 | 8.797 | <0.001 | 9335.695 | 0.001 |
| zero Social grade - AB | | 5.620 | 4.422 | 3.211 | 9.835 | 0.246 |
| zero - Number of adults | | 0.359 | 2.159 | 0.279 | 0.461 | 0.183 |
| zero Presence of children - Yes | | - | | | | |
| zero Region - North of England | | - | | | | |
| zero Festival - Valentine's Day | | - | | | | |
| zero Festival - Easter | | - | | | | |
| zero Festival - Halloween | | - | | | | |
| zero Festival - Christmas | | - | | | | |
| zero Interaction Time*Pandemic | | 0.800 | 1.106 | 0.690 | 0.928 | 0.027 |
| zero Interaction Pandemic*Region | | - | | | | |
| Observations | | 16,806 | | | | |

Model coefficients from secondary analysis; interactions with presence of children

HFSS = high in fat, salt and sugar; UPF = ultra-processed food; OOH = out-of-home

Due to multicollinearity, the variables region, presence of children, and age of the main shopper were not included in the OOH models

| Term | Outcome | Total Energy purchased | | | | Energy purchased from fruit & vegetables | | | | | |
|-------------------------------------------------------|---------|------------------------|-------|-----------|------------|------------------------------------------|---------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 15168.394 | 1.046 | 14814.241 | 15531.013 | <0.001 | 0.082 | 1.089 | 0.080 | 0.085 | <0.001 |
| count Time | | 1.001 | 1.000 | 1.000 | 1.001 | <0.001 | 0.999 | 1.000 | 0.998 | 0.999 | <0.001 |
| count Pandemic - during pandemic | | 1.178 | 1.013 | 1.147 | 1.210 | <0.001 | 0.907 | 1.025 | 0.875 | 0.939 | <0.001 |
| count Season - 2 | | 1.007 | 1.006 | 0.993 | 1.021 | 0.222 | 1.029 | 1.012 | 1.010 | 1.048 | 0.022 |
| count Season - 3 | | 0.970 | 1.007 | 0.956 | 0.983 | <0.001 | 1.025 | 1.013 | 1.006 | 1.045 | 0.053 |
| count Season - 4 | | 1.070 | 1.007 | 1.054 | 1.087 | <0.001 | 0.894 | 1.013 | 0.876 | 0.913 | <0.001 |
| count Age - 45-54 yrs | | 1.147 | 1.029 | 1.131 | 1.163 | <0.001 | 0.911 | 1.051 | 0.894 | 0.929 | 0.060 |
| count Age - 55-64 yrs | | 1.255 | 1.032 | 1.236 | 1.274 | <0.001 | 0.862 | 1.060 | 0.844 | 0.880 | 0.011 |
| count Age - 65+ yrs | | 1.271 | 1.032 | 1.251 | 1.290 | <0.001 | 0.867 | 1.061 | 0.849 | 0.885 | 0.017 |
| count Sex - male | | 0.971 | 1.023 | 0.961 | 0.981 | 0.199 | 0.971 | 1.038 | 0.958 | 0.985 | 0.432 |
| count Social grade - C1C2 | | 1.002 | 1.029 | 0.990 | 1.014 | 0.945 | 1.144 | 1.045 | 1.125 | 1.164 | 0.002 |
| count Social grade - AB | | 0.928 | 1.034 | 0.914 | 0.941 | 0.026 | 1.422 | 1.053 | 1.394 | 1.451 | <0.001 |
| count - Number of adults | | 0.864 | 1.012 | 0.859 | 0.868 | <0.001 | 0.890 | 1.021 | 0.883 | 0.896 | <0.001 |
| count Presence of children - Yes | | 0.799 | 1.027 | 0.788 | 0.810 | <0.001 | 0.826 | 1.048 | 0.811 | 0.842 | <0.001 |
| count Region - North of England | | 1.042 | 1.020 | 1.033 | 1.052 | 0.039 | 0.757 | 1.035 | 0.748 | 0.767 | <0.001 |
| count Festival - Valentine's Day | | 0.998 | 1.012 | 0.970 | 1.027 | 0.868 | 0.926 | 1.020 | 0.890 | 0.963 | <0.001 |
| count Festival - Easter | | 1.042 | 1.013 | 1.011 | 1.074 | 0.001 | 0.983 | 1.025 | 0.944 | 1.024 | 0.488 |
| count Festival - Halloween | | 0.922 | 1.017 | 0.884 | 0.961 | <0.001 | 1.067 | 1.039 | 1.008 | 1.131 | 0.084 |
| count Festival - Christmas | | 0.855 | 1.025 | 0.819 | 0.893 | <0.001 | 1.076 | 1.046 | 1.013 | 1.143 | 0.106 |
| count Interaction Time*Pandemic | | 0.999 | 1.001 | 0.996 | 1.002 | 0.320 | 1.000 | 1.003 | 0.996 | 1.004 | 0.939 |
| count Interaction Pandemic*Presence of Children - Yes | | 1.056 | 1.020 | 1.027 | 1.086 | 0.006 | 1.000 | 1.032 | 0.963 | 1.039 | 0.990 |
| zero Constant | | 0.078 | 1.176 | 0.067 | 0.092 | <0.001 | 0.471 | 1.199 | 0.421 | 0.526 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.996 | 1.001 | 0.146 | 1.000 | 1.001 | 0.999 | 1.002 | 0.893 |
| zero Pandemic - during pandemic | | 1.441 | 1.091 | 1.211 | 1.715 | <0.001 | 0.865 | 1.075 | 0.755 | 0.992 | 0.046 |
| zero Season - 2 | | 1.060 | 1.045 | 0.964 | 1.165 | 0.184 | 0.977 | 1.033 | 0.913 | 1.046 | 0.480 |
| zero Season - 3 | | 1.411 | 1.041 | 1.289 | 1.545 | <0.001 | 1.040 | 1.037 | 0.973 | 1.113 | 0.281 |
| zero Season - 4 | | 1.120 | 1.053 | 1.005 | 1.247 | 0.029 | 1.182 | 1.037 | 1.100 | 1.271 | <0.001 |
| zero Age - 45-54 yrs | | 0.737 | 1.098 | 0.677 | 0.803 | 0.001 | 0.834 | 1.120 | 0.780 | 0.891 | 0.108 |
| zero Age - 55-64 yrs | | 0.549 | 1.122 | 0.499 | 0.605 | <0.001 | 0.694 | 1.139 | 0.646 | 0.745 | 0.005 |
| zero Age - 65+ yrs | | 0.466 | 1.123 | 0.422 | 0.516 | <0.001 | 0.472 | 1.141 | 0.438 | 0.509 | <0.001 |
| zero Sex - male | | 0.871 | 1.083 | 0.812 | 0.934 | 0.084 | 1.335 | 1.094 | 1.273 | 1.401 | 0.001 |
| zero Social grade - C1C2 | | 0.980 | 1.106 | 0.900 | 1.066 | 0.838 | 0.631 | 1.111 | 0.597 | 0.667 | <0.001 |
| zero Social grade - AB | | 1.109 | 1.121 | 1.005 | 1.223 | 0.367 | 0.550 | 1.143 | 0.512 | 0.591 | <0.001 |
| zero - Number of adults | | 0.922 | 1.044 | 0.889 | 0.957 | 0.057 | 0.689 | 1.066 | 0.669 | 0.710 | <0.001 |
| zero Presence of children - Yes | | 0.861 | 1.095 | 0.789 | 0.939 | 0.099 | 0.673 | 1.118 | 0.628 | 0.721 | <0.001 |
| zero Region - North of England | | 0.995 | 1.069 | 0.936 | 1.058 | 0.941 | 1.107 | 1.086 | 1.057 | 1.158 | 0.221 |
| zero Festival - Valentine's Day | | 0.937 | 1.114 | 0.758 | 1.159 | 0.547 | 1.099 | 1.061 | 0.959 | 1.260 | 0.112 |
| zero Festival - Easter | | 1.251 | 1.098 | 1.043 | 1.501 | 0.016 | 0.965 | 1.080 | 0.824 | 1.130 | 0.640 |
| zero Festival - Halloween | | 1.641 | 1.122 | 1.297 | 2.076 | <0.001 | 0.879 | 1.099 | 0.718 | 1.076 | 0.173 |
| zero Festival - Christmas | | 2.542 | 1.103 | 2.073 | 3.118 | <0.001 | 1.327 | 1.093 | 1.106 | 1.591 | 0.002 |
| zero Interaction Time*Pandemic | | 0.979 | 1.010 | 0.959 | 0.999 | 0.029 | 0.987 | 1.009 | 0.970 | 1.004 | 0.115 |
| zero Interaction Pandemic*Presence of Children - Yes | | 1.035 | 1.097 | 0.871 | 1.229 | 0.714 | 0.876 | 1.102 | 0.743 | 1.033 | 0.172 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from HFSS | | | | | Energy purchased from UPF | | | | |
|-------------------------------------------------------|---------|----------------------------|-------|-----------|------------|---------|---------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.519 | 1.021 | 0.512 | 0.527 | <0.001 | 0.603 | 1.026 | 0.594 | 0.611 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.000 | 0.776 | 1.000 | 1.000 | 1.000 | 1.000 | 0.765 |
| count Pandemic - during pandemic | | 1.008 | 1.007 | 0.993 | 1.024 | 0.228 | 0.964 | 1.007 | 0.950 | 0.979 | <0.001 |
| count Season - 2 | | 1.033 | 1.003 | 1.025 | 1.042 | <0.001 | 1.017 | 1.003 | 1.009 | 1.025 | <0.001 |
| count Season - 3 | | 1.039 | 1.004 | 1.031 | 1.048 | <0.001 | 1.024 | 1.003 | 1.016 | 1.032 | <0.001 |
| count Season - 4 | | 1.073 | 1.004 | 1.064 | 1.083 | <0.001 | 1.026 | 1.003 | 1.017 | 1.036 | <0.001 |
| count Age - 45-54 yrs | | 0.998 | 1.013 | 0.990 | 1.007 | 0.904 | 1.019 | 1.017 | 1.011 | 1.027 | 0.267 |
| count Age - 55-64 yrs | | 0.993 | 1.015 | 0.985 | 1.002 | 0.664 | 0.995 | 1.020 | 0.986 | 1.003 | 0.776 |
| count Age - 65+ yrs | | 0.997 | 1.016 | 0.988 | 1.006 | 0.863 | 0.985 | 1.020 | 0.977 | 0.994 | 0.453 |
| count Sex - male | | 1.006 | 1.011 | 1.000 | 1.012 | 0.547 | 0.998 | 1.013 | 0.992 | 1.004 | 0.885 |
| count Social grade - C1C2 | | 0.971 | 1.012 | 0.964 | 0.978 | 0.017 | 0.955 | 1.015 | 0.948 | 0.962 | 0.002 |
| count Social grade - AB | | 0.940 | 1.015 | 0.932 | 0.949 | <0.001 | 0.900 | 1.018 | 0.893 | 0.908 | <0.001 |
| count - Number of adults | | 0.992 | 1.006 | 0.989 | 0.995 | 0.159 | 0.992 | 1.007 | 0.989 | 0.995 | 0.212 |
| count Presence of children - Yes | | 1.011 | 1.012 | 1.003 | 1.019 | 0.384 | 1.051 | 1.015 | 1.043 | 1.059 | 0.001 |
| count Region - North of England | | 1.015 | 1.009 | 1.010 | 1.021 | 0.095 | 1.059 | 1.012 | 1.054 | 1.065 | <0.001 |
| count Festival - Valentine's Day | | 1.022 | 1.007 | 1.005 | 1.040 | 0.001 | 1.014 | 1.006 | 0.997 | 1.031 | 0.016 |
| count Festival - Easter | | 0.982 | 1.007 | 0.965 | 1.000 | 0.011 | 0.999 | 1.006 | 0.982 | 1.017 | 0.912 |
| count Festival - Halloween | | 0.994 | 1.010 | 0.970 | 1.019 | 0.571 | 1.011 | 1.008 | 0.987 | 1.036 | 0.172 |
| count Festival - Christmas | | 0.994 | 1.012 | 0.969 | 1.019 | 0.589 | 0.991 | 1.011 | 0.967 | 1.017 | 0.414 |
| count Interaction Time*Pandemic | | 1.000 | 1.001 | 0.998 | 1.002 | 0.735 | 1.000 | 1.001 | 0.998 | 1.002 | 0.758 |
| count Interaction Pandemic*Presence of Children - Yes | | 1.025 | 1.008 | 1.008 | 1.042 | 0.002 | 1.022 | 1.008 | 1.006 | 1.039 | 0.006 |
| zero Constant | | 0.101 | 1.240 | 0.081 | 0.126 | <0.001 | 0.026 | 1.318 | 0.019 | 0.037 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.995 | 1.001 | 0.223 | 0.997 | 1.002 | 0.992 | 1.001 | 0.153 |
| zero Pandemic - during pandemic | | 1.271 | 1.138 | 1.000 | 1.615 | 0.063 | 1.207 | 1.202 | 0.841 | 1.733 | 0.306 |
| zero Season - 2 | | 0.966 | 1.065 | 0.850 | 1.097 | 0.578 | 1.014 | 1.108 | 0.836 | 1.229 | 0.892 |
| zero Season - 3 | | 0.967 | 1.067 | 0.848 | 1.103 | 0.607 | 1.163 | 1.101 | 0.959 | 1.411 | 0.117 |
| zero Season - 4 | | 0.813 | 1.084 | 0.697 | 0.950 | 0.010 | 0.892 | 1.117 | 0.705 | 1.129 | 0.304 |
| zero Age - 45-54 yrs | | 0.620 | 1.153 | 0.544 | 0.707 | 0.001 | 0.651 | 1.237 | 0.541 | 0.784 | 0.044 |
| zero Age - 55-64 yrs | | 0.520 | 1.170 | 0.454 | 0.597 | <0.001 | 0.487 | 1.227 | 0.399 | 0.595 | <0.001 |
| zero Age - 65+ yrs | | 0.562 | 1.167 | 0.493 | 0.641 | <0.001 | 0.530 | 1.226 | 0.438 | 0.641 | 0.002 |
| zero Sex - male | | 1.228 | 1.115 | 1.119 | 1.347 | 0.060 | 1.215 | 1.156 | 1.061 | 1.391 | 0.181 |
| zero Social grade - C1C2 | | 1.060 | 1.144 | 0.935 | 1.201 | 0.667 | 1.300 | 1.190 | 1.063 | 1.589 | 0.131 |
| zero Social grade - AB | | 1.338 | 1.166 | 1.161 | 1.541 | 0.058 | 1.852 | 1.217 | 1.488 | 2.305 | 0.002 |
| zero - Number of adults | | 0.663 | 1.074 | 0.625 | 0.703 | <0.001 | 0.788 | 1.089 | 0.727 | 0.854 | 0.005 |
| zero Presence of children - Yes | | 0.443 | 1.150 | 0.382 | 0.515 | <0.001 | 0.309 | 1.207 | 0.244 | 0.392 | <0.001 |
| zero Region - North of England | | 0.690 | 1.103 | 0.632 | 0.754 | <0.001 | 0.600 | 1.131 | 0.526 | 0.684 | <0.001 |
| zero Festival - Valentine's Day | | 0.819 | 1.155 | 0.610 | 1.099 | 0.165 | 0.985 | 1.237 | 0.647 | 1.500 | 0.943 |
| zero Festival - Easter | | 0.976 | 1.148 | 0.734 | 1.297 | 0.859 | 1.129 | 1.216 | 0.759 | 1.679 | 0.536 |
| zero Festival - Halloween | | 0.992 | 1.250 | 0.638 | 1.543 | 0.972 | 1.026 | 1.393 | 0.535 | 1.968 | 0.939 |
| zero Festival - Christmas | | 2.002 | 1.197 | 1.427 | 2.810 | <0.001 | 3.124 | 1.247 | 2.048 | 4.766 | <0.001 |
| zero Interaction Time*Pandemic | | 0.963 | 1.016 | 0.933 | 0.993 | 0.016 | 0.996 | 1.025 | 0.954 | 1.041 | 0.885 |
| zero Interaction Pandemic*Presence of Children - Yes | | 1.155 | 1.209 | 0.845 | 1.579 | 0.447 | 1.676 | 1.303 | 1.076 | 2.610 | 0.051 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from savoury snacks | | | | | Energy purchased from chocolate & confectionery | | | | |
|-------------------------------------------------------|---------|--------------------------------------|-------|-----------|------------|---------|-------------------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.139 | 1.077 | 0.134 | 0.144 | <0.001 | 0.150 | 1.064 | 0.144 | 0.156 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.001 | 0.176 | 1.001 | 1.000 | 1.000 | 1.001 | 0.021 |
| count Pandemic - during pandemic | | 0.909 | 1.026 | 0.872 | 0.948 | <0.001 | 0.965 | 1.028 | 0.923 | 1.008 | 0.186 |
| count Season - 2 | | 1.012 | 1.013 | 0.991 | 1.034 | 0.333 | 1.039 | 1.014 | 1.015 | 1.063 | 0.005 |
| count Season - 3 | | 1.065 | 1.013 | 1.041 | 1.088 | <0.001 | 1.046 | 1.016 | 1.022 | 1.072 | 0.003 |
| count Season - 4 | | 1.079 | 1.015 | 1.053 | 1.105 | <0.001 | 1.174 | 1.016 | 1.144 | 1.204 | <0.001 |
| count Age - 45-54 yrs | | 0.919 | 1.044 | 0.900 | 0.938 | 0.050 | 0.997 | 1.045 | 0.974 | 1.021 | 0.947 |
| count Age - 55-64 yrs | | 0.813 | 1.052 | 0.795 | 0.832 | <0.001 | 0.936 | 1.044 | 0.913 | 0.961 | 0.127 |
| count Age - 65+ yrs | | 0.734 | 1.060 | 0.716 | 0.752 | <0.001 | 0.870 | 1.046 | 0.847 | 0.893 | 0.002 |
| count Sex - male | | 1.132 | 1.037 | 1.114 | 1.150 | 0.001 | 1.040 | 1.032 | 1.022 | 1.059 | 0.215 |
| count Social grade - C1C2 | | 0.906 | 1.041 | 0.888 | 0.923 | 0.014 | 0.899 | 1.038 | 0.880 | 0.917 | 0.004 |
| count Social grade - AB | | 0.921 | 1.046 | 0.900 | 0.943 | 0.068 | 0.975 | 1.045 | 0.951 | 1.000 | 0.572 |
| count - Number of adults | | 0.898 | 1.017 | 0.891 | 0.905 | <0.001 | 0.872 | 1.018 | 0.864 | 0.880 | <0.001 |
| count Presence of children - Yes | | 0.793 | 1.043 | 0.777 | 0.810 | <0.001 | 0.875 | 1.040 | 0.856 | 0.895 | 0.001 |
| count Region - North of England | | 0.880 | 1.029 | 0.867 | 0.892 | <0.001 | 0.984 | 1.028 | 0.969 | 1.000 | 0.558 |
| count Festival - Valentine's Day | | 1.078 | 1.026 | 1.031 | 1.127 | 0.004 | 1.043 | 1.030 | 0.994 | 1.094 | 0.154 |
| count Festival - Easter | | 0.968 | 1.026 | 0.924 | 1.015 | 0.202 | 1.192 | 1.030 | 1.137 | 1.249 | <0.001 |
| count Festival - Halloween | | 1.006 | 1.041 | 0.942 | 1.075 | 0.882 | 1.124 | 1.040 | 1.051 | 1.201 | 0.003 |
| count Festival - Christmas | | 1.242 | 1.043 | 1.159 | 1.331 | <0.001 | 1.169 | 1.057 | 1.081 | 1.263 | 0.005 |
| count Interaction Time*Pandemic | | 1.000 | 1.003 | 0.995 | 1.005 | 0.930 | 0.988 | 1.003 | 0.983 | 0.994 | <0.001 |
| count Interaction Pandemic*Presence of Children - Yes | | 1.077 | 1.029 | 1.035 | 1.122 | 0.009 | 1.003 | 1.030 | 0.960 | 1.049 | 0.909 |
| zero Constant | | 1.703 | 1.133 | 1.586 | 1.830 | <0.001 | 1.632 | 1.123 | 1.520 | 1.753 | <0.001 |
| zero Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.145 | 0.999 | 1.001 | 0.998 | 1.000 | 0.068 |
| zero Pandemic - during pandemic | | 0.986 | 1.041 | 0.911 | 1.068 | 0.729 | 0.782 | 1.044 | 0.722 | 0.847 | <0.001 |
| zero Season - 2 | | 0.915 | 1.020 | 0.878 | 0.954 | <0.001 | 0.902 | 1.021 | 0.865 | 0.939 | <0.001 |
| zero Season - 3 | | 0.967 | 1.022 | 0.928 | 1.009 | 0.126 | 0.938 | 1.022 | 0.900 | 0.978 | 0.003 |
| zero Season - 4 | | 0.871 | 1.024 | 0.831 | 0.912 | <0.001 | 0.713 | 1.024 | 0.681 | 0.746 | <0.001 |
| zero Age - 45-54 yrs | | 0.882 | 1.086 | 0.845 | 0.920 | 0.127 | 0.843 | 1.082 | 0.809 | 0.880 | 0.031 |
| zero Age - 55-64 yrs | | 0.922 | 1.094 | 0.881 | 0.965 | 0.367 | 0.722 | 1.090 | 0.690 | 0.755 | <0.001 |
| zero Age - 65+ yrs | | 1.223 | 1.096 | 1.167 | 1.280 | 0.029 | 0.808 | 1.090 | 0.771 | 0.846 | 0.013 |
| zero Sex - male | | 1.011 | 1.067 | 0.981 | 1.043 | 0.860 | 1.286 | 1.063 | 1.248 | 1.326 | <0.001 |
| zero Social grade - C1C2 | | 0.907 | 1.081 | 0.874 | 0.942 | 0.211 | 1.057 | 1.075 | 1.018 | 1.097 | 0.445 |
| zero Social grade - AB | | 1.037 | 1.094 | 0.992 | 1.084 | 0.690 | 1.250 | 1.089 | 1.196 | 1.306 | 0.009 |
| zero - Number of adults | | 0.805 | 1.034 | 0.791 | 0.818 | <0.001 | 0.888 | 1.033 | 0.874 | 0.902 | <0.001 |
| zero Presence of children - Yes | | 0.604 | 1.080 | 0.579 | 0.629 | <0.001 | 0.685 | 1.076 | 0.657 | 0.714 | <0.001 |
| zero Region - North of England | | 0.980 | 1.057 | 0.953 | 1.007 | 0.714 | 0.757 | 1.056 | 0.737 | 0.779 | <0.001 |
| zero Festival - Valentine's Day | | 0.871 | 1.041 | 0.798 | 0.950 | 0.001 | 0.798 | 1.040 | 0.732 | 0.870 | <0.001 |
| zero Festival - Easter | | 1.021 | 1.043 | 0.932 | 1.120 | 0.612 | 0.695 | 1.045 | 0.633 | 0.764 | <0.001 |
| zero Festival - Halloween | | 1.097 | 1.059 | 0.966 | 1.245 | 0.106 | 0.949 | 1.060 | 0.835 | 1.078 | 0.370 |
| zero Festival - Christmas | | 1.227 | 1.064 | 1.078 | 1.396 | 0.001 | 1.698 | 1.067 | 1.493 | 1.932 | <0.001 |
| zero Interaction Time*Pandemic | | 0.990 | 1.005 | 0.980 | 0.999 | 0.028 | 1.009 | 1.005 | 0.999 | 1.019 | 0.056 |
| zero Interaction Pandemic*Presence of Children - Yes | | 0.916 | 1.056 | 0.839 | 1.001 | 0.107 | 0.926 | 1.056 | 0.849 | 1.009 | 0.158 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from low-sugar soft drinks | | | | | Energy from medium-sugar soft drinks | | | | |
|-------------------------------------------------------|---------|---------------------------------------------|-------|-----------|------------|---------|--------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.020 | 1.205 | 0.019 | 0.022 | <0.001 | 0.040 | 1.253 | 0.032 | 0.051 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.420 | 1.005 | 1.002 | 1.001 | 1.008 | 0.065 |
| count Pandemic - during pandemic | | 0.879 | 1.078 | 0.805 | 0.959 | 0.086 | 0.635 | 1.199 | 0.493 | 0.818 | 0.012 |
| count Season - 2 | | 1.005 | 1.046 | 0.960 | 1.053 | 0.912 | 0.909 | 1.087 | 0.795 | 1.039 | 0.253 |
| count Season - 3 | | 1.119 | 1.045 | 1.068 | 1.172 | 0.010 | 0.951 | 1.102 | 0.832 | 1.087 | 0.601 |
| count Season - 4 | | 1.000 | 1.042 | 0.949 | 1.054 | 0.991 | 0.908 | 1.126 | 0.790 | 1.045 | 0.418 |
| count Age - 45-54 yrs | | 0.738 | 1.116 | 0.706 | 0.772 | 0.006 | 1.169 | 1.171 | 1.021 | 1.338 | 0.323 |
| count Age - 55-64 yrs | | 0.860 | 1.149 | 0.819 | 0.903 | 0.278 | 1.147 | 1.154 | 0.988 | 1.332 | 0.339 |
| count Age - 65+ yrs | | 0.674 | 1.140 | 0.639 | 0.710 | 0.003 | 0.938 | 1.172 | 0.807 | 1.089 | 0.684 |
| count Sex - male | | 1.105 | 1.095 | 1.067 | 1.144 | 0.272 | 1.089 | 1.102 | 0.985 | 1.204 | 0.381 |
| count Social grade - C1C2 | | 0.743 | 1.124 | 0.712 | 0.774 | 0.011 | 0.657 | 1.213 | 0.580 | 0.744 | 0.030 |
| count Social grade - AB | | 0.622 | 1.136 | 0.590 | 0.654 | <0.001 | 0.695 | 1.211 | 0.600 | 0.806 | 0.058 |
| count - Number of adults | | 0.909 | 1.047 | 0.895 | 0.923 | 0.037 | 0.846 | 1.062 | 0.807 | 0.888 | 0.005 |
| count Presence of children - Yes | | 0.729 | 1.102 | 0.698 | 0.760 | 0.001 | 0.945 | 1.158 | 0.821 | 1.086 | 0.697 |
| count Region - North of England | | 0.875 | 1.097 | 0.848 | 0.904 | 0.148 | 0.939 | 1.098 | 0.860 | 1.025 | 0.500 |
| count Festival - Valentine's Day | | 1.080 | 1.079 | 0.977 | 1.194 | 0.309 | 1.427 | 1.227 | 1.078 | 1.889 | 0.083 |
| count Festival - Easter | | 1.106 | 1.104 | 1.003 | 1.221 | 0.306 | 0.764 | 1.137 | 0.568 | 1.027 | 0.036 |
| count Festival - Halloween | | 0.982 | 1.138 | 0.852 | 1.133 | 0.891 | 1.268 | 1.338 | 0.825 | 1.950 | 0.415 |
| count Festival - Christmas | | 1.792 | 1.239 | 1.530 | 2.099 | 0.007 | 0.658 | 1.229 | 0.466 | 0.929 | 0.042 |
| count Interaction Time*Pandemic | | 1.009 | 1.007 | 0.999 | 1.020 | 0.185 | 1.019 | 1.023 | 0.989 | 1.050 | 0.403 |
| count Interaction Pandemic*Presence of Children - Yes | | 0.973 | 1.087 | 0.894 | 1.060 | 0.746 | 2.120 | 1.281 | 1.617 | 2.779 | 0.002 |
| zero Constant | | 3.395 | 1.175 | 3.137 | 3.673 | <0.001 | 50.390 | 1.325 | 39.634 | 64.063 | <0.001 |
| zero Time | | 1.000 | 1.001 | 0.999 | 1.001 | 0.793 | 0.996 | 1.002 | 0.993 | 0.999 | 0.069 |
| zero Pandemic - during pandemic | | 0.920 | 1.044 | 0.843 | 1.004 | 0.051 | 1.481 | 1.178 | 1.120 | 1.959 | 0.016 |
| zero Season - 2 | | 0.868 | 1.022 | 0.830 | 0.908 | <0.001 | 0.800 | 1.076 | 0.694 | 0.921 | 0.002 |
| zero Season - 3 | | 0.803 | 1.023 | 0.767 | 0.840 | <0.001 | 0.852 | 1.086 | 0.740 | 0.981 | 0.052 |
| zero Season - 4 | | 0.946 | 1.024 | 0.900 | 0.995 | 0.018 | 0.738 | 1.082 | 0.638 | 0.853 | <0.001 |
| zero Age - 45-54 yrs | | 0.873 | 1.113 | 0.834 | 0.915 | 0.205 | 0.839 | 1.176 | 0.730 | 0.964 | 0.279 |
| zero Age - 55-64 yrs | | 1.021 | 1.124 | 0.972 | 1.073 | 0.858 | 0.849 | 1.222 | 0.730 | 0.986 | 0.413 |
| zero Age - 65+ yrs | | 1.292 | 1.124 | 1.228 | 1.359 | 0.029 | 0.984 | 1.219 | 0.841 | 1.151 | 0.935 |
| zero Sex - male | | 1.183 | 1.084 | 1.144 | 1.223 | 0.037 | 1.289 | 1.152 | 1.160 | 1.432 | 0.073 |
| zero Social grade - C1C2 | | 0.956 | 1.104 | 0.918 | 0.995 | 0.647 | 0.823 | 1.197 | 0.723 | 0.936 | 0.277 |
| zero Social grade - AB | | 1.343 | 1.123 | 1.279 | 1.410 | 0.011 | 0.844 | 1.213 | 0.725 | 0.982 | 0.380 |
| zero - Number of adults | | 0.758 | 1.046 | 0.744 | 0.772 | <0.001 | 0.943 | 1.076 | 0.896 | 0.992 | 0.423 |
| zero Presence of children - Yes | | 0.651 | 1.104 | 0.622 | 0.681 | <0.001 | 1.229 | 1.162 | 1.068 | 1.415 | 0.169 |
| zero Region - North of England | | 0.559 | 1.074 | 0.542 | 0.576 | <0.001 | 1.241 | 1.143 | 1.134 | 1.359 | 0.106 |
| zero Festival - Valentine's Day | | 1.035 | 1.041 | 0.941 | 1.139 | 0.393 | 0.910 | 1.158 | 0.679 | 1.222 | 0.522 |
| zero Festival - Easter | | 0.952 | 1.044 | 0.862 | 1.052 | 0.258 | 1.088 | 1.156 | 0.794 | 1.490 | 0.559 |
| zero Festival - Halloween | | 0.996 | 1.063 | 0.867 | 1.144 | 0.942 | 1.516 | 1.238 | 0.961 | 2.390 | 0.051 |
| zero Festival - Christmas | | 1.216 | 1.069 | 1.054 | 1.402 | 0.004 | 0.918 | 1.203 | 0.635 | 1.328 | 0.645 |
| zero Interaction Time*Pandemic | | 0.983 | 1.005 | 0.973 | 0.993 | <0.001 | 0.968 | 1.016 | 0.938 | 0.999 | 0.040 |
| zero Interaction Pandemic*Presence of Children - Yes | | 1.029 | 1.061 | 0.937 | 1.130 | 0.631 | 0.850 | 1.202 | 0.643 | 1.123 | 0.376 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy from high-sugar soft drinks | | | | | Alcohol volume | | | | |
|-------------------------------------------------------|---------|------------------------------------|-------|-----------|------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.110 | 1.168 | 0.097 | 0.124 | <0.001 | 3685.240 | 1.172 | 3448.575 | 3938.146 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.001 | 0.369 | 1.001 | 1.001 | 1.000 | 1.002 | 0.057 |
| count Pandemic - during pandemic | | 0.329 | 2.138 | 0.092 | 1.181 | 0.144 | 1.148 | 1.045 | 1.075 | 1.225 | 0.002 |
| count Season - 2 | | 0.926 | 1.056 | 0.856 | 1.002 | 0.160 | 1.098 | 1.022 | 1.060 | 1.138 | <0.001 |
| count Season - 3 | | 1.145 | 1.074 | 1.055 | 1.243 | 0.057 | 1.093 | 1.027 | 1.055 | 1.133 | 0.001 |
| count Season - 4 | | 0.933 | 1.068 | 0.852 | 1.021 | 0.292 | 1.125 | 1.024 | 1.083 | 1.170 | <0.001 |
| count Age - 45-54 yrs | | 0.752 | 1.114 | 0.701 | 0.808 | 0.008 | 1.161 | 1.096 | 1.117 | 1.207 | 0.105 |
| count Age - 55-64 yrs | | 0.630 | 1.141 | 0.583 | 0.680 | <0.001 | 1.059 | 1.110 | 1.016 | 1.103 | 0.585 |
| count Age - 65+ yrs | | 0.667 | 1.198 | 0.608 | 0.731 | 0.025 | 0.918 | 1.130 | 0.880 | 0.957 | 0.485 |
| count Sex - male | | 1.151 | 1.104 | 1.082 | 1.224 | 0.157 | 1.113 | 1.075 | 1.084 | 1.142 | 0.141 |
| count Social grade - C1C2 | | 0.830 | 1.115 | 0.777 | 0.888 | 0.088 | 0.792 | 1.116 | 0.767 | 0.818 | 0.034 |
| count Social grade - AB | | 0.796 | 1.116 | 0.731 | 0.867 | 0.038 | 0.723 | 1.121 | 0.695 | 0.751 | 0.004 |
| count - Number of adults | | 0.854 | 1.055 | 0.832 | 0.876 | 0.003 | 0.695 | 1.038 | 0.686 | 0.705 | <0.001 |
| count Presence of children - Yes | | 0.692 | 1.099 | 0.643 | 0.744 | <0.001 | 0.867 | 1.094 | 0.834 | 0.902 | 0.114 |
| count Region - North of England | | 0.852 | 1.097 | 0.806 | 0.900 | 0.082 | 1.375 | 1.070 | 1.342 | 1.409 | <0.001 |
| count Festival - Valentine's Day | | 0.840 | 1.088 | 0.706 | 0.998 | 0.038 | 0.911 | 1.038 | 0.847 | 0.981 | 0.012 |
| count Festival - Easter | | 0.946 | 1.093 | 0.814 | 1.100 | 0.534 | 1.083 | 1.040 | 1.008 | 1.165 | 0.041 |
| count Festival - Halloween | | 0.833 | 1.119 | 0.653 | 1.064 | 0.105 | 0.910 | 1.058 | 0.820 | 1.010 | 0.095 |
| count Festival - Christmas | | 0.837 | 1.124 | 0.674 | 1.039 | 0.126 | 1.038 | 1.064 | 0.935 | 1.152 | 0.552 |
| count Interaction Time*Pandemic | | 1.014 | 1.011 | 0.996 | 1.033 | 0.205 | 0.995 | 1.005 | 0.987 | 1.002 | 0.269 |
| count Interaction Pandemic*Presence of Children - Yes | | 0.982 | 1.153 | 0.844 | 1.143 | 0.898 | 1.092 | 1.055 | 1.019 | 1.170 | 0.101 |
| zero Constant | | 9.558 | 1.337 | 8.309 | 10.996 | <0.001 | 8.355 | 1.189 | 7.711 | 9.052 | <0.001 |
| zero Time | | 1.001 | 1.001 | 0.999 | 1.003 | 0.304 | 0.999 | 1.001 | 0.998 | 1.000 | 0.321 |
| zero Pandemic - during pandemic | | 2.138 | 1.984 | 0.524 | 8.723 | 0.267 | 0.859 | 1.044 | 0.790 | 0.935 | <0.001 |
| zero Season - 2 | | 0.844 | 1.048 | 0.773 | 0.922 | <0.001 | 0.829 | 1.022 | 0.793 | 0.867 | <0.001 |
| zero Season - 3 | | 0.891 | 1.048 | 0.813 | 0.976 | 0.014 | 0.816 | 1.024 | 0.779 | 0.854 | <0.001 |
| zero Season - 4 | | 0.843 | 1.054 | 0.763 | 0.932 | 0.001 | 0.686 | 1.025 | 0.653 | 0.721 | <0.001 |
| zero Age - 45-54 yrs | | 1.691 | 1.201 | 1.558 | 1.835 | 0.004 | 0.764 | 1.125 | 0.730 | 0.800 | 0.022 |
| zero Age - 55-64 yrs | | 1.792 | 1.249 | 1.641 | 1.957 | 0.009 | 0.675 | 1.136 | 0.643 | 0.709 | 0.002 |
| zero Age - 65+ yrs | | 3.133 | 1.268 | 2.824 | 3.477 | <0.001 | 0.725 | 1.138 | 0.689 | 0.762 | 0.013 |
| zero Sex - male | | 0.888 | 1.157 | 0.832 | 0.949 | 0.416 | 1.011 | 1.092 | 0.978 | 1.045 | 0.902 |
| zero Social grade - C1C2 | | 1.562 | 1.185 | 1.453 | 1.680 | 0.008 | 0.782 | 1.119 | 0.751 | 0.815 | 0.029 |
| zero Social grade - AB | | 1.992 | 1.213 | 1.813 | 2.189 | <0.001 | 0.801 | 1.139 | 0.763 | 0.841 | 0.087 |
| zero - Number of adults | | 0.810 | 1.078 | 0.785 | 0.835 | 0.005 | 0.843 | 1.048 | 0.829 | 0.857 | <0.001 |
| zero Presence of children - Yes | | 1.228 | 1.201 | 1.131 | 1.334 | 0.261 | 1.391 | 1.118 | 1.328 | 1.457 | 0.003 |
| zero Region - North of England | | 1.364 | 1.141 | 1.286 | 1.447 | 0.018 | 0.612 | 1.083 | 0.594 | 0.631 | <0.001 |
| zero Festival - Valentine's Day | | 0.963 | 1.087 | 0.794 | 1.168 | 0.649 | 0.820 | 1.039 | 0.746 | 0.901 | <0.001 |
| zero Festival - Easter | | 0.715 | 1.078 | 0.603 | 0.847 | <0.001 | 0.976 | 1.039 | 0.887 | 1.074 | 0.525 |
| zero Festival - Halloween | | 1.052 | 1.125 | 0.801 | 1.382 | 0.668 | 1.198 | 1.056 | 1.048 | 1.370 | 0.001 |
| zero Festival - Christmas | | 0.738 | 1.126 | 0.578 | 0.943 | 0.011 | 1.199 | 1.068 | 1.048 | 1.371 | 0.006 |
| zero Interaction Time*Pandemic | | 0.988 | 1.010 | 0.968 | 1.008 | 0.225 | 0.986 | 1.004 | 0.976 | 0.996 | 0.001 |
| zero Interaction Pandemic*Presence of Children - Yes | | 1.048 | 1.125 | 0.884 | 1.242 | 0.693 | 0.815 | 1.068 | 0.745 | 0.891 | 0.002 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | OOH purchasing | | | | p value |
|-------------------------------------------------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | |
| count Constant | | 1.377 | 1.351 | 1.252 | 1.515 | 0.287 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.000 | 0.037 |
| count Pandemic - during pandemic | | 0.490 | 1.091 | 0.436 | 0.550 | <0.001 |
| count Season - 2 | | 0.962 | 1.025 | 0.913 | 1.013 | 0.121 |
| count Season - 3 | | 0.995 | 1.024 | 0.945 | 1.046 | 0.819 |
| count Season - 4 | | 0.995 | 1.024 | 0.940 | 1.053 | 0.828 |
| count Age - 45-54 yrs | | 0.912 | 1.181 | 0.870 | 0.956 | 0.580 |
| count Age - 55-64 yrs | | 1.045 | 1.191 | 0.992 | 1.101 | 0.799 |
| count Age - 65+ yrs | | 0.717 | 1.261 | 0.667 | 0.771 | 0.152 |
| count Sex - male | | 1.503 | 1.137 | 1.446 | 1.563 | 0.001 |
| count Social grade - C1C2 | | 1.025 | 1.218 | 0.972 | 1.080 | 0.902 |
| count Social grade - AB | | 1.031 | 1.299 | 0.962 | 1.104 | 0.908 |
| count - Number of adults | | 1.005 | 1.078 | 0.983 | 1.027 | 0.948 |
| count Presence of children - Yes | | 0.985 | 1.171 | 0.938 | 1.034 | 0.923 |
| count Region - North of England | | 1.108 | 1.125 | 1.069 | 1.149 | 0.382 |
| count Festival - Valentine's Day | | 1.006 | 1.027 | 0.906 | 1.117 | 0.823 |
| count Festival - Easter | | 0.874 | 1.042 | 0.772 | 0.990 | 0.001 |
| count Festival - Halloween | | 1.012 | 1.041 | 0.872 | 1.174 | 0.770 |
| count Festival - Christmas | | 0.727 | 1.060 | 0.616 | 0.859 | <0.001 |
| count Interaction Time*Pandemic | | 1.018 | 1.008 | 1.004 | 1.033 | 0.025 |
| count Interaction Pandemic*Presence of Children - Yes | | 1.086 | 1.138 | 0.967 | 1.218 | 0.526 |
| zero Constant | | 0.072 | 4.042 | 0.031 | 0.168 | 0.059 |
| zero Time | | 1.008 | 1.013 | 0.993 | 1.023 | 0.539 |
| zero Pandemic - during pandemic | | 2.590 | 2.057 | 0.945 | 7.099 | 0.187 |
| zero Season - 2 | | 2.538 | 1.655 | 1.445 | 4.459 | 0.064 |
| zero Season - 3 | | 1.052 | 1.438 | 0.575 | 1.926 | 0.889 |
| zero Season - 4 | | 1.298 | 1.477 | 0.700 | 2.407 | 0.504 |
| zero Age - 45-54 yrs | | - | | | | |
| zero Age - 55-64 yrs | | - | | | | |
| zero Age - 65+ yrs | | - | | | | |
| zero Sex - male | | 8.463 | 3.612 | 5.008 | 14.301 | 0.096 |
| zero Social grade - C1C2 | | <0.001 | 8.563 | <0.001 | Inf | <0.001 |
| zero Social grade - AB | | 5.700 | 4.479 | 3.234 | 10.047 | 0.246 |
| zero - Number of adults | | 0.359 | 2.161 | 0.279 | 0.462 | 0.184 |
| zero Presence of children - Yes | | - | | | | |
| zero Region - North of England | | - | | | | |
| zero Festival - Valentine's Day | | - | | | | |
| zero Festival - Easter | | - | | | | |
| zero Festival - Halloween | | - | | | | |
| zero Festival - Christmas | | - | | | | |
| zero Interaction Time*Pandemic | | 0.796 | 1.110 | 0.684 | 0.926 | 0.028 |
| zero Interaction Pandemic*Presence of Children - Yes | | - | | | | |
| Observations | | 16,806 | | | | |

Model coefficients from secondary analysis; interactions with age group of the main reporter

HFSS = high in fat, salt and sugar; UPF = ultra-processed food; OOH = out-of-home. Due to multicollinearity, the variables region, presence of children, and age of the main shopper were not included in the OOH models

| Term | Outcome | Total Energy purchased | | | | Energy purchased from fruit & vegetables | | | | | |
|--------------------------------------------|---------|------------------------|-------|-----------|------------|------------------------------------------|---------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 14953.260 | 1.047 | 14600.740 | 15314.292 | <0.001 | 0.082 | 1.089 | 0.080 | 0.085 | <0.001 |
| count Time | | 1.001 | 1.000 | 1.000 | 1.001 | <0.001 | 0.999 | 1.000 | 0.998 | 0.999 | <0.001 |
| count Pandemic - during pandemic | | 1.277 | 1.020 | 1.235 | 1.321 | <0.001 | 0.899 | 1.036 | 0.859 | 0.941 | 0.003 |
| count Season - 2 | | 1.006 | 1.006 | 0.993 | 1.020 | 0.268 | 1.028 | 1.012 | 1.009 | 1.048 | 0.023 |
| count Season - 3 | | 0.969 | 1.007 | 0.956 | 0.983 | <0.001 | 1.025 | 1.013 | 1.006 | 1.045 | 0.053 |
| count Season - 4 | | 1.070 | 1.007 | 1.054 | 1.086 | <0.001 | 0.894 | 1.013 | 0.876 | 0.913 | <0.001 |
| count Age - 45-54 yrs | | 1.151 | 1.031 | 1.134 | 1.168 | <0.001 | 0.916 | 1.052 | 0.897 | 0.935 | 0.084 |
| count Age - 55-64 yrs | | 1.275 | 1.033 | 1.254 | 1.295 | <0.001 | 0.859 | 1.061 | 0.840 | 0.879 | 0.011 |
| count Age - 65+ yrs | | 1.308 | 1.033 | 1.287 | 1.330 | <0.001 | 0.861 | 1.063 | 0.841 | 0.880 | 0.013 |
| count Sex - male | | 0.971 | 1.023 | 0.961 | 0.981 | 0.194 | 0.971 | 1.038 | 0.958 | 0.985 | 0.435 |
| count Social grade - C1C2 | | 1.002 | 1.029 | 0.990 | 1.014 | 0.947 | 1.144 | 1.045 | 1.125 | 1.164 | 0.002 |
| count Social grade - AB | | 0.928 | 1.034 | 0.914 | 0.941 | 0.026 | 1.422 | 1.053 | 1.393 | 1.451 | <0.001 |
| count - Number of adults | | 0.864 | 1.012 | 0.859 | 0.868 | <0.001 | 0.890 | 1.021 | 0.883 | 0.896 | <0.001 |
| count Presence of children - Yes | | 0.807 | 1.026 | 0.796 | 0.817 | <0.001 | 0.826 | 1.046 | 0.812 | 0.841 | <0.001 |
| count Region - North of England | | 1.042 | 1.020 | 1.033 | 1.052 | 0.040 | 0.757 | 1.035 | 0.747 | 0.767 | <0.001 |
| count Festival - Valentine's Day | | 0.998 | 1.012 | 0.969 | 1.027 | 0.838 | 0.926 | 1.020 | 0.890 | 0.963 | <0.001 |
| count Festival - Easter | | 1.042 | 1.013 | 1.011 | 1.074 | 0.001 | 0.983 | 1.025 | 0.944 | 1.025 | 0.491 |
| count Festival - Halloween | | 0.922 | 1.017 | 0.884 | 0.961 | <0.001 | 1.067 | 1.038 | 1.008 | 1.131 | 0.084 |
| count Festival - Christmas | | 0.856 | 1.025 | 0.820 | 0.893 | <0.001 | 1.077 | 1.047 | 1.014 | 1.144 | 0.104 |
| count Interaction Time*Pandemic | | 0.999 | 1.001 | 0.996 | 1.002 | 0.383 | 1.000 | 1.003 | 0.996 | 1.005 | 0.916 |
| count Interaction Pandemic*Age - 45-54 yrs | | 0.982 | 1.025 | 0.949 | 1.017 | 0.481 | 0.971 | 1.040 | 0.926 | 1.017 | 0.446 |
| count Interaction Pandemic*Age - 55-64 yrs | | 0.918 | 1.025 | 0.887 | 0.950 | 0.001 | 1.016 | 1.040 | 0.970 | 1.065 | 0.683 |
| count Interaction Pandemic*Age - 65+ yrs | | 0.843 | 1.027 | 0.814 | 0.872 | <0.001 | 1.045 | 1.040 | 0.997 | 1.095 | 0.268 |
| zero Constant | | 0.078 | 1.176 | 0.067 | 0.092 | <0.001 | 0.477 | 1.199 | 0.427 | 0.534 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.996 | 1.001 | 0.147 | 1.000 | 1.001 | 0.999 | 1.002 | 0.891 |
| zero Pandemic - during pandemic | | 1.449 | 1.107 | 1.187 | 1.769 | <0.001 | 0.785 | 1.098 | 0.659 | 0.934 | 0.010 |
| zero Season - 2 | | 1.060 | 1.045 | 0.964 | 1.165 | 0.185 | 0.977 | 1.033 | 0.913 | 1.046 | 0.482 |
| zero Season - 3 | | 1.412 | 1.041 | 1.290 | 1.546 | <0.001 | 1.040 | 1.037 | 0.973 | 1.113 | 0.279 |
| zero Season - 4 | | 1.120 | 1.053 | 1.005 | 1.247 | 0.029 | 1.182 | 1.037 | 1.100 | 1.271 | <0.001 |
| zero Age - 45-54 yrs | | 0.755 | 1.101 | 0.689 | 0.828 | 0.004 | 0.838 | 1.121 | 0.781 | 0.900 | 0.123 |
| zero Age - 55-64 yrs | | 0.564 | 1.124 | 0.508 | 0.626 | <0.001 | 0.685 | 1.142 | 0.635 | 0.738 | 0.004 |
| zero Age - 65+ yrs | | 0.433 | 1.129 | 0.388 | 0.484 | <0.001 | 0.455 | 1.143 | 0.420 | 0.493 | <0.001 |
| zero Sex - male | | 0.871 | 1.083 | 0.812 | 0.934 | 0.085 | 1.336 | 1.094 | 1.273 | 1.401 | 0.001 |
| zero Social grade - C1C2 | | 0.979 | 1.106 | 0.900 | 1.065 | 0.835 | 0.631 | 1.111 | 0.597 | 0.667 | <0.001 |
| zero Social grade - AB | | 1.108 | 1.121 | 1.005 | 1.222 | 0.368 | 0.550 | 1.143 | 0.512 | 0.591 | <0.001 |
| zero - Number of adults | | 0.922 | 1.044 | 0.889 | 0.957 | 0.058 | 0.689 | 1.066 | 0.669 | 0.710 | <0.001 |
| zero Presence of children - Yes | | 0.866 | 1.092 | 0.799 | 0.939 | 0.101 | 0.661 | 1.116 | 0.619 | 0.706 | <0.001 |
| zero Region - North of England | | 0.995 | 1.069 | 0.936 | 1.058 | 0.944 | 1.107 | 1.086 | 1.057 | 1.158 | 0.221 |
| zero Festival - Valentine's Day | | 0.937 | 1.114 | 0.758 | 1.160 | 0.548 | 1.100 | 1.061 | 0.959 | 1.260 | 0.112 |
| zero Festival - Easter | | 1.252 | 1.098 | 1.043 | 1.502 | 0.016 | 0.964 | 1.080 | 0.823 | 1.129 | 0.635 |
| zero Festival - Halloween | | 1.642 | 1.122 | 1.298 | 2.077 | <0.001 | 0.879 | 1.099 | 0.718 | 1.076 | 0.173 |
| zero Festival - Christmas | | 2.543 | 1.103 | 2.073 | 3.119 | <0.001 | 1.326 | 1.093 | 1.106 | 1.591 | 0.002 |
| zero Interaction Time*Pandemic | | 0.979 | 1.010 | 0.958 | 0.999 | 0.029 | 0.987 | 1.009 | 0.970 | 1.004 | 0.112 |
| zero Interaction Pandemic*Age - 45-54 yrs | | 0.870 | 1.119 | 0.706 | 1.072 | 0.217 | 0.957 | 1.120 | 0.794 | 1.152 | 0.694 |
| zero Interaction Pandemic*Age - 55-64 yrs | | 0.859 | 1.127 | 0.687 | 1.073 | 0.202 | 1.099 | 1.123 | 0.919 | 1.316 | 0.414 |
| zero Interaction Pandemic*Age - 65+ yrs | | 1.414 | 1.129 | 1.142 | 1.751 | 0.004 | 1.292 | 1.119 | 1.072 | 1.557 | 0.023 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from HFSS | | | | | Energy purchased from UPF | | | | |
|--------------------------------------------|---------|----------------------------|-------|-----------|------------|---------|---------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.518 | 1.021 | 0.511 | 0.525 | <0.001 | 0.602 | 1.026 | 0.593 | 0.610 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.000 | 0.779 | 1.000 | 1.000 | 1.000 | 1.000 | 0.764 |
| count Pandemic - during pandemic | | 1.025 | 1.009 | 1.006 | 1.046 | 0.005 | 0.973 | 1.009 | 0.955 | 0.992 | 0.004 |
| count Season - 2 | | 1.033 | 1.003 | 1.025 | 1.041 | <0.001 | 1.017 | 1.003 | 1.009 | 1.025 | <0.001 |
| count Season - 3 | | 1.039 | 1.004 | 1.031 | 1.048 | <0.001 | 1.024 | 1.003 | 1.016 | 1.032 | <0.001 |
| count Season - 4 | | 1.073 | 1.004 | 1.064 | 1.083 | <0.001 | 1.026 | 1.003 | 1.017 | 1.036 | <0.001 |
| count Age - 45-54 yrs | | 0.997 | 1.014 | 0.989 | 1.006 | 0.844 | 1.019 | 1.018 | 1.010 | 1.028 | 0.284 |
| count Age - 55-64 yrs | | 0.996 | 1.016 | 0.986 | 1.005 | 0.791 | 0.996 | 1.020 | 0.986 | 1.005 | 0.823 |
| count Age - 65+ yrs | | 1.003 | 1.016 | 0.994 | 1.013 | 0.835 | 0.987 | 1.020 | 0.978 | 0.997 | 0.516 |
| count Sex - male | | 1.006 | 1.011 | 1.000 | 1.012 | 0.546 | 0.998 | 1.013 | 0.992 | 1.004 | 0.886 |
| count Social grade - C1C2 | | 0.971 | 1.012 | 0.964 | 0.978 | 0.017 | 0.955 | 1.015 | 0.948 | 0.962 | 0.002 |
| count Social grade - AB | | 0.941 | 1.015 | 0.932 | 0.949 | <0.001 | 0.900 | 1.018 | 0.893 | 0.908 | <0.001 |
| count - Number of adults | | 0.992 | 1.006 | 0.989 | 0.995 | 0.158 | 0.992 | 1.007 | 0.989 | 0.995 | 0.211 |
| count Presence of children - Yes | | 1.015 | 1.012 | 1.007 | 1.023 | 0.214 | 1.055 | 1.015 | 1.047 | 1.063 | <0.001 |
| count Region - North of England | | 1.015 | 1.009 | 1.010 | 1.021 | 0.096 | 1.059 | 1.012 | 1.054 | 1.065 | <0.001 |
| count Festival - Valentine's Day | | 1.022 | 1.007 | 1.005 | 1.040 | 0.001 | 1.014 | 1.006 | 0.997 | 1.031 | 0.016 |
| count Festival - Easter | | 0.982 | 1.007 | 0.965 | 1.000 | 0.011 | 0.999 | 1.006 | 0.982 | 1.017 | 0.914 |
| count Festival - Halloween | | 0.994 | 1.010 | 0.970 | 1.019 | 0.568 | 1.012 | 1.008 | 0.987 | 1.036 | 0.171 |
| count Festival - Christmas | | 0.994 | 1.012 | 0.969 | 1.019 | 0.595 | 0.991 | 1.011 | 0.967 | 1.017 | 0.416 |
| count Interaction Time*Pandemic | | 1.000 | 1.001 | 0.998 | 1.002 | 0.762 | 1.000 | 1.001 | 0.998 | 1.002 | 0.750 |
| count Interaction Pandemic*Age - 45-54 yrs | | 1.006 | 1.011 | 0.986 | 1.027 | 0.558 | 1.002 | 1.011 | 0.982 | 1.022 | 0.882 |
| count Interaction Pandemic*Age - 55-64 yrs | | 0.986 | 1.010 | 0.966 | 1.006 | 0.158 | 0.994 | 1.011 | 0.974 | 1.014 | 0.558 |
| count Interaction Pandemic*Age - 65+ yrs | | 0.965 | 1.011 | 0.946 | 0.985 | 0.001 | 0.989 | 1.011 | 0.970 | 1.009 | 0.333 |
| zero Constant | | 0.103 | 1.241 | 0.083 | 0.128 | <0.001 | 0.026 | 1.323 | 0.018 | 0.036 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.995 | 1.001 | 0.227 | 0.997 | 1.002 | 0.992 | 1.001 | 0.154 |
| zero Pandemic - during pandemic | | 1.141 | 1.182 | 0.839 | 1.551 | 0.429 | 1.365 | 1.268 | 0.878 | 2.122 | 0.190 |
| zero Season - 2 | | 0.966 | 1.065 | 0.850 | 1.098 | 0.581 | 1.014 | 1.108 | 0.836 | 1.230 | 0.891 |
| zero Season - 3 | | 0.968 | 1.067 | 0.849 | 1.104 | 0.615 | 1.165 | 1.101 | 0.960 | 1.412 | 0.114 |
| zero Season - 4 | | 0.814 | 1.084 | 0.697 | 0.950 | 0.010 | 0.892 | 1.117 | 0.705 | 1.129 | 0.305 |
| zero Age - 45-54 yrs | | 0.630 | 1.159 | 0.547 | 0.725 | 0.002 | 0.706 | 1.256 | 0.577 | 0.864 | 0.127 |
| zero Age - 55-64 yrs | | 0.505 | 1.176 | 0.436 | 0.586 | <0.001 | 0.473 | 1.246 | 0.380 | 0.590 | 0.001 |
| zero Age - 65+ yrs | | 0.525 | 1.179 | 0.455 | 0.606 | <0.001 | 0.518 | 1.246 | 0.420 | 0.639 | 0.003 |
| zero Sex - male | | 1.228 | 1.115 | 1.119 | 1.348 | 0.060 | 1.215 | 1.156 | 1.061 | 1.392 | 0.179 |
| zero Social grade - C1C2 | | 1.059 | 1.145 | 0.935 | 1.200 | 0.669 | 1.299 | 1.190 | 1.063 | 1.589 | 0.132 |
| zero Social grade - AB | | 1.338 | 1.166 | 1.161 | 1.541 | 0.058 | 1.853 | 1.217 | 1.489 | 2.306 | 0.002 |
| zero - Number of adults | | 0.663 | 1.074 | 0.625 | 0.703 | <0.001 | 0.788 | 1.089 | 0.727 | 0.855 | 0.005 |
| zero Presence of children - Yes | | 0.454 | 1.147 | 0.396 | 0.522 | <0.001 | 0.345 | 1.195 | 0.279 | 0.426 | <0.001 |
| zero Region - North of England | | 0.690 | 1.103 | 0.632 | 0.754 | <0.001 | 0.600 | 1.131 | 0.526 | 0.683 | <0.001 |
| zero Festival - Valentine's Day | | 0.819 | 1.155 | 0.610 | 1.099 | 0.166 | 0.986 | 1.237 | 0.647 | 1.500 | 0.946 |
| zero Festival - Easter | | 0.976 | 1.149 | 0.734 | 1.298 | 0.861 | 1.131 | 1.216 | 0.760 | 1.682 | 0.530 |
| zero Festival - Halloween | | 0.992 | 1.250 | 0.638 | 1.543 | 0.971 | 1.025 | 1.393 | 0.534 | 1.966 | 0.941 |
| zero Festival - Christmas | | 2.002 | 1.197 | 1.426 | 2.809 | <0.001 | 3.124 | 1.247 | 2.048 | 4.765 | <0.001 |
| zero Interaction Time*Pandemic | | 0.962 | 1.016 | 0.933 | 0.993 | 0.016 | 0.996 | 1.025 | 0.954 | 1.040 | 0.877 |
| zero Interaction Pandemic*Age - 45-54 yrs | | 0.891 | 1.249 | 0.625 | 1.270 | 0.603 | 0.595 | 1.344 | 0.361 | 0.981 | 0.079 |
| zero Interaction Pandemic*Age - 55-64 yrs | | 1.195 | 1.234 | 0.855 | 1.671 | 0.396 | 1.159 | 1.309 | 0.733 | 1.832 | 0.584 |
| zero Interaction Pandemic*Age - 65+ yrs | | 1.469 | 1.228 | 1.077 | 2.003 | 0.062 | 1.122 | 1.300 | 0.724 | 1.739 | 0.661 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from savoury snacks | | | | | Energy purchased from chocolate & confectionery | | | | |
|--------------------------------------------|---------|--------------------------------------|-------|-----------|------------|---------|-------------------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.138 | 1.078 | 0.133 | 0.144 | <0.001 | 0.151 | 1.064 | 0.145 | 0.157 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.001 | 0.176 | 1.001 | 1.000 | 1.000 | 1.001 | 0.021 |
| count Pandemic - during pandemic | | 0.930 | 1.033 | 0.885 | 0.978 | 0.024 | 0.949 | 1.036 | 0.899 | 1.002 | 0.134 |
| count Season - 2 | | 1.012 | 1.013 | 0.991 | 1.034 | 0.330 | 1.039 | 1.014 | 1.015 | 1.063 | 0.005 |
| count Season - 3 | | 1.065 | 1.013 | 1.042 | 1.089 | <0.001 | 1.046 | 1.016 | 1.022 | 1.072 | 0.003 |
| count Season - 4 | | 1.079 | 1.015 | 1.053 | 1.105 | <0.001 | 1.174 | 1.016 | 1.144 | 1.204 | <0.001 |
| count Age - 45-54 yrs | | 0.923 | 1.046 | 0.902 | 0.944 | 0.074 | 0.993 | 1.046 | 0.968 | 1.018 | 0.870 |
| count Age - 55-64 yrs | | 0.816 | 1.054 | 0.796 | 0.837 | <0.001 | 0.932 | 1.045 | 0.907 | 0.958 | 0.108 |
| count Age - 65+ yrs | | 0.725 | 1.061 | 0.706 | 0.744 | <0.001 | 0.867 | 1.047 | 0.843 | 0.892 | 0.002 |
| count Sex - male | | 1.132 | 1.037 | 1.114 | 1.151 | 0.001 | 1.040 | 1.032 | 1.022 | 1.059 | 0.215 |
| count Social grade - C1C2 | | 0.905 | 1.041 | 0.888 | 0.923 | 0.014 | 0.899 | 1.038 | 0.880 | 0.917 | 0.004 |
| count Social grade - AB | | 0.921 | 1.046 | 0.900 | 0.943 | 0.067 | 0.976 | 1.045 | 0.952 | 1.000 | 0.576 |
| count - Number of adults | | 0.898 | 1.017 | 0.891 | 0.905 | <0.001 | 0.872 | 1.018 | 0.864 | 0.880 | <0.001 |
| count Presence of children - Yes | | 0.804 | 1.043 | 0.789 | 0.820 | <0.001 | 0.876 | 1.039 | 0.857 | 0.895 | 0.001 |
| count Region - North of England | | 0.880 | 1.029 | 0.867 | 0.893 | <0.001 | 0.984 | 1.028 | 0.969 | 0.999 | 0.556 |
| count Festival - Valentine's Day | | 1.078 | 1.026 | 1.031 | 1.127 | 0.004 | 1.043 | 1.030 | 0.994 | 1.094 | 0.154 |
| count Festival - Easter | | 0.968 | 1.026 | 0.924 | 1.015 | 0.203 | 1.192 | 1.030 | 1.137 | 1.249 | <0.001 |
| count Festival - Halloween | | 1.006 | 1.041 | 0.942 | 1.075 | 0.881 | 1.123 | 1.040 | 1.051 | 1.201 | 0.003 |
| count Festival - Christmas | | 1.243 | 1.043 | 1.160 | 1.332 | <0.001 | 1.168 | 1.057 | 1.081 | 1.263 | 0.005 |
| count Interaction Time*Pandemic | | 1.000 | 1.003 | 0.995 | 1.005 | 0.949 | 0.988 | 1.003 | 0.983 | 0.994 | <0.001 |
| count Interaction Pandemic*Age - 45-54 yrs | | 0.979 | 1.037 | 0.931 | 1.030 | 0.559 | 1.024 | 1.041 | 0.969 | 1.083 | 0.548 |
| count Interaction Pandemic*Age - 55-64 yrs | | 0.981 | 1.040 | 0.932 | 1.033 | 0.624 | 1.028 | 1.040 | 0.972 | 1.086 | 0.492 |
| count Interaction Pandemic*Age - 65+ yrs | | 1.071 | 1.041 | 1.013 | 1.132 | 0.085 | 1.017 | 1.046 | 0.960 | 1.078 | 0.702 |
| zero Constant | | 1.742 | 1.133 | 1.620 | 1.872 | <0.001 | 1.670 | 1.124 | 1.554 | 1.794 | <0.001 |
| zero Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.146 | 0.999 | 1.001 | 0.998 | 1.000 | 0.069 |
| zero Pandemic - during pandemic | | 0.866 | 1.057 | 0.782 | 0.959 | 0.009 | 0.685 | 1.059 | 0.619 | 0.759 | <0.001 |
| zero Season - 2 | | 0.915 | 1.020 | 0.878 | 0.954 | <0.001 | 0.902 | 1.021 | 0.865 | 0.939 | <0.001 |
| zero Season - 3 | | 0.968 | 1.022 | 0.928 | 1.009 | 0.128 | 0.939 | 1.022 | 0.900 | 0.978 | 0.003 |
| zero Season - 4 | | 0.871 | 1.024 | 0.832 | 0.912 | <0.001 | 0.713 | 1.024 | 0.681 | 0.746 | <0.001 |
| zero Age - 45-54 yrs | | 0.885 | 1.087 | 0.845 | 0.926 | 0.142 | 0.844 | 1.083 | 0.807 | 0.884 | 0.035 |
| zero Age - 55-64 yrs | | 0.892 | 1.095 | 0.850 | 0.937 | 0.210 | 0.706 | 1.092 | 0.672 | 0.741 | <0.001 |
| zero Age - 65+ yrs | | 1.173 | 1.098 | 1.116 | 1.232 | 0.087 | 0.765 | 1.093 | 0.728 | 0.804 | 0.003 |
| zero Sex - male | | 1.012 | 1.067 | 0.981 | 1.043 | 0.858 | 1.287 | 1.063 | 1.248 | 1.326 | <0.001 |
| zero Social grade - C1C2 | | 0.907 | 1.081 | 0.874 | 0.941 | 0.210 | 1.057 | 1.075 | 1.018 | 1.097 | 0.447 |
| zero Social grade - AB | | 1.037 | 1.094 | 0.992 | 1.084 | 0.690 | 1.250 | 1.089 | 1.196 | 1.306 | 0.009 |
| zero - Number of adults | | 0.805 | 1.034 | 0.791 | 0.818 | <0.001 | 0.888 | 1.033 | 0.873 | 0.902 | <0.001 |
| zero Presence of children - Yes | | 0.595 | 1.080 | 0.572 | 0.619 | <0.001 | 0.676 | 1.075 | 0.650 | 0.702 | <0.001 |
| zero Region - North of England | | 0.980 | 1.057 | 0.953 | 1.007 | 0.712 | 0.757 | 1.056 | 0.737 | 0.778 | <0.001 |
| zero Festival - Valentine's Day | | 0.871 | 1.041 | 0.798 | 0.950 | 0.001 | 0.798 | 1.040 | 0.732 | 0.870 | <0.001 |
| zero Festival - Easter | | 1.021 | 1.043 | 0.932 | 1.119 | 0.616 | 0.695 | 1.045 | 0.632 | 0.763 | <0.001 |
| zero Festival - Halloween | | 1.097 | 1.059 | 0.967 | 1.245 | 0.105 | 0.949 | 1.060 | 0.835 | 1.078 | 0.371 |
| zero Festival - Christmas | | 1.226 | 1.064 | 1.078 | 1.396 | 0.001 | 1.698 | 1.067 | 1.493 | 1.932 | <0.001 |
| zero Interaction Time*Pandemic | | 0.990 | 1.005 | 0.980 | 0.999 | 0.026 | 1.009 | 1.005 | 0.999 | 1.019 | 0.059 |
| zero Interaction Pandemic*Age - 45-54 yrs | | 0.980 | 1.068 | 0.880 | 1.091 | 0.759 | 0.990 | 1.071 | 0.891 | 1.101 | 0.888 |
| zero Interaction Pandemic*Age - 55-64 yrs | | 1.219 | 1.070 | 1.098 | 1.354 | 0.003 | 1.143 | 1.072 | 1.029 | 1.269 | 0.056 |
| zero Interaction Pandemic*Age - 65+ yrs | | 1.279 | 1.068 | 1.151 | 1.422 | <0.001 | 1.378 | 1.074 | 1.241 | 1.530 | <0.001 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from low-sugar soft drinks | | | | | Energy from medium-sugar soft drinks | | | | |
|--------------------------------------------|---------|---------------------------------------------|-------|-----------|------------|---------|--------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.021 | 1.203 | 0.019 | 0.022 | <0.001 | 0.038 | 1.253 | 0.030 | 0.048 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.421 | 1.004 | 1.003 | 1.001 | 1.007 | 0.089 |
| count Pandemic - during pandemic | | 0.838 | 1.089 | 0.753 | 0.932 | 0.037 | 0.700 | 1.314 | 0.490 | 1.001 | 0.192 |
| count Season - 2 | | 1.006 | 1.046 | 0.961 | 1.054 | 0.890 | 0.895 | 1.088 | 0.783 | 1.023 | 0.190 |
| count Season - 3 | | 1.121 | 1.045 | 1.070 | 1.174 | 0.009 | 0.948 | 1.102 | 0.830 | 1.085 | 0.587 |
| count Season - 4 | | 1.001 | 1.042 | 0.950 | 1.055 | 0.980 | 0.899 | 1.124 | 0.781 | 1.035 | 0.364 |
| count Age - 45-54 yrs | | 0.725 | 1.122 | 0.691 | 0.761 | 0.005 | 1.129 | 1.163 | 0.975 | 1.307 | 0.421 |
| count Age - 55-64 yrs | | 0.873 | 1.159 | 0.828 | 0.920 | 0.356 | 1.218 | 1.167 | 1.038 | 1.428 | 0.202 |
| count Age - 65+ yrs | | 0.651 | 1.145 | 0.615 | 0.689 | 0.002 | 0.978 | 1.181 | 0.834 | 1.147 | 0.892 |
| count Sex - male | | 1.107 | 1.095 | 1.068 | 1.146 | 0.262 | 1.082 | 1.103 | 0.978 | 1.197 | 0.419 |
| count Social grade - C1C2 | | 0.744 | 1.124 | 0.714 | 0.776 | 0.011 | 0.671 | 1.214 | 0.591 | 0.761 | 0.040 |
| count Social grade - AB | | 0.621 | 1.135 | 0.590 | 0.653 | <0.001 | 0.709 | 1.212 | 0.611 | 0.823 | 0.075 |
| count - Number of adults | | 0.909 | 1.047 | 0.896 | 0.923 | 0.037 | 0.846 | 1.063 | 0.806 | 0.887 | 0.006 |
| count Presence of children - Yes | | 0.725 | 1.098 | 0.697 | 0.754 | 0.001 | 1.077 | 1.163 | 0.946 | 1.227 | 0.623 |
| count Region - North of England | | 0.876 | 1.096 | 0.849 | 0.905 | 0.149 | 0.948 | 1.100 | 0.868 | 1.036 | 0.577 |
| count Festival - Valentine's Day | | 1.080 | 1.078 | 0.978 | 1.194 | 0.306 | 1.408 | 1.226 | 1.062 | 1.866 | 0.094 |
| count Festival - Easter | | 1.107 | 1.104 | 1.003 | 1.221 | 0.306 | 0.751 | 1.131 | 0.558 | 1.011 | 0.020 |
| count Festival - Halloween | | 0.983 | 1.139 | 0.852 | 1.134 | 0.894 | 1.256 | 1.330 | 0.816 | 1.933 | 0.425 |
| count Festival - Christmas | | 1.796 | 1.240 | 1.533 | 2.103 | 0.006 | 0.655 | 1.226 | 0.463 | 0.926 | 0.038 |
| count Interaction Time*Pandemic | | 1.009 | 1.007 | 0.999 | 1.019 | 0.208 | 1.035 | 1.026 | 1.005 | 1.067 | 0.178 |
| count Interaction Pandemic*Age - 45-54 yrs | | 1.096 | 1.104 | 0.987 | 1.217 | 0.354 | 1.476 | 1.357 | 1.056 | 2.061 | 0.202 |
| count Interaction Pandemic*Age - 55-64 yrs | | 0.917 | 1.116 | 0.823 | 1.021 | 0.428 | 0.776 | 1.272 | 0.562 | 1.071 | 0.291 |
| count Interaction Pandemic*Age - 65+ yrs | | 1.204 | 1.133 | 1.070 | 1.354 | 0.136 | 0.879 | 1.290 | 0.612 | 1.262 | 0.613 |
| zero Constant | | 3.413 | 1.175 | 3.152 | 3.696 | <0.001 | 49.624 | 1.326 | 38.930 | 63.257 | <0.001 |
| zero Time | | 1.000 | 1.001 | 0.999 | 1.001 | 0.797 | 0.996 | 1.002 | 0.993 | 0.999 | 0.068 |
| zero Pandemic - during pandemic | | 0.894 | 1.061 | 0.800 | 0.998 | 0.059 | 1.623 | 1.231 | 1.130 | 2.332 | 0.020 |
| zero Season - 2 | | 0.869 | 1.022 | 0.830 | 0.909 | <0.001 | 0.799 | 1.076 | 0.694 | 0.921 | 0.002 |
| zero Season - 3 | | 0.804 | 1.023 | 0.768 | 0.841 | <0.001 | 0.852 | 1.086 | 0.740 | 0.981 | 0.051 |
| zero Season - 4 | | 0.946 | 1.024 | 0.900 | 0.995 | 0.019 | 0.737 | 1.082 | 0.638 | 0.853 | <0.001 |
| zero Age - 45-54 yrs | | 0.885 | 1.114 | 0.842 | 0.930 | 0.258 | 0.859 | 1.185 | 0.738 | 0.999 | 0.370 |
| zero Age - 55-64 yrs | | 1.010 | 1.125 | 0.958 | 1.065 | 0.931 | 0.907 | 1.236 | 0.771 | 1.067 | 0.645 |
| zero Age - 65+ yrs | | 1.254 | 1.125 | 1.188 | 1.324 | 0.055 | 0.970 | 1.224 | 0.821 | 1.147 | 0.882 |
| zero Sex - male | | 1.183 | 1.084 | 1.144 | 1.224 | 0.037 | 1.288 | 1.152 | 1.159 | 1.431 | 0.074 |
| zero Social grade - C1C2 | | 0.956 | 1.104 | 0.918 | 0.996 | 0.649 | 0.823 | 1.197 | 0.723 | 0.936 | 0.277 |
| zero Social grade - AB | | 1.343 | 1.123 | 1.279 | 1.411 | 0.011 | 0.844 | 1.213 | 0.725 | 0.982 | 0.380 |
| zero - Number of adults | | 0.758 | 1.046 | 0.744 | 0.772 | <0.001 | 0.943 | 1.076 | 0.896 | 0.992 | 0.423 |
| zero Presence of children - Yes | | 0.653 | 1.103 | 0.626 | 0.682 | <0.001 | 1.194 | 1.156 | 1.048 | 1.360 | 0.221 |
| zero Region - North of England | | 0.559 | 1.074 | 0.542 | 0.576 | <0.001 | 1.242 | 1.143 | 1.135 | 1.360 | 0.105 |
| zero Festival - Valentine's Day | | 1.035 | 1.041 | 0.942 | 1.139 | 0.390 | 0.911 | 1.158 | 0.679 | 1.222 | 0.524 |
| zero Festival - Easter | | 0.952 | 1.044 | 0.862 | 1.052 | 0.259 | 1.087 | 1.156 | 0.794 | 1.489 | 0.564 |
| zero Festival - Halloween | | 0.996 | 1.063 | 0.867 | 1.144 | 0.944 | 1.515 | 1.238 | 0.960 | 2.388 | 0.051 |
| zero Festival - Christmas | | 1.215 | 1.069 | 1.054 | 1.401 | 0.004 | 0.918 | 1.203 | 0.635 | 1.327 | 0.642 |
| zero Interaction Time*Pandemic | | 0.983 | 1.005 | 0.972 | 0.993 | <0.001 | 0.968 | 1.016 | 0.938 | 0.999 | 0.040 |
| zero Interaction Pandemic*Age - 45-54 yrs | | 0.922 | 1.076 | 0.821 | 1.034 | 0.262 | 0.870 | 1.254 | 0.613 | 1.234 | 0.537 |
| zero Interaction Pandemic*Age - 55-64 yrs | | 1.063 | 1.075 | 0.949 | 1.190 | 0.403 | 0.698 | 1.271 | 0.497 | 0.980 | 0.133 |
| zero Interaction Pandemic*Age - 65+ yrs | | 1.186 | 1.079 | 1.057 | 1.331 | 0.024 | 1.095 | 1.284 | 0.752 | 1.595 | 0.717 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy from high-sugar soft drinks | | | | | Alcohol volume | | | | |
|--------------------------------------------|---------|------------------------------------|-------|-----------|------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.104 | 1.175 | 0.091 | 0.118 | <0.001 | 3637.614 | 1.174 | 3400.521 | 3891.238 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.001 | 0.388 | 1.001 | 1.001 | 1.000 | 1.002 | 0.055 |
| count Pandemic - during pandemic | | 0.687 | 1.125 | 0.574 | 0.821 | 0.001 | 1.224 | 1.054 | 1.126 | 1.331 | <0.001 |
| count Season - 2 | | 0.928 | 1.056 | 0.858 | 1.005 | 0.172 | 1.098 | 1.022 | 1.060 | 1.137 | <0.001 |
| count Season - 3 | | 1.146 | 1.073 | 1.056 | 1.244 | 0.052 | 1.093 | 1.027 | 1.055 | 1.133 | 0.001 |
| count Season - 4 | | 0.935 | 1.067 | 0.854 | 1.024 | 0.303 | 1.125 | 1.024 | 1.082 | 1.169 | <0.001 |
| count Age - 45-54 yrs | | 0.749 | 1.127 | 0.693 | 0.810 | 0.016 | 1.156 | 1.101 | 1.108 | 1.207 | 0.131 |
| count Age - 55-64 yrs | | 0.595 | 1.148 | 0.548 | 0.646 | <0.001 | 1.080 | 1.114 | 1.033 | 1.129 | 0.478 |
| count Age - 65+ yrs | | 0.630 | 1.214 | 0.570 | 0.696 | 0.017 | 0.939 | 1.135 | 0.897 | 0.982 | 0.618 |
| count Sex - male | | 1.155 | 1.104 | 1.086 | 1.228 | 0.145 | 1.112 | 1.075 | 1.083 | 1.141 | 0.144 |
| count Social grade - C1C2 | | 0.831 | 1.115 | 0.777 | 0.888 | 0.088 | 0.791 | 1.117 | 0.766 | 0.817 | 0.034 |
| count Social grade - AB | | 0.794 | 1.115 | 0.729 | 0.865 | 0.034 | 0.722 | 1.121 | 0.695 | 0.750 | 0.004 |
| count - Number of adults | | 0.856 | 1.055 | 0.834 | 0.878 | 0.004 | 0.695 | 1.038 | 0.686 | 0.705 | <0.001 |
| count Presence of children - Yes | | 0.694 | 1.090 | 0.649 | 0.742 | <0.001 | 0.885 | 1.091 | 0.853 | 0.917 | 0.161 |
| count Region - North of England | | 0.851 | 1.096 | 0.806 | 0.900 | 0.080 | 1.374 | 1.070 | 1.341 | 1.408 | <0.001 |
| count Festival - Valentine's Day | | 0.841 | 1.089 | 0.708 | 1.000 | 0.042 | 0.911 | 1.038 | 0.846 | 0.980 | 0.012 |
| count Festival - Easter | | 0.946 | 1.086 | 0.814 | 1.099 | 0.500 | 1.083 | 1.040 | 1.008 | 1.165 | 0.041 |
| count Festival - Halloween | | 0.831 | 1.117 | 0.651 | 1.060 | 0.092 | 0.910 | 1.058 | 0.820 | 1.010 | 0.094 |
| count Festival - Christmas | | 0.837 | 1.123 | 0.674 | 1.039 | 0.123 | 1.038 | 1.064 | 0.935 | 1.152 | 0.546 |
| count Interaction Time*Pandemic | | 1.017 | 1.011 | 0.999 | 1.036 | 0.122 | 0.995 | 1.005 | 0.988 | 1.002 | 0.301 |
| count Interaction Pandemic*Age - 45-54 yrs | | 1.031 | 1.178 | 0.865 | 1.229 | 0.850 | 1.015 | 1.078 | 0.934 | 1.103 | 0.842 |
| count Interaction Pandemic*Age - 55-64 yrs | | 1.398 | 1.183 | 1.168 | 1.673 | 0.046 | 0.913 | 1.063 | 0.841 | 0.992 | 0.138 |
| count Interaction Pandemic*Age - 65+ yrs | | 1.382 | 1.218 | 1.113 | 1.715 | 0.101 | 0.895 | 1.067 | 0.821 | 0.976 | 0.088 |
| zero Constant | | 10.515 | 1.335 | 9.076 | 12.182 | <0.001 | 8.612 | 1.190 | 7.939 | 9.342 | <0.001 |
| zero Time | | 1.001 | 1.001 | 0.999 | 1.003 | 0.304 | 0.999 | 1.001 | 0.998 | 1.000 | 0.323 |
| zero Pandemic - during pandemic | | 0.942 | 1.110 | 0.772 | 1.148 | 0.564 | 0.736 | 1.066 | 0.660 | 0.820 | <0.001 |
| zero Season - 2 | | 0.844 | 1.048 | 0.773 | 0.922 | <0.001 | 0.829 | 1.022 | 0.792 | 0.867 | <0.001 |
| zero Season - 3 | | 0.891 | 1.048 | 0.813 | 0.977 | 0.014 | 0.816 | 1.024 | 0.779 | 0.854 | <0.001 |
| zero Season - 4 | | 0.844 | 1.054 | 0.763 | 0.933 | 0.001 | 0.686 | 1.025 | 0.653 | 0.721 | <0.001 |
| zero Age - 45-54 yrs | | 1.683 | 1.207 | 1.538 | 1.840 | 0.006 | 0.776 | 1.129 | 0.737 | 0.817 | 0.036 |
| zero Age - 55-64 yrs | | 1.733 | 1.253 | 1.577 | 1.906 | 0.015 | 0.655 | 1.138 | 0.621 | 0.691 | 0.001 |
| zero Age - 65+ yrs | | 3.107 | 1.278 | 2.775 | 3.478 | <0.001 | 0.680 | 1.141 | 0.644 | 0.718 | 0.003 |
| zero Sex - male | | 0.889 | 1.157 | 0.832 | 0.949 | 0.417 | 1.011 | 1.092 | 0.979 | 1.045 | 0.900 |
| zero Social grade - C1C2 | | 1.562 | 1.185 | 1.453 | 1.680 | 0.008 | 0.782 | 1.119 | 0.751 | 0.815 | 0.029 |
| zero Social grade - AB | | 1.992 | 1.213 | 1.814 | 2.189 | <0.001 | 0.801 | 1.139 | 0.763 | 0.840 | 0.087 |
| zero - Number of adults | | 0.810 | 1.078 | 0.785 | 0.835 | 0.005 | 0.843 | 1.048 | 0.828 | 0.857 | <0.001 |
| zero Presence of children - Yes | | 1.238 | 1.197 | 1.147 | 1.338 | 0.234 | 1.338 | 1.115 | 1.282 | 1.397 | 0.007 |
| zero Region - North of England | | 1.364 | 1.141 | 1.286 | 1.447 | 0.018 | 0.612 | 1.083 | 0.594 | 0.631 | <0.001 |
| zero Festival - Valentine's Day | | 0.963 | 1.087 | 0.794 | 1.168 | 0.650 | 0.820 | 1.039 | 0.746 | 0.901 | <0.001 |
| zero Festival - Easter | | 0.715 | 1.078 | 0.603 | 0.847 | 0.000 | 0.976 | 1.039 | 0.887 | 1.074 | 0.527 |
| zero Festival - Halloween | | 1.052 | 1.125 | 0.801 | 1.382 | 0.665 | 1.198 | 1.056 | 1.048 | 1.370 | 0.001 |
| zero Festival - Christmas | | 0.738 | 1.126 | 0.578 | 0.944 | 0.011 | 1.199 | 1.068 | 1.048 | 1.371 | 0.006 |
| zero Interaction Time*Pandemic | | 0.988 | 1.010 | 0.968 | 1.008 | 0.225 | 0.986 | 1.004 | 0.976 | 0.996 | 0.001 |
| zero Interaction Pandemic*Age - 45-54 yrs | | 1.027 | 1.143 | 0.843 | 1.251 | 0.842 | 0.921 | 1.081 | 0.826 | 1.027 | 0.288 |
| zero Interaction Pandemic*Age - 55-64 yrs | | 1.209 | 1.131 | 0.988 | 1.479 | 0.124 | 1.176 | 1.080 | 1.055 | 1.310 | 0.035 |
| zero Interaction Pandemic*Age - 65+ yrs | | 1.048 | 1.215 | 0.824 | 1.332 | 0.809 | 1.413 | 1.084 | 1.265 | 1.579 | <0.001 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | OOH purchasing | | | | p value |
|--------------------------------------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | |
| count Constant | | 1.353 | 1.350 | 1.229 | 1.489 | 0.314 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.000 | 0.036 |
| count Pandemic - during pandemic | | 0.535 | 1.109 | 0.468 | 0.613 | <0.001 |
| count Season - 2 | | 0.961 | 1.026 | 0.912 | 1.012 | 0.112 |
| count Season - 3 | | 0.994 | 1.024 | 0.945 | 1.046 | 0.798 |
| count Season - 4 | | 0.994 | 1.024 | 0.939 | 1.052 | 0.800 |
| count Age - 45-54 yrs | | 0.910 | 1.178 | 0.866 | 0.957 | 0.566 |
| count Age - 55-64 yrs | | 1.066 | 1.192 | 1.009 | 1.126 | 0.718 |
| count Age - 65+ yrs | | 0.761 | 1.271 | 0.705 | 0.821 | 0.255 |
| count Sex - male | | 1.502 | 1.137 | 1.445 | 1.562 | 0.002 |
| count Social grade - C1C2 | | 1.030 | 1.217 | 0.977 | 1.085 | 0.881 |
| count Social grade - AB | | 1.031 | 1.298 | 0.963 | 1.105 | 0.905 |
| count - Number of adults | | 1.006 | 1.078 | 0.984 | 1.028 | 0.938 |
| count Presence of children - Yes | | 0.995 | 1.172 | 0.950 | 1.042 | 0.975 |
| count Region - North of England | | 1.107 | 1.125 | 1.068 | 1.148 | 0.385 |
| count Festival - Valentine's Day | | 1.005 | 1.027 | 0.905 | 1.116 | 0.837 |
| count Festival - Easter | | 0.872 | 1.042 | 0.770 | 0.987 | 0.001 |
| count Festival - Halloween | | 1.013 | 1.041 | 0.872 | 1.175 | 0.754 |
| count Festival - Christmas | | 0.728 | 1.060 | 0.617 | 0.859 | <0.001 |
| count Interaction Time*Pandemic | | 1.020 | 1.008 | 1.006 | 1.034 | 0.016 |
| count Interaction Pandemic*Age - 45-54 yrs | | 1.022 | 1.150 | 0.897 | 1.164 | 0.877 |
| count Interaction Pandemic*Age - 55-64 yrs | | 0.857 | 1.160 | 0.750 | 0.980 | 0.301 |
| count Interaction Pandemic*Age - 65+ yrs | | 0.545 | 1.283 | 0.432 | 0.687 | 0.015 |
| zero Constant | | 0.066 | 4.370 | 0.027 | 0.158 | 0.065 |
| zero Time | | 1.008 | 1.013 | 0.993 | 1.023 | 0.560 |
| zero Pandemic - during pandemic | | 2.227 | 2.037 | 0.756 | 6.561 | 0.260 |
| zero Season - 2 | | 2.457 | 1.665 | 1.394 | 4.331 | 0.078 |
| zero Season - 3 | | 1.043 | 1.436 | 0.572 | 1.902 | 0.908 |
| zero Season - 4 | | 1.271 | 1.485 | 0.684 | 2.362 | 0.545 |
| zero Age - 45-54 yrs | | - | | | | |
| zero Age - 55-64 yrs | | - | | | | |
| zero Age - 65+ yrs | | - | | | | |
| zero Sex - male | | 8.933 | 3.812 | 5.169 | 15.439 | 0.102 |
| zero Social grade - C1C2 | | <0.001 | 5.711 | <0.001 | 189660.934 | <0.001 |
| zero Social grade - AB | | 6.203 | 4.626 | 3.418 | 11.257 | 0.233 |
| zero - Number of adults | | 0.358 | 2.178 | 0.277 | 0.461 | 0.187 |
| zero Presence of children - Yes | | - | | | | |
| zero Region - North of England | | - | | | | |
| zero Festival - Valentine's Day | | - | | | | |
| zero Festival - Easter | | - | | | | |
| zero Festival - Halloween | | - | | | | |
| zero Festival - Christmas | | - | | | | |
| zero Interaction Time*Pandemic | | 0.782 | 1.127 | 0.656 | 0.931 | 0.040 |
| zero Interaction Pandemic*Age - 45-54 yrs | | - | | | | |
| zero Interaction Pandemic*Age - 55-64 yrs | | - | | | | |
| zero Interaction Pandemic*Age - 65+ yrs | | - | | | | |
| Observations | | 16,806 | | | | |

Model coefficients from secondary analysis; interactions with social grade of the main reporter

HFSS = high in fat, salt and sugar; UPF = ultra-processed food; OOH = out-of-home.

Due to multicollinearity, the variables region, presence of children, and age of the main shopper were not included in the OOH models

| Term | Outcome | Total Energy purchased | | | | Energy purchased from fruit & vegetables | | | | | |
|------------------------------------------------|---------|------------------------|-------|-----------|------------|------------------------------------------|---------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 15341.460 | 1.047 | 14977.837 | 15713.910 | <0.001 | 0.081 | 1.089 | 0.079 | 0.084 | <0.001 |
| count Time | | 1.001 | 1.000 | 1.000 | 1.001 | <0.001 | 0.999 | 1.000 | 0.998 | 0.999 | <0.001 |
| count Pandemic - during pandemic | | 1.095 | 1.021 | 1.055 | 1.135 | <0.001 | 0.966 | 1.045 | 0.919 | 1.016 | 0.432 |
| count Season - 2 | | 1.007 | 1.006 | 0.993 | 1.021 | 0.214 | 1.028 | 1.012 | 1.009 | 1.048 | 0.023 |
| count Season - 3 | | 0.970 | 1.007 | 0.956 | 0.983 | <0.001 | 1.025 | 1.013 | 1.006 | 1.044 | 0.054 |
| count Season - 4 | | 1.070 | 1.007 | 1.054 | 1.087 | <0.001 | 0.894 | 1.013 | 0.875 | 0.913 | <0.001 |
| count Age - 45-54 yrs | | 1.147 | 1.029 | 1.132 | 1.163 | <0.001 | 0.911 | 1.051 | 0.894 | 0.928 | 0.059 |
| count Age - 55-64 yrs | | 1.256 | 1.032 | 1.237 | 1.275 | <0.001 | 0.862 | 1.060 | 0.844 | 0.880 | 0.011 |
| count Age - 65+ yrs | | 1.271 | 1.032 | 1.252 | 1.291 | <0.001 | 0.867 | 1.061 | 0.849 | 0.886 | 0.017 |
| count Sex - male | | 0.971 | 1.023 | 0.961 | 0.981 | 0.195 | 0.971 | 1.038 | 0.958 | 0.985 | 0.436 |
| count Social grade - C1C2 | | 0.986 | 1.030 | 0.973 | 1.000 | 0.641 | 1.164 | 1.046 | 1.143 | 1.186 | 0.001 |
| count Social grade - AB | | 0.909 | 1.036 | 0.894 | 0.924 | 0.007 | 1.426 | 1.055 | 1.395 | 1.458 | <0.001 |
| count - Number of adults | | 0.864 | 1.012 | 0.859 | 0.868 | <0.001 | 0.890 | 1.021 | 0.883 | 0.896 | <0.001 |
| count Presence of children - Yes | | 0.806 | 1.026 | 0.796 | 0.817 | <0.001 | 0.827 | 1.046 | 0.812 | 0.841 | <0.001 |
| count Region - North of England | | 1.042 | 1.020 | 1.033 | 1.052 | 0.040 | 0.757 | 1.035 | 0.748 | 0.767 | <0.001 |
| count Festival - Valentine's Day | | 0.998 | 1.012 | 0.970 | 1.027 | 0.875 | 0.926 | 1.020 | 0.890 | 0.963 | <0.001 |
| count Festival - Easter | | 1.042 | 1.013 | 1.011 | 1.074 | 0.001 | 0.983 | 1.025 | 0.944 | 1.025 | 0.490 |
| count Festival - Halloween | | 0.921 | 1.017 | 0.884 | 0.961 | <0.001 | 1.067 | 1.038 | 1.007 | 1.131 | 0.085 |
| count Festival - Christmas | | 0.855 | 1.025 | 0.819 | 0.893 | <0.001 | 1.077 | 1.047 | 1.014 | 1.144 | 0.103 |
| count Interaction Time*Pandemic | | 0.999 | 1.001 | 0.996 | 1.002 | 0.323 | 1.000 | 1.003 | 0.996 | 1.005 | 0.913 |
| count Interaction Pandemic*Social grade - C1C2 | | 1.103 | 1.023 | 1.067 | 1.140 | <0.001 | 0.905 | 1.042 | 0.865 | 0.947 | 0.015 |
| count Interaction Pandemic*Social grade - AB | | 1.133 | 1.029 | 1.090 | 1.178 | <0.001 | 0.982 | 1.047 | 0.931 | 1.035 | 0.688 |
| zero Constant | | 0.076 | 1.180 | 0.065 | 0.090 | <0.001 | 0.458 | 1.200 | 0.409 | 0.513 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.996 | 1.001 | 0.146 | 1.000 | 1.001 | 0.999 | 1.002 | 0.893 |
| zero Pandemic - during pandemic | | 1.665 | 1.131 | 1.316 | 2.108 | <0.001 | 1.045 | 1.097 | 0.880 | 1.242 | 0.632 |
| zero Season - 2 | | 1.060 | 1.045 | 0.964 | 1.165 | 0.184 | 0.977 | 1.033 | 0.913 | 1.046 | 0.480 |
| zero Season - 3 | | 1.412 | 1.041 | 1.290 | 1.545 | <0.001 | 1.040 | 1.037 | 0.973 | 1.113 | 0.280 |
| zero Season - 4 | | 1.120 | 1.053 | 1.005 | 1.247 | 0.029 | 1.182 | 1.037 | 1.100 | 1.270 | <0.001 |
| zero Age - 45-54 yrs | | 0.737 | 1.098 | 0.677 | 0.803 | 0.001 | 0.833 | 1.120 | 0.779 | 0.891 | 0.107 |
| zero Age - 55-64 yrs | | 0.549 | 1.122 | 0.499 | 0.605 | <0.001 | 0.693 | 1.139 | 0.646 | 0.744 | 0.005 |
| zero Age - 65+ yrs | | 0.466 | 1.123 | 0.422 | 0.516 | <0.001 | 0.472 | 1.141 | 0.438 | 0.509 | <0.001 |
| zero Sex - male | | 0.871 | 1.083 | 0.812 | 0.934 | 0.085 | 1.336 | 1.094 | 1.273 | 1.402 | 0.001 |
| zero Social grade - C1C2 | | 1.005 | 1.112 | 0.915 | 1.104 | 0.964 | 0.656 | 1.114 | 0.618 | 0.696 | <0.001 |
| zero Social grade - AB | | 1.159 | 1.127 | 1.040 | 1.292 | 0.217 | 0.578 | 1.145 | 0.535 | 0.624 | <0.001 |
| zero - Number of adults | | 0.922 | 1.044 | 0.889 | 0.956 | 0.057 | 0.689 | 1.066 | 0.669 | 0.710 | <0.001 |
| zero Presence of children - Yes | | 0.866 | 1.092 | 0.799 | 0.939 | 0.102 | 0.662 | 1.116 | 0.620 | 0.707 | <0.001 |
| zero Region - North of England | | 0.995 | 1.069 | 0.936 | 1.058 | 0.944 | 1.107 | 1.086 | 1.058 | 1.159 | 0.219 |
| zero Festival - Valentine's Day | | 0.937 | 1.114 | 0.758 | 1.159 | 0.546 | 1.099 | 1.061 | 0.959 | 1.260 | 0.112 |
| zero Festival - Easter | | 1.251 | 1.098 | 1.043 | 1.501 | 0.016 | 0.964 | 1.080 | 0.823 | 1.130 | 0.637 |
| zero Festival - Halloween | | 1.642 | 1.122 | 1.298 | 2.077 | <0.001 | 0.879 | 1.099 | 0.719 | 1.076 | 0.174 |
| zero Festival - Christmas | | 2.543 | 1.103 | 2.073 | 3.119 | <0.001 | 1.326 | 1.093 | 1.106 | 1.590 | 0.002 |
| zero Interaction Time*Pandemic | | 0.979 | 1.010 | 0.959 | 0.999 | 0.029 | 0.987 | 1.009 | 0.970 | 1.004 | 0.116 |
| zero Interaction Pandemic*Social grade - C1C2 | | 0.876 | 1.118 | 0.710 | 1.081 | 0.235 | 0.765 | 1.097 | 0.656 | 0.892 | 0.004 |
| zero Interaction Pandemic*Social grade - AB | | 0.786 | 1.145 | 0.614 | 1.007 | 0.075 | 0.705 | 1.139 | 0.574 | 0.866 | 0.007 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from HFSS | | | | | Energy purchased from UPF | | | | |
|------------------------------------------------|---------|----------------------------|-------|-----------|------------|---------|---------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.519 | 1.021 | 0.512 | 0.527 | <0.001 | 0.601 | 1.026 | 0.593 | 0.609 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.000 | 0.776 | 1.000 | 1.000 | 1.000 | 1.000 | 0.761 |
| count Pandemic - during pandemic | | 1.010 | 1.010 | 0.989 | 1.032 | 0.309 | 0.979 | 1.011 | 0.958 | 1.000 | 0.045 |
| count Season - 2 | | 1.033 | 1.003 | 1.025 | 1.042 | <0.001 | 1.017 | 1.003 | 1.009 | 1.025 | <0.001 |
| count Season - 3 | | 1.039 | 1.004 | 1.031 | 1.048 | <0.001 | 1.024 | 1.003 | 1.016 | 1.032 | <0.001 |
| count Season - 4 | | 1.073 | 1.004 | 1.064 | 1.083 | <0.001 | 1.026 | 1.003 | 1.017 | 1.036 | <0.001 |
| count Age - 45-54 yrs | | 0.998 | 1.013 | 0.990 | 1.007 | 0.902 | 1.019 | 1.017 | 1.011 | 1.027 | 0.267 |
| count Age - 55-64 yrs | | 0.993 | 1.015 | 0.985 | 1.002 | 0.664 | 0.995 | 1.020 | 0.986 | 1.003 | 0.777 |
| count Age - 65+ yrs | | 0.997 | 1.016 | 0.988 | 1.006 | 0.863 | 0.985 | 1.020 | 0.977 | 0.994 | 0.454 |
| count Sex - male | | 1.006 | 1.011 | 1.000 | 1.013 | 0.545 | 0.998 | 1.013 | 0.992 | 1.004 | 0.887 |
| count Social grade - C1C2 | | 0.970 | 1.013 | 0.962 | 0.978 | 0.017 | 0.956 | 1.015 | 0.949 | 0.964 | 0.003 |
| count Social grade - AB | | 0.941 | 1.016 | 0.932 | 0.950 | <0.001 | 0.904 | 1.019 | 0.896 | 0.913 | <0.001 |
| count - Number of adults | | 0.992 | 1.006 | 0.989 | 0.995 | 0.159 | 0.992 | 1.007 | 0.989 | 0.995 | 0.212 |
| count Presence of children - Yes | | 1.015 | 1.012 | 1.007 | 1.023 | 0.215 | 1.055 | 1.015 | 1.047 | 1.063 | <0.001 |
| count Region - North of England | | 1.015 | 1.009 | 1.010 | 1.021 | 0.095 | 1.059 | 1.012 | 1.054 | 1.065 | <0.001 |
| count Festival - Valentine's Day | | 1.022 | 1.007 | 1.005 | 1.040 | 0.001 | 1.014 | 1.006 | 0.998 | 1.031 | 0.016 |
| count Festival - Easter | | 0.982 | 1.007 | 0.965 | 1.000 | 0.011 | 0.999 | 1.006 | 0.982 | 1.017 | 0.916 |
| count Festival - Halloween | | 0.994 | 1.010 | 0.970 | 1.019 | 0.573 | 1.012 | 1.008 | 0.987 | 1.036 | 0.169 |
| count Festival - Christmas | | 0.994 | 1.012 | 0.969 | 1.019 | 0.589 | 0.991 | 1.011 | 0.967 | 1.017 | 0.416 |
| count Interaction Time*Pandemic | | 1.000 | 1.001 | 0.998 | 1.002 | 0.712 | 1.000 | 1.001 | 0.998 | 1.002 | 0.740 |
| count Interaction Pandemic*Social grade - C1C2 | | 1.007 | 1.010 | 0.988 | 1.027 | 0.478 | 0.993 | 1.011 | 0.975 | 1.013 | 0.538 |
| count Interaction Pandemic*Social grade - AB | | 0.999 | 1.013 | 0.976 | 1.022 | 0.943 | 0.974 | 1.013 | 0.953 | 0.997 | 0.047 |
| zero Constant | | 0.096 | 1.243 | 0.077 | 0.121 | <0.001 | 0.023 | 1.331 | 0.016 | 0.033 | <0.001 |
| zero Time | | 0.998 | 1.001 | 0.995 | 1.001 | 0.226 | 0.997 | 1.002 | 0.992 | 1.001 | 0.154 |
| zero Pandemic - during pandemic | | 1.656 | 1.206 | 1.178 | 2.328 | 0.007 | 2.083 | 1.312 | 1.243 | 3.492 | 0.007 |
| zero Season - 2 | | 0.966 | 1.065 | 0.850 | 1.097 | 0.580 | 1.014 | 1.108 | 0.836 | 1.230 | 0.890 |
| zero Season - 3 | | 0.968 | 1.067 | 0.848 | 1.104 | 0.610 | 1.164 | 1.101 | 0.960 | 1.411 | 0.116 |
| zero Season - 4 | | 0.814 | 1.084 | 0.697 | 0.950 | 0.010 | 0.893 | 1.117 | 0.705 | 1.130 | 0.306 |
| zero Age - 45-54 yrs | | 0.620 | 1.153 | 0.543 | 0.706 | 0.001 | 0.651 | 1.237 | 0.541 | 0.784 | 0.044 |
| zero Age - 55-64 yrs | | 0.520 | 1.170 | 0.453 | 0.597 | <0.001 | 0.487 | 1.227 | 0.399 | 0.595 | <0.001 |
| zero Age - 65+ yrs | | 0.562 | 1.167 | 0.493 | 0.641 | <0.001 | 0.530 | 1.226 | 0.438 | 0.642 | 0.002 |
| zero Sex - male | | 1.228 | 1.115 | 1.119 | 1.348 | 0.060 | 1.216 | 1.156 | 1.062 | 1.393 | 0.178 |
| zero Social grade - C1C2 | | 1.117 | 1.154 | 0.972 | 1.283 | 0.439 | 1.479 | 1.212 | 1.174 | 1.863 | 0.042 |
| zero Social grade - AB | | 1.407 | 1.177 | 1.203 | 1.645 | 0.037 | 2.027 | 1.242 | 1.578 | 2.604 | 0.001 |
| zero - Number of adults | | 0.663 | 1.074 | 0.624 | 0.703 | <0.001 | 0.788 | 1.089 | 0.727 | 0.854 | 0.005 |
| zero Presence of children - Yes | | 0.455 | 1.147 | 0.396 | 0.522 | <0.001 | 0.345 | 1.195 | 0.280 | 0.426 | <0.001 |
| zero Region - North of England | | 0.690 | 1.103 | 0.632 | 0.754 | <0.001 | 0.600 | 1.131 | 0.526 | 0.684 | <0.001 |
| zero Festival - Valentine's Day | | 0.818 | 1.155 | 0.610 | 1.098 | 0.164 | 0.985 | 1.237 | 0.647 | 1.500 | 0.944 |
| zero Festival - Easter | | 0.976 | 1.149 | 0.734 | 1.298 | 0.862 | 1.131 | 1.216 | 0.761 | 1.682 | 0.529 |
| zero Festival - Halloween | | 0.992 | 1.250 | 0.638 | 1.543 | 0.972 | 1.027 | 1.393 | 0.535 | 1.969 | 0.937 |
| zero Festival - Christmas | | 2.001 | 1.197 | 1.426 | 2.808 | <0.001 | 3.122 | 1.247 | 2.046 | 4.763 | <0.001 |
| zero Interaction Time*Pandemic | | 0.962 | 1.016 | 0.933 | 0.993 | 0.016 | 0.996 | 1.025 | 0.954 | 1.040 | 0.878 |
| zero Interaction Pandemic*Social grade - C1C2 | | 0.745 | 1.201 | 0.543 | 1.020 | 0.107 | 0.537 | 1.291 | 0.335 | 0.860 | 0.015 |
| zero Interaction Pandemic*Social grade - AB | | 0.756 | 1.243 | 0.528 | 1.084 | 0.200 | 0.668 | 1.332 | 0.402 | 1.111 | 0.160 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from savoury snacks | | | | | Energy purchased from chocolate & confectionery | | | | |
|------------------------------------------------|---------|--------------------------------------|-------|-----------|------------|---------|-------------------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.139 | 1.078 | 0.133 | 0.144 | <0.001 | 0.149 | 1.065 | 0.143 | 0.155 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.001 | 0.175 | 1.001 | 1.000 | 1.000 | 1.001 | 0.020 |
| count Pandemic - during pandemic | | 0.926 | 1.042 | 0.873 | 0.981 | 0.061 | 1.026 | 1.044 | 0.966 | 1.090 | 0.544 |
| count Season - 2 | | 1.012 | 1.013 | 0.991 | 1.034 | 0.335 | 1.039 | 1.014 | 1.015 | 1.064 | 0.005 |
| count Season - 3 | | 1.065 | 1.013 | 1.042 | 1.089 | <0.001 | 1.047 | 1.016 | 1.022 | 1.072 | 0.003 |
| count Season - 4 | | 1.079 | 1.015 | 1.053 | 1.105 | <0.001 | 1.174 | 1.016 | 1.144 | 1.204 | <0.001 |
| count Age - 45-54 yrs | | 0.919 | 1.044 | 0.900 | 0.938 | 0.050 | 0.996 | 1.045 | 0.973 | 1.020 | 0.933 |
| count Age - 55-64 yrs | | 0.813 | 1.052 | 0.795 | 0.832 | <0.001 | 0.936 | 1.044 | 0.913 | 0.960 | 0.124 |
| count Age - 65+ yrs | | 0.734 | 1.060 | 0.716 | 0.752 | <0.001 | 0.869 | 1.046 | 0.847 | 0.892 | 0.002 |
| count Sex - male | | 1.132 | 1.037 | 1.114 | 1.151 | 0.001 | 1.040 | 1.032 | 1.022 | 1.059 | 0.216 |
| count Social grade - C1C2 | | 0.904 | 1.043 | 0.884 | 0.923 | 0.015 | 0.908 | 1.039 | 0.888 | 0.929 | 0.013 |
| count Social grade - AB | | 0.922 | 1.048 | 0.899 | 0.947 | 0.085 | 0.996 | 1.047 | 0.969 | 1.023 | 0.922 |
| count - Number of adults | | 0.898 | 1.017 | 0.891 | 0.905 | <0.001 | 0.872 | 1.018 | 0.864 | 0.880 | <0.001 |
| count Presence of children - Yes | | 0.804 | 1.043 | 0.789 | 0.820 | <0.001 | 0.876 | 1.039 | 0.857 | 0.895 | 0.001 |
| count Region - North of England | | 0.880 | 1.029 | 0.867 | 0.892 | <0.001 | 0.984 | 1.028 | 0.969 | 1.000 | 0.561 |
| count Festival - Valentine's Day | | 1.078 | 1.026 | 1.031 | 1.128 | 0.004 | 1.043 | 1.030 | 0.994 | 1.094 | 0.151 |
| count Festival - Easter | | 0.969 | 1.026 | 0.924 | 1.016 | 0.213 | 1.191 | 1.030 | 1.136 | 1.249 | <0.001 |
| count Festival - Halloween | | 1.006 | 1.041 | 0.942 | 1.075 | 0.878 | 1.124 | 1.040 | 1.051 | 1.202 | 0.003 |
| count Festival - Christmas | | 1.243 | 1.043 | 1.160 | 1.332 | <0.001 | 1.169 | 1.057 | 1.081 | 1.263 | 0.005 |
| count Interaction Time*Pandemic | | 1.000 | 1.003 | 0.995 | 1.005 | 0.998 | 0.988 | 1.003 | 0.983 | 0.994 | <0.001 |
| count Interaction Pandemic*Social grade - C1C2 | | 1.013 | 1.041 | 0.962 | 1.067 | 0.747 | 0.940 | 1.044 | 0.891 | 0.991 | 0.151 |
| count Interaction Pandemic*Social grade - AB | | 0.994 | 1.046 | 0.935 | 1.057 | 0.895 | 0.893 | 1.049 | 0.838 | 0.952 | 0.018 |
| zero Constant | | 1.676 | 1.134 | 1.559 | 1.803 | <0.001 | 1.593 | 1.124 | 1.482 | 1.712 | <0.001 |
| zero Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.145 | 0.999 | 1.001 | 0.998 | 1.000 | 0.068 |
| zero Pandemic - during pandemic | | 1.087 | 1.065 | 0.973 | 1.213 | 0.187 | 0.910 | 1.070 | 0.815 | 1.016 | 0.166 |
| zero Season - 2 | | 0.915 | 1.020 | 0.878 | 0.954 | <0.001 | 0.902 | 1.021 | 0.865 | 0.939 | <0.001 |
| zero Season - 3 | | 0.967 | 1.022 | 0.928 | 1.009 | 0.125 | 0.938 | 1.022 | 0.900 | 0.978 | 0.003 |
| zero Season - 4 | | 0.871 | 1.024 | 0.831 | 0.912 | <0.001 | 0.712 | 1.024 | 0.680 | 0.746 | <0.001 |
| zero Age - 45-54 yrs | | 0.882 | 1.086 | 0.845 | 0.920 | 0.127 | 0.843 | 1.082 | 0.809 | 0.879 | 0.031 |
| zero Age - 55-64 yrs | | 0.922 | 1.094 | 0.881 | 0.965 | 0.366 | 0.722 | 1.090 | 0.689 | 0.755 | <0.001 |
| zero Age - 65+ yrs | | 1.223 | 1.096 | 1.167 | 1.280 | 0.029 | 0.807 | 1.090 | 0.771 | 0.846 | 0.013 |
| zero Sex - male | | 1.011 | 1.067 | 0.981 | 1.043 | 0.860 | 1.287 | 1.063 | 1.248 | 1.326 | <0.001 |
| zero Social grade - C1C2 | | 0.926 | 1.083 | 0.889 | 0.965 | 0.337 | 1.093 | 1.078 | 1.049 | 1.138 | 0.236 |
| zero Social grade - AB | | 1.070 | 1.097 | 1.020 | 1.124 | 0.460 | 1.295 | 1.092 | 1.233 | 1.359 | 0.003 |
| zero - Number of adults | | 0.805 | 1.034 | 0.791 | 0.818 | <0.001 | 0.888 | 1.033 | 0.873 | 0.902 | <0.001 |
| zero Presence of children - Yes | | 0.595 | 1.080 | 0.572 | 0.619 | <0.001 | 0.676 | 1.075 | 0.650 | 0.703 | <0.001 |
| zero Region - North of England | | 0.980 | 1.057 | 0.953 | 1.008 | 0.716 | 0.757 | 1.056 | 0.737 | 0.779 | <0.001 |
| zero Festival - Valentine's Day | | 0.870 | 1.041 | 0.798 | 0.949 | 0.001 | 0.797 | 1.040 | 0.731 | 0.869 | <0.001 |
| zero Festival - Easter | | 1.021 | 1.043 | 0.932 | 1.119 | 0.618 | 0.695 | 1.045 | 0.633 | 0.764 | <0.001 |
| zero Festival - Halloween | | 1.097 | 1.059 | 0.967 | 1.245 | 0.105 | 0.949 | 1.061 | 0.835 | 1.078 | 0.372 |
| zero Festival - Christmas | | 1.227 | 1.064 | 1.078 | 1.396 | 0.001 | 1.699 | 1.067 | 1.493 | 1.933 | <0.001 |
| zero Interaction Time*Pandemic | | 0.990 | 1.005 | 0.980 | 1.000 | 0.030 | 1.009 | 1.005 | 0.999 | 1.019 | 0.054 |
| zero Interaction Pandemic*Social grade - C1C2 | | 0.883 | 1.065 | 0.799 | 0.975 | 0.048 | 0.816 | 1.071 | 0.739 | 0.901 | 0.003 |
| zero Interaction Pandemic*Social grade - AB | | 0.825 | 1.078 | 0.733 | 0.927 | 0.010 | 0.806 | 1.085 | 0.717 | 0.906 | 0.008 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from low-sugar soft drinks | | | | | Energy from medium-sugar soft drinks | | | | |
|------------------------------------------------|---------|---------------------------------------------|-------|-----------|------------|---------|--------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.020 | 1.204 | 0.018 | 0.022 | <0.001 | 0.040 | 1.275 | 0.032 | 0.051 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.409 | 1.004 | 1.002 | 1.001 | 1.007 | 0.079 |
| count Pandemic - during pandemic | | 1.003 | 1.136 | 0.888 | 1.133 | 0.982 | 0.617 | 1.412 | 0.428 | 0.891 | 0.162 |
| count Season - 2 | | 1.005 | 1.046 | 0.960 | 1.053 | 0.910 | 0.889 | 1.087 | 0.777 | 1.017 | 0.159 |
| count Season - 3 | | 1.120 | 1.045 | 1.069 | 1.173 | 0.010 | 0.949 | 1.103 | 0.830 | 1.085 | 0.593 |
| count Season - 4 | | 1.001 | 1.042 | 0.950 | 1.055 | 0.977 | 0.909 | 1.127 | 0.789 | 1.046 | 0.422 |
| count Age - 45-54 yrs | | 0.738 | 1.115 | 0.706 | 0.771 | 0.005 | 1.235 | 1.186 | 1.080 | 1.412 | 0.215 |
| count Age - 55-64 yrs | | 0.860 | 1.149 | 0.819 | 0.903 | 0.276 | 1.173 | 1.159 | 1.010 | 1.363 | 0.279 |
| count Age - 65+ yrs | | 0.672 | 1.140 | 0.638 | 0.708 | 0.002 | 0.967 | 1.178 | 0.833 | 1.123 | 0.838 |
| count Sex - male | | 1.106 | 1.095 | 1.068 | 1.145 | 0.266 | 1.089 | 1.105 | 0.983 | 1.206 | 0.392 |
| count Social grade - C1C2 | | 0.767 | 1.128 | 0.733 | 0.803 | 0.028 | 0.621 | 1.257 | 0.540 | 0.715 | 0.037 |
| count Social grade - AB | | 0.635 | 1.139 | 0.600 | 0.672 | <0.001 | 0.695 | 1.261 | 0.589 | 0.821 | 0.117 |
| count - Number of adults | | 0.908 | 1.047 | 0.895 | 0.922 | 0.036 | 0.836 | 1.060 | 0.796 | 0.877 | 0.002 |
| count Presence of children - Yes | | 0.724 | 1.098 | 0.696 | 0.753 | 0.001 | 1.122 | 1.178 | 0.985 | 1.277 | 0.484 |
| count Region - North of England | | 0.877 | 1.096 | 0.849 | 0.906 | 0.153 | 0.941 | 1.101 | 0.861 | 1.028 | 0.524 |
| count Festival - Valentine's Day | | 1.079 | 1.078 | 0.976 | 1.192 | 0.313 | 1.440 | 1.233 | 1.086 | 1.910 | 0.082 |
| count Festival - Easter | | 1.106 | 1.103 | 1.002 | 1.220 | 0.302 | 0.804 | 1.133 | 0.597 | 1.083 | 0.082 |
| count Festival - Halloween | | 0.983 | 1.138 | 0.852 | 1.133 | 0.891 | 1.228 | 1.302 | 0.797 | 1.892 | 0.437 |
| count Festival - Christmas | | 1.789 | 1.239 | 1.527 | 2.095 | 0.007 | 0.630 | 1.230 | 0.445 | 0.892 | 0.026 |
| count Interaction Time*Pandemic | | 1.009 | 1.007 | 0.999 | 1.019 | 0.212 | 1.031 | 1.029 | 1.000 | 1.062 | 0.293 |
| count Interaction Pandemic*Social grade - C1C2 | | 0.835 | 1.140 | 0.750 | 0.930 | 0.170 | 1.337 | 1.363 | 0.961 | 1.861 | 0.348 |
| count Interaction Pandemic*Social grade - AB | | 0.888 | 1.155 | 0.780 | 1.012 | 0.410 | 0.940 | 1.382 | 0.647 | 1.365 | 0.847 |
| zero Constant | | 3.308 | 1.175 | 3.053 | 3.583 | <0.001 | 50.687 | 1.327 | 39.683 | 64.743 | <0.001 |
| zero Time | | 1.000 | 1.001 | 0.999 | 1.001 | 0.791 | 0.996 | 1.002 | 0.993 | 0.999 | 0.069 |
| zero Pandemic - during pandemic | | 1.076 | 1.074 | 0.954 | 1.214 | 0.304 | 1.432 | 1.255 | 0.971 | 2.113 | 0.114 |
| zero Season - 2 | | 0.868 | 1.022 | 0.830 | 0.908 | <0.001 | 0.800 | 1.076 | 0.694 | 0.921 | 0.002 |
| zero Season - 3 | | 0.803 | 1.023 | 0.767 | 0.841 | <0.001 | 0.852 | 1.086 | 0.740 | 0.981 | 0.052 |
| zero Season - 4 | | 0.946 | 1.024 | 0.900 | 0.995 | 0.018 | 0.737 | 1.082 | 0.638 | 0.853 | <0.001 |
| zero Age - 45-54 yrs | | 0.873 | 1.113 | 0.834 | 0.914 | 0.205 | 0.839 | 1.176 | 0.730 | 0.964 | 0.280 |
| zero Age - 55-64 yrs | | 1.021 | 1.124 | 0.972 | 1.073 | 0.860 | 0.849 | 1.222 | 0.730 | 0.986 | 0.413 |
| zero Age - 65+ yrs | | 1.291 | 1.124 | 1.228 | 1.359 | 0.029 | 0.984 | 1.219 | 0.841 | 1.151 | 0.935 |
| zero Sex - male | | 1.183 | 1.084 | 1.144 | 1.224 | 0.037 | 1.289 | 1.152 | 1.160 | 1.432 | 0.073 |
| zero Social grade - C1C2 | | 0.987 | 1.105 | 0.944 | 1.031 | 0.893 | 0.817 | 1.206 | 0.709 | 0.941 | 0.279 |
| zero Social grade - AB | | 1.378 | 1.125 | 1.306 | 1.454 | 0.007 | 0.865 | 1.225 | 0.731 | 1.022 | 0.474 |
| zero - Number of adults | | 0.758 | 1.046 | 0.744 | 0.772 | <0.001 | 0.943 | 1.076 | 0.896 | 0.992 | 0.422 |
| zero Presence of children - Yes | | 0.654 | 1.103 | 0.627 | 0.682 | <0.001 | 1.194 | 1.156 | 1.048 | 1.360 | 0.221 |
| zero Region - North of England | | 0.559 | 1.074 | 0.542 | 0.576 | <0.001 | 1.242 | 1.143 | 1.134 | 1.359 | 0.106 |
| zero Festival - Valentine's Day | | 1.035 | 1.041 | 0.941 | 1.138 | 0.393 | 0.911 | 1.158 | 0.679 | 1.222 | 0.524 |
| zero Festival - Easter | | 0.952 | 1.044 | 0.862 | 1.052 | 0.258 | 1.087 | 1.156 | 0.794 | 1.489 | 0.565 |
| zero Festival - Halloween | | 0.996 | 1.063 | 0.867 | 1.144 | 0.945 | 1.516 | 1.238 | 0.961 | 2.390 | 0.051 |
| zero Festival - Christmas | | 1.215 | 1.069 | 1.054 | 1.401 | 0.004 | 0.918 | 1.203 | 0.634 | 1.327 | 0.642 |
| zero Interaction Time*Pandemic | | 0.983 | 1.005 | 0.973 | 0.993 | <0.001 | 0.968 | 1.016 | 0.938 | 0.999 | 0.040 |
| zero Interaction Pandemic*Social grade - C1C2 | | 0.826 | 1.076 | 0.741 | 0.920 | 0.009 | 1.041 | 1.238 | 0.743 | 1.460 | 0.849 |
| zero Interaction Pandemic*Social grade - AB | | 0.857 | 1.087 | 0.754 | 0.975 | 0.064 | 0.880 | 1.278 | 0.597 | 1.298 | 0.603 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy from high-sugar soft drinks | | | | | Alcohol volume | | | | |
|------------------------------------------------|---------|------------------------------------|-------|-----------|------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.112 | 1.170 | 0.099 | 0.127 | <0.001 | 3755.540 | 1.173 | 3510.209 | 4018.018 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.001 | 0.368 | 1.001 | 1.001 | 1.000 | 1.002 | 0.055 |
| count Pandemic - during pandemic | | 0.307 | 2.145 | 0.086 | 1.105 | 0.122 | 1.032 | 1.063 | 0.940 | 1.133 | 0.606 |
| count Season - 2 | | 0.927 | 1.056 | 0.856 | 1.003 | 0.166 | 1.098 | 1.022 | 1.060 | 1.137 | <0.001 |
| count Season - 3 | | 1.145 | 1.074 | 1.055 | 1.243 | 0.056 | 1.093 | 1.027 | 1.055 | 1.133 | 0.001 |
| count Season - 4 | | 0.934 | 1.068 | 0.853 | 1.022 | 0.297 | 1.125 | 1.024 | 1.082 | 1.170 | <0.001 |
| count Age - 45-54 yrs | | 0.751 | 1.114 | 0.699 | 0.806 | 0.008 | 1.161 | 1.096 | 1.117 | 1.207 | 0.104 |
| count Age - 55-64 yrs | | 0.629 | 1.141 | 0.582 | 0.679 | <0.001 | 1.061 | 1.110 | 1.018 | 1.105 | 0.571 |
| count Age - 65+ yrs | | 0.666 | 1.197 | 0.608 | 0.731 | 0.024 | 0.920 | 1.130 | 0.882 | 0.959 | 0.494 |
| count Sex - male | | 1.153 | 1.104 | 1.084 | 1.226 | 0.151 | 1.111 | 1.075 | 1.083 | 1.140 | 0.145 |
| count Social grade - C1C2 | | 0.813 | 1.121 | 0.756 | 0.874 | 0.071 | 0.773 | 1.119 | 0.745 | 0.801 | 0.022 |
| count Social grade - AB | | 0.774 | 1.122 | 0.705 | 0.850 | 0.026 | 0.700 | 1.125 | 0.671 | 0.731 | 0.002 |
| count - Number of adults | | 0.853 | 1.055 | 0.832 | 0.876 | 0.003 | 0.695 | 1.038 | 0.686 | 0.704 | <0.001 |
| count Presence of children - Yes | | 0.689 | 1.091 | 0.644 | 0.737 | <0.001 | 0.884 | 1.091 | 0.853 | 0.917 | 0.159 |
| count Region - North of England | | 0.851 | 1.097 | 0.806 | 0.900 | 0.081 | 1.374 | 1.070 | 1.341 | 1.408 | <0.001 |
| count Festival - Valentine's Day | | 0.840 | 1.088 | 0.707 | 0.999 | 0.040 | 0.911 | 1.038 | 0.847 | 0.981 | 0.013 |
| count Festival - Easter | | 0.941 | 1.092 | 0.810 | 1.094 | 0.491 | 1.084 | 1.040 | 1.008 | 1.165 | 0.042 |
| count Festival - Halloween | | 0.835 | 1.119 | 0.654 | 1.065 | 0.108 | 0.912 | 1.058 | 0.821 | 1.012 | 0.100 |
| count Festival - Christmas | | 0.837 | 1.124 | 0.674 | 1.040 | 0.129 | 1.037 | 1.064 | 0.934 | 1.151 | 0.558 |
| count Interaction Time*Pandemic | | 1.014 | 1.011 | 0.995 | 1.032 | 0.233 | 0.995 | 1.005 | 0.987 | 1.002 | 0.275 |
| count Interaction Pandemic*Social grade - C1C2 | | 1.141 | 1.171 | 0.959 | 1.357 | 0.403 | 1.148 | 1.064 | 1.057 | 1.246 | 0.027 |
| count Interaction Pandemic*Social grade - AB | | 1.183 | 1.210 | 0.949 | 1.473 | 0.378 | 1.188 | 1.081 | 1.079 | 1.308 | 0.027 |
| zero Constant | | 9.221 | 1.337 | 8.004 | 10.623 | <0.001 | 8.208 | 1.190 | 7.566 | 8.904 | <0.001 |
| zero Time | | 1.001 | 1.001 | 0.999 | 1.003 | 0.304 | 0.999 | 1.001 | 0.998 | 1.000 | 0.320 |
| zero Pandemic - during pandemic | | 2.624 | 2.012 | 0.640 | 10.763 | 0.168 | 0.947 | 1.073 | 0.841 | 1.067 | 0.442 |
| zero Season - 2 | | 0.844 | 1.048 | 0.772 | 0.922 | <0.001 | 0.829 | 1.022 | 0.793 | 0.867 | <0.001 |
| zero Season - 3 | | 0.891 | 1.048 | 0.813 | 0.976 | 0.014 | 0.816 | 1.024 | 0.779 | 0.854 | <0.001 |
| zero Season - 4 | | 0.843 | 1.054 | 0.763 | 0.932 | 0.001 | 0.687 | 1.025 | 0.653 | 0.721 | <0.001 |
| zero Age - 45-54 yrs | | 1.690 | 1.201 | 1.558 | 1.835 | 0.004 | 0.764 | 1.125 | 0.730 | 0.800 | 0.022 |
| zero Age - 55-64 yrs | | 1.792 | 1.249 | 1.641 | 1.957 | 0.009 | 0.675 | 1.136 | 0.643 | 0.709 | 0.002 |
| zero Age - 65+ yrs | | 3.134 | 1.268 | 2.824 | 3.477 | <0.001 | 0.725 | 1.138 | 0.689 | 0.762 | 0.013 |
| zero Sex - male | | 0.889 | 1.157 | 0.832 | 0.949 | 0.417 | 1.011 | 1.092 | 0.978 | 1.045 | 0.902 |
| zero Social grade - C1C2 | | 1.633 | 1.190 | 1.508 | 1.767 | 0.005 | 0.811 | 1.121 | 0.775 | 0.848 | 0.066 |
| zero Social grade - AB | | 2.077 | 1.218 | 1.873 | 2.302 | <0.001 | 0.817 | 1.141 | 0.774 | 0.862 | 0.126 |
| zero - Number of adults | | 0.810 | 1.078 | 0.785 | 0.835 | 0.005 | 0.843 | 1.048 | 0.828 | 0.857 | <0.001 |
| zero Presence of children - Yes | | 1.239 | 1.197 | 1.147 | 1.338 | 0.234 | 1.337 | 1.115 | 1.281 | 1.396 | 0.007 |
| zero Region - North of England | | 1.364 | 1.141 | 1.286 | 1.447 | 0.018 | 0.612 | 1.083 | 0.594 | 0.631 | <0.001 |
| zero Festival - Valentine's Day | | 0.963 | 1.087 | 0.794 | 1.168 | 0.649 | 0.820 | 1.039 | 0.747 | 0.901 | <0.001 |
| zero Festival - Easter | | 0.716 | 1.078 | 0.604 | 0.848 | <0.001 | 0.975 | 1.039 | 0.887 | 1.073 | 0.515 |
| zero Festival - Halloween | | 1.052 | 1.125 | 0.801 | 1.382 | 0.665 | 1.198 | 1.056 | 1.048 | 1.370 | 0.001 |
| zero Festival - Christmas | | 0.738 | 1.126 | 0.578 | 0.944 | 0.011 | 1.198 | 1.068 | 1.048 | 1.371 | 0.006 |
| zero Interaction Time*Pandemic | | 0.988 | 1.010 | 0.968 | 1.008 | 0.230 | 0.986 | 1.004 | 0.976 | 0.996 | 0.001 |
| zero Interaction Pandemic*Social grade - C1C2 | | 0.771 | 1.147 | 0.634 | 0.937 | 0.058 | 0.824 | 1.076 | 0.741 | 0.916 | 0.008 |
| zero Interaction Pandemic*Social grade - AB | | 0.782 | 1.174 | 0.612 | 1.000 | 0.125 | 0.895 | 1.097 | 0.791 | 1.014 | 0.235 |
| Observations | | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | OOH purchasing | | | | p value |
|------------------------------------------------|---------|----------------|-------|-----------|------------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | |
| count Constant | | 1.347 | 1.356 | 1.223 | 1.483 | 0.329 |
| count Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.047 |
| count Pandemic - during pandemic | | 0.704 | 1.235 | 0.583 | 0.849 | 0.096 |
| count Season - 2 | | 0.972 | 1.026 | 0.922 | 1.024 | 0.270 |
| count Season - 3 | | 0.998 | 1.024 | 0.949 | 1.050 | 0.948 |
| count Season - 4 | | 0.997 | 1.024 | 0.942 | 1.055 | 0.896 |
| count Age - 45-54 yrs | | 0.912 | 1.180 | 0.871 | 0.956 | 0.579 |
| count Age - 55-64 yrs | | 1.047 | 1.190 | 0.994 | 1.103 | 0.793 |
| count Age - 65+ yrs | | 0.721 | 1.262 | 0.671 | 0.775 | 0.160 |
| count Sex - male | | 1.512 | 1.137 | 1.454 | 1.572 | 0.001 |
| count Social grade - C1C2 | | 1.057 | 1.218 | 1.000 | 1.116 | 0.780 |
| count Social grade - AB | | 1.066 | 1.292 | 0.992 | 1.144 | 0.805 |
| count - Number of adults | | 1.000 | 1.078 | 0.978 | 1.023 | 1.000 |
| count Presence of children - Yes | | 0.996 | 1.173 | 0.951 | 1.043 | 0.979 |
| count Region - North of England | | 1.106 | 1.125 | 1.067 | 1.147 | 0.390 |
| count Festival - Valentine's Day | | 1.007 | 1.027 | 0.907 | 1.118 | 0.791 |
| count Festival - Easter | | 0.886 | 1.045 | 0.781 | 1.004 | 0.006 |
| count Festival - Halloween | | 1.013 | 1.041 | 0.873 | 1.175 | 0.747 |
| count Festival - Christmas | | 0.726 | 1.060 | 0.616 | 0.857 | <0.001 |
| count Interaction Time*Pandemic | | 1.013 | 1.011 | 0.998 | 1.028 | 0.224 |
| count Interaction Pandemic*Social grade - C1C2 | | 0.731 | 1.223 | 0.618 | 0.866 | 0.120 |
| count Interaction Pandemic*Social grade - AB | | 0.731 | 1.260 | 0.594 | 0.899 | 0.174 |
| zero Constant | | 0.046 | 4.430 | 0.017 | 0.122 | 0.039 |
| zero Time | | 1.012 | 1.013 | 0.996 | 1.028 | 0.355 |
| zero Pandemic - during pandemic | | 24.583 | 3.168 | 8.128 | 74.345 | 0.005 |
| zero Season - 2 | | 3.303 | 1.721 | 1.859 | 5.867 | 0.028 |
| zero Season - 3 | | 1.200 | 1.460 | 0.647 | 2.227 | 0.630 |
| zero Season - 4 | | 1.384 | 1.506 | 0.741 | 2.585 | 0.428 |
| zero Age - 45-54 yrs | | - | | | | |
| zero Age - 55-64 yrs | | - | | | | |
| zero Age - 65+ yrs | | - | | | | |
| zero Sex - male | | 7.203 | 3.884 | 4.369 | 11.874 | 0.146 |
| zero Social grade - C1C2 | | <0.001 | 5.204 | <0.001 | 5,527,284,996.23 | <0.001 |
| zero Social grade - AB | | 10.657 | 4.511 | 4.973 | 22.838 | 0.116 |
| zero - Number of adults | | 0.367 | 1.957 | 0.289 | 0.466 | 0.136 |
| zero Presence of children - Yes | | - | | | | |
| zero Region - North of England | | - | | | | |
| zero Festival - Valentine's Day | | - | | | | |
| zero Festival - Easter | | - | | | | |
| zero Festival - Halloween | | - | | | | |
| zero Festival - Christmas | | - | | | | |
| zero Interaction Time*Pandemic | | 0.794 | 1.089 | 0.710 | 0.888 | 0.007 |
| zero Interaction Pandemic*Social grade - C1C2 | | 492.040 | 5.873 | <0.001 | 1.62744E+16 | <0.001 |
| zero Interaction Pandemic*Social grade - AB | | 0.046 | 3.824 | 0.014 | 0.155 | 0.022 |
| Observations | | 16,806 | | | | |

Moedel coefficients from secondary analysis; interactions with usual purchasing (purchasing levels before the pandemic)

HFSS = high in fat, salt and sugar; UPF = ultra-processed food; OOH = out-of-home; PPP = pre-pandemic purchasing

Due to multicollinearity, the variables region, presence of children, and age of the main shopper were not included in the OOH models

PPP was mainly modelled as quartiles; due to lower purchasing levels, no quartiles could be built for some outcomes, so that pre-pandemic alcohol purchasing was categorised into tertiles, while OOH purchasing were split along the median. Because the more than half of observations for pre-pandemic medium and high-sugar soft drink purchasing were 0, PPP was determined for these variables for considering the highest quartile as 'high' and the remainder as 'low'

| Term | Outcome | Total Energy purchased | | | | Energy purchased from fruit & vegetables | | | | | |
|------------------------------------|---------|------------------------|-------|-----------|------------|------------------------------------------|---------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 8405.253 | 1.035 | 8207.298 | 8607.983 | <0.001 | 0.039 | 1.057 | 0.038 | 0.040 | <0.001 |
| count Time | | 1.001 | 1.000 | 1.001 | 1.001 | <0.001 | 0.999 | 1.000 | 0.999 | 1.000 | 0.022 |
| count Pandemic - during pandemic | | 1.423 | 1.020 | 1.379 | 1.468 | <0.001 | 1.127 | 1.042 | 1.081 | 1.175 | 0.004 |
| count Season - 2 | | 0.997 | 1.006 | 0.984 | 1.010 | 0.603 | 0.981 | 1.011 | 0.965 | 0.998 | 0.087 |
| count Season - 3 | | 0.967 | 1.006 | 0.955 | 0.980 | <0.001 | 1.028 | 1.013 | 1.010 | 1.045 | 0.033 |
| count Season - 4 | | 1.069 | 1.007 | 1.054 | 1.085 | <0.001 | 0.901 | 1.014 | 0.884 | 0.918 | <0.001 |
| count Age - 45-54 yrs | | 1.039 | 1.019 | 1.026 | 1.053 | 0.039 | 0.955 | 1.031 | 0.939 | 0.972 | 0.137 |
| count Age - 55-64 yrs | | 1.040 | 1.021 | 1.025 | 1.054 | 0.063 | 0.895 | 1.037 | 0.878 | 0.912 | 0.002 |
| count Age - 65+ yrs | | 1.012 | 1.022 | 0.997 | 1.027 | 0.579 | 0.903 | 1.038 | 0.886 | 0.921 | 0.006 |
| count Sex - male | | 0.990 | 1.015 | 0.980 | 0.999 | 0.469 | 1.006 | 1.023 | 0.993 | 1.018 | 0.804 |
| count Social grade - C1C2 | | 1.001 | 1.018 | 0.990 | 1.013 | 0.940 | 1.017 | 1.026 | 1.002 | 1.033 | 0.505 |
| count Social grade - AB | | 1.012 | 1.022 | 0.999 | 1.026 | 0.564 | 1.139 | 1.034 | 1.118 | 1.160 | <0.001 |
| count - Number of adults | | 0.936 | 1.007 | 0.931 | 0.941 | <0.001 | 0.928 | 1.013 | 0.922 | 0.934 | <0.001 |
| count Presence of children - Yes | | 0.926 | 1.018 | 0.915 | 0.938 | <0.001 | 0.889 | 1.028 | 0.875 | 0.903 | <0.001 |
| count Region - North of England | | 1.006 | 1.012 | 0.998 | 1.015 | 0.595 | 0.899 | 1.021 | 0.889 | 0.910 | <0.001 |
| count Festival - Valentine's Day | | 0.998 | 1.012 | 0.972 | 1.025 | 0.885 | 0.930 | 1.019 | 0.897 | 0.964 | <0.001 |
| count Festival - Easter | | 1.037 | 1.013 | 1.009 | 1.067 | 0.004 | 0.984 | 1.022 | 0.948 | 1.021 | 0.447 |
| count Festival - Halloween | | 0.921 | 1.017 | 0.886 | 0.958 | <0.001 | 1.074 | 1.038 | 1.019 | 1.132 | 0.053 |
| count Festival - Christmas | | 0.860 | 1.025 | 0.827 | 0.895 | <0.001 | 1.064 | 1.039 | 1.008 | 1.124 | 0.105 |
| count PPP - 2 | | 1.420 | 1.019 | 1.401 | 1.439 | <0.001 | 1.372 | 1.029 | 1.347 | 1.398 | <0.001 |
| count PPP - 3 | | 1.774 | 1.019 | 1.749 | 1.798 | <0.001 | 1.902 | 1.029 | 1.868 | 1.938 | <0.001 |
| count PPP - 4 | | 2.542 | 1.023 | 2.505 | 2.580 | <0.001 | 3.259 | 1.035 | 3.199 | 3.321 | <0.001 |
| count Interaction Time*Pandemic | | 0.999 | 1.001 | 0.996 | 1.002 | 0.516 | 1.003 | 1.003 | 1.000 | 1.007 | 0.230 |
| count Interaction Pandemic*PPP - 2 | | 0.880 | 1.024 | 0.852 | 0.909 | <0.001 | 0.879 | 1.046 | 0.842 | 0.918 | 0.004 |
| count Interaction Pandemic*PPP - 3 | | 0.826 | 1.023 | 0.800 | 0.853 | <0.001 | 0.783 | 1.040 | 0.750 | 0.818 | <0.001 |
| count Interaction Pandemic*PPP - 4 | | 0.747 | 1.026 | 0.724 | 0.771 | <0.001 | 0.743 | 1.040 | 0.712 | 0.776 | <0.001 |
| zero Constant | | 0.136 | 1.193 | 0.115 | 0.161 | <0.001 | 0.980 | 1.173 | 0.873 | 1.100 | 0.899 |
| zero Time | | 0.999 | 1.001 | 0.996 | 1.001 | 0.157 | 1.000 | 1.001 | 0.999 | 1.002 | 0.884 |
| zero Pandemic - during pandemic | | 1.195 | 1.106 | 0.975 | 1.464 | 0.077 | 0.712 | 1.090 | 0.611 | 0.830 | <0.001 |
| zero Season - 2 | | 1.059 | 1.045 | 0.964 | 1.165 | 0.189 | 0.982 | 1.035 | 0.916 | 1.053 | 0.603 |
| zero Season - 3 | | 1.417 | 1.042 | 1.294 | 1.551 | <0.001 | 1.040 | 1.039 | 0.970 | 1.114 | 0.309 |
| zero Season - 4 | | 1.123 | 1.053 | 1.008 | 1.251 | 0.026 | 1.188 | 1.039 | 1.103 | 1.280 | <0.001 |
| zero Age - 45-54 yrs | | 0.807 | 1.094 | 0.740 | 0.879 | 0.017 | 0.801 | 1.104 | 0.748 | 0.857 | 0.025 |
| zero Age - 55-64 yrs | | 0.661 | 1.119 | 0.599 | 0.730 | <0.001 | 0.685 | 1.118 | 0.637 | 0.737 | 0.001 |
| zero Age - 65+ yrs | | 0.600 | 1.122 | 0.541 | 0.666 | <0.001 | 0.539 | 1.123 | 0.499 | 0.582 | <0.001 |
| zero Sex - male | | 0.852 | 1.081 | 0.794 | 0.915 | 0.041 | 1.198 | 1.082 | 1.140 | 1.259 | 0.022 |
| zero Social grade - C1C2 | | 0.985 | 1.104 | 0.905 | 1.073 | 0.882 | 0.800 | 1.102 | 0.755 | 0.847 | 0.022 |
| zero Social grade - AB | | 1.007 | 1.119 | 0.913 | 1.112 | 0.948 | 0.852 | 1.129 | 0.791 | 0.918 | 0.189 |
| zero - Number of adults | | 0.850 | 1.045 | 0.818 | 0.882 | <0.001 | 0.717 | 1.057 | 0.696 | 0.738 | <0.001 |
| zero Presence of children - Yes | | 0.755 | 1.092 | 0.695 | 0.820 | 0.001 | 0.686 | 1.102 | 0.642 | 0.733 | <0.001 |
| zero Region - North of England | | 1.039 | 1.068 | 0.977 | 1.105 | 0.562 | 0.906 | 1.077 | 0.864 | 0.950 | 0.185 |
| zero Festival - Valentine's Day | | 0.937 | 1.114 | 0.757 | 1.160 | 0.549 | 1.110 | 1.065 | 0.965 | 1.277 | 0.097 |
| zero Festival - Easter | | 1.252 | 1.098 | 1.044 | 1.503 | 0.016 | 0.961 | 1.082 | 0.819 | 1.129 | 0.619 |

| | | | | | | | | | | |
|-----------------------------------|--------|-------|-------|-------|--------|--------|-------|-------|-------|--------|
| zeroFestival - Halloween | 1.646 | 1.123 | 1.300 | 2.084 | <0.001 | 0.868 | 1.105 | 0.706 | 1.068 | 0.158 |
| zero Festival - Christmas | 2.562 | 1.104 | 2.087 | 3.146 | <0.001 | 1.381 | 1.099 | 1.145 | 1.665 | 0.001 |
| zero PPP - 2 | 0.695 | 1.087 | 0.637 | 0.757 | <0.001 | 0.316 | 1.100 | 0.296 | 0.337 | <0.001 |
| zero PPP - 3 | 0.481 | 1.101 | 0.436 | 0.532 | <0.001 | 0.237 | 1.103 | 0.220 | 0.254 | <0.001 |
| zero PPP - 4 | 0.368 | 1.127 | 0.329 | 0.411 | <0.001 | 0.173 | 1.110 | 0.160 | 0.187 | <0.001 |
| zero Interaction Time*Pandemic | 0.978 | 1.010 | 0.958 | 0.999 | 0.026 | 0.985 | 1.009 | 0.968 | 1.003 | 0.090 |
| zero Interaction Pandemic*PPP - 2 | 1.152 | 1.119 | 0.937 | 1.416 | 0.210 | 1.377 | 1.119 | 1.161 | 1.632 | 0.004 |
| zero Interaction Pandemic*PPP - 3 | 1.409 | 1.122 | 1.134 | 1.752 | 0.003 | 1.346 | 1.128 | 1.116 | 1.623 | 0.014 |
| zero Interaction Pandemic*PPP - 4 | 1.627 | 1.133 | 1.299 | 2.036 | <0.001 | 1.395 | 1.122 | 1.147 | 1.695 | 0.004 |
| Observations | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from HFSS | | | | | Energy purchased from UPF | | | | |
|------------------------------------|---------|----------------------------|-------|-----------|------------|---------|---------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.437 | 1.017 | 0.431 | 0.443 | <0.001 | 0.461 | 1.019 | 0.455 | 0.468 | <0.001 |
| count Time | | 1.000 | 1.000 | 1.000 | 1.000 | 0.414 | 1.000 | 1.000 | 1.000 | 1.000 | 0.368 |
| count Pandemic - during pandemic | | 1.053 | 1.011 | 1.033 | 1.073 | <0.001 | 1.004 | 1.011 | 0.987 | 1.022 | 0.697 |
| count Season - 2 | | 1.029 | 1.003 | 1.021 | 1.037 | <0.001 | 1.012 | 1.003 | 1.005 | 1.020 | <0.001 |
| count Season - 3 | | 1.039 | 1.004 | 1.031 | 1.048 | <0.001 | 1.024 | 1.003 | 1.017 | 1.032 | <0.001 |
| count Season - 4 | | 1.075 | 1.004 | 1.066 | 1.084 | <0.001 | 1.029 | 1.004 | 1.020 | 1.037 | <0.001 |
| count Age - 45-54 yrs | | 0.986 | 1.009 | 0.978 | 0.993 | 0.122 | 1.007 | 1.012 | 1.000 | 1.015 | 0.516 |
| count Age - 55-64 yrs | | 0.979 | 1.011 | 0.971 | 0.987 | 0.056 | 0.984 | 1.013 | 0.976 | 0.992 | 0.210 |
| count Age - 65+ yrs | | 0.970 | 1.011 | 0.962 | 0.979 | 0.005 | 0.979 | 1.013 | 0.971 | 0.987 | 0.096 |
| count Sex - male | | 1.003 | 1.007 | 0.997 | 1.009 | 0.690 | 0.989 | 1.008 | 0.984 | 0.994 | 0.181 |
| count Social grade - C1C2 | | 0.980 | 1.009 | 0.973 | 0.987 | 0.019 | 0.989 | 1.009 | 0.982 | 0.995 | 0.213 |
| count Social grade - AB | | 0.965 | 1.011 | 0.957 | 0.973 | 0.001 | 0.973 | 1.012 | 0.966 | 0.981 | 0.019 |
| count - Number of adults | | 0.995 | 1.004 | 0.992 | 0.998 | 0.191 | 0.992 | 1.004 | 0.989 | 0.995 | 0.064 |
| count Presence of children - Yes | | 1.002 | 1.009 | 0.994 | 1.009 | 0.858 | 1.016 | 1.011 | 1.010 | 1.023 | 0.119 |
| count Region - North of England | | 0.998 | 1.006 | 0.993 | 1.003 | 0.750 | 1.012 | 1.007 | 1.007 | 1.017 | 0.120 |
| count Festival - Valentine's Day | | 1.024 | 1.007 | 1.007 | 1.040 | 0.001 | 1.015 | 1.006 | 1.000 | 1.031 | 0.015 |
| count Festival - Easter | | 0.980 | 1.007 | 0.964 | 0.997 | 0.006 | 1.001 | 1.007 | 0.985 | 1.017 | 0.892 |
| countFestival - Halloween | | 0.993 | 1.010 | 0.970 | 1.016 | 0.466 | 1.012 | 1.009 | 0.990 | 1.035 | 0.185 |
| count Festival - Christmas | | 0.994 | 1.012 | 0.971 | 1.019 | 0.642 | 0.992 | 1.011 | 0.969 | 1.015 | 0.449 |
| count PPP - 2 | | 1.136 | 1.011 | 1.126 | 1.145 | <0.001 | 1.239 | 1.013 | 1.230 | 1.249 | <0.001 |
| count PPP - 3 | | 1.246 | 1.010 | 1.236 | 1.257 | <0.001 | 1.394 | 1.013 | 1.383 | 1.404 | <0.001 |
| count PPP - 4 | | 1.405 | 1.011 | 1.393 | 1.416 | <0.001 | 1.606 | 1.013 | 1.593 | 1.618 | <0.001 |
| count Interaction Time*Pandemic | | 1.000 | 1.001 | 0.998 | 1.002 | 0.886 | 1.000 | 1.001 | 0.998 | 1.002 | 0.965 |
| count Interaction Pandemic*PPP - 2 | | 0.984 | 1.012 | 0.965 | 1.003 | 0.181 | 0.976 | 1.013 | 0.958 | 0.994 | 0.058 |
| count Interaction Pandemic*PPP - 3 | | 0.981 | 1.011 | 0.962 | 1.000 | 0.086 | 0.962 | 1.012 | 0.945 | 0.980 | 0.002 |
| count Interaction Pandemic*PPP - 4 | | 0.915 | 1.012 | 0.897 | 0.933 | <0.001 | 0.946 | 1.012 | 0.928 | 0.963 | <0.001 |
| zero Constant | | 0.203 | 1.243 | 0.162 | 0.255 | <0.001 | 0.052 | 1.319 | 0.037 | 0.074 | <0.001 |
| zero Time | | 0.998 | 1.002 | 0.995 | 1.001 | 0.239 | 0.997 | 1.002 | 0.992 | 1.001 | 0.156 |
| zero Pandemic - during pandemic | | 0.886 | 1.156 | 0.671 | 1.169 | 0.404 | 1.007 | 1.229 | 0.676 | 1.500 | 0.974 |
| zero Season - 2 | | 0.971 | 1.066 | 0.853 | 1.104 | 0.642 | 1.020 | 1.109 | 0.840 | 1.237 | 0.850 |
| zero Season - 3 | | 0.969 | 1.068 | 0.849 | 1.107 | 0.634 | 1.168 | 1.102 | 0.962 | 1.417 | 0.109 |
| zero Season - 4 | | 0.815 | 1.084 | 0.698 | 0.953 | 0.012 | 0.891 | 1.118 | 0.704 | 1.128 | 0.301 |
| zero Age - 45-54 yrs | | 0.676 | 1.138 | 0.592 | 0.772 | 0.003 | 0.696 | 1.221 | 0.578 | 0.838 | 0.070 |
| zero Age - 55-64 yrs | | 0.581 | 1.150 | 0.505 | 0.667 | <0.001 | 0.534 | 1.216 | 0.437 | 0.653 | 0.001 |
| zero Age - 65+ yrs | | 0.630 | 1.151 | 0.551 | 0.720 | 0.001 | 0.567 | 1.210 | 0.468 | 0.687 | 0.003 |
| zero Sex - male | | 1.177 | 1.102 | 1.072 | 1.293 | 0.094 | 1.227 | 1.148 | 1.071 | 1.406 | 0.137 |
| zero Social grade - C1C2 | | 1.036 | 1.137 | 0.914 | 1.174 | 0.783 | 1.166 | 1.174 | 0.953 | 1.425 | 0.341 |
| zero Social grade - AB | | 1.174 | 1.158 | 1.017 | 1.355 | 0.275 | 1.424 | 1.205 | 1.142 | 1.777 | 0.058 |

| | | | | | | | | | | |
|-----------------------------------|--------|-------|-------|-------|--------|--------|-------|-------|-------|--------|
| zero - Number of adults | 0.661 | 1.069 | 0.622 | 0.702 | <0.001 | 0.778 | 1.087 | 0.717 | 0.845 | 0.003 |
| zero Presence of children - Yes | 0.495 | 1.137 | 0.431 | 0.569 | <0.001 | 0.410 | 1.186 | 0.332 | 0.507 | <0.001 |
| zero Region - North of England | 0.752 | 1.096 | 0.687 | 0.822 | 0.002 | 0.730 | 1.122 | 0.639 | 0.834 | 0.006 |
| zero Festival - Valentine's Day | 0.817 | 1.157 | 0.608 | 1.099 | 0.165 | 0.980 | 1.238 | 0.643 | 1.493 | 0.923 |
| zero Festival - Easter | 0.974 | 1.150 | 0.732 | 1.297 | 0.852 | 1.133 | 1.217 | 0.761 | 1.686 | 0.526 |
| zero Festival - Halloween | 1.010 | 1.253 | 0.648 | 1.574 | 0.966 | 1.024 | 1.395 | 0.533 | 1.968 | 0.942 |
| zero Festival - Christmas | 2.017 | 1.202 | 1.433 | 2.841 | <0.001 | 3.143 | 1.250 | 2.055 | 4.806 | <0.001 |
| zero PPP - 2 | 0.428 | 1.122 | 0.379 | 0.483 | <0.001 | 0.497 | 1.166 | 0.418 | 0.593 | <0.001 |
| zero PPP - 3 | 0.223 | 1.128 | 0.191 | 0.261 | <0.001 | 0.245 | 1.183 | 0.195 | 0.308 | <0.001 |
| zero PPP - 4 | 0.223 | 1.144 | 0.192 | 0.258 | <0.001 | 0.168 | 1.208 | 0.129 | 0.220 | <0.001 |
| zero Interaction Time*Pandemic | 0.962 | 1.016 | 0.933 | 0.992 | 0.015 | 0.996 | 1.025 | 0.954 | 1.040 | 0.875 |
| zero Interaction Pandemic*PPP - 2 | 1.191 | 1.215 | 0.858 | 1.652 | 0.369 | 1.202 | 1.272 | 0.788 | 1.836 | 0.443 |
| zero Interaction Pandemic*PPP - 3 | 2.544 | 1.221 | 1.819 | 3.556 | <0.001 | 2.026 | 1.328 | 1.267 | 3.240 | 0.013 |
| zero Interaction Pandemic*PPP - 4 | 2.877 | 1.230 | 2.101 | 3.939 | <0.001 | 2.359 | 1.331 | 1.404 | 3.966 | 0.003 |
| Observations | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from savoury snacks | | | | | Energy purchased from chocolate & confectionery | | | | |
|------------------------------------|---------|--------------------------------------|-------|-----------|------------|---------|-------------------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.091 | 1.066 | 0.087 | 0.094 | <0.001 | 0.107 | 1.060 | 0.102 | 0.112 | <0.001 |
| count Time | | 1.001 | 1.000 | 1.000 | 1.001 | 0.007 | 1.001 | 1.000 | 1.001 | 1.002 | 0.001 |
| count Pandemic - during pandemic | | 1.034 | 1.048 | 0.976 | 1.095 | 0.483 | 1.063 | 1.044 | 1.001 | 1.129 | 0.152 |
| count Season - 2 | | 0.977 | 1.012 | 0.957 | 0.997 | 0.055 | 1.001 | 1.014 | 0.979 | 1.024 | 0.927 |
| count Season - 3 | | 1.077 | 1.014 | 1.054 | 1.100 | <0.001 | 1.047 | 1.016 | 1.023 | 1.071 | 0.004 |
| count Season - 4 | | 1.093 | 1.016 | 1.069 | 1.119 | <0.001 | 1.202 | 1.017 | 1.173 | 1.232 | <0.001 |
| count Age - 45-54 yrs | | 0.902 | 1.034 | 0.884 | 0.920 | 0.002 | 0.941 | 1.032 | 0.920 | 0.962 | 0.056 |
| count Age - 55-64 yrs | | 0.826 | 1.040 | 0.808 | 0.845 | <0.001 | 0.878 | 1.035 | 0.857 | 0.900 | <0.001 |
| count Age - 65+ yrs | | 0.790 | 1.044 | 0.772 | 0.809 | <0.001 | 0.840 | 1.036 | 0.819 | 0.861 | <0.001 |
| count Sex - male | | 1.080 | 1.028 | 1.063 | 1.097 | 0.005 | 1.046 | 1.025 | 1.028 | 1.064 | 0.070 |
| count Social grade - C1C2 | | 0.938 | 1.031 | 0.921 | 0.956 | 0.039 | 0.909 | 1.029 | 0.891 | 0.927 | 0.001 |
| count Social grade - AB | | 0.968 | 1.035 | 0.947 | 0.990 | 0.350 | 0.980 | 1.034 | 0.957 | 1.004 | 0.558 |
| count - Number of adults | | 0.907 | 1.013 | 0.901 | 0.914 | <0.001 | 0.898 | 1.014 | 0.891 | 0.906 | <0.001 |
| count Presence of children - Yes | | 0.819 | 1.031 | 0.804 | 0.834 | <0.001 | 0.859 | 1.029 | 0.841 | 0.876 | <0.001 |
| count Region - North of England | | 0.914 | 1.023 | 0.902 | 0.927 | <0.001 | 0.945 | 1.022 | 0.931 | 0.960 | 0.009 |
| count Festival - Valentine's Day | | 1.094 | 1.027 | 1.048 | 1.141 | 0.001 | 1.052 | 1.029 | 1.005 | 1.102 | 0.072 |
| count Festival - Easter | | 0.978 | 1.026 | 0.935 | 1.023 | 0.373 | 1.214 | 1.028 | 1.160 | 1.271 | <0.001 |
| count Festival - Halloween | | 0.991 | 1.043 | 0.930 | 1.055 | 0.821 | 1.129 | 1.043 | 1.058 | 1.205 | 0.004 |
| count Festival - Christmas | | 1.258 | 1.043 | 1.178 | 1.344 | <0.001 | 1.191 | 1.058 | 1.105 | 1.284 | 0.002 |
| count PPP - 2 | | 1.058 | 1.041 | 1.030 | 1.086 | 0.159 | 1.085 | 1.039 | 1.055 | 1.116 | 0.033 |
| count PPP - 3 | | 1.315 | 1.038 | 1.282 | 1.349 | <0.001 | 1.319 | 1.035 | 1.283 | 1.355 | <0.001 |
| count PPP - 4 | | 1.936 | 1.040 | 1.888 | 1.985 | <0.001 | 1.901 | 1.036 | 1.851 | 1.953 | <0.001 |
| count Interaction Time*Pandemic | | 1.002 | 1.003 | 0.997 | 1.006 | 0.536 | 0.989 | 1.003 | 0.984 | 0.994 | <0.001 |
| count Interaction Pandemic*PPP - 2 | | 0.964 | 1.053 | 0.908 | 1.023 | 0.477 | 0.999 | 1.049 | 0.939 | 1.063 | 0.982 |
| count Interaction Pandemic*PPP - 3 | | 0.950 | 1.050 | 0.898 | 1.006 | 0.299 | 0.953 | 1.046 | 0.898 | 1.012 | 0.286 |
| count Interaction Pandemic*PPP - 4 | | 0.850 | 1.050 | 0.804 | 0.899 | 0.001 | 0.879 | 1.044 | 0.828 | 0.932 | 0.003 |
| zero Constant | | 5.383 | 1.116 | 4.960 | 5.842 | <0.001 | 5.020 | 1.115 | 4.628 | 5.446 | <0.001 |
| zero Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.200 | 0.999 | 1.001 | 0.998 | 1.000 | 0.078 |
| zero Pandemic - during pandemic | | 0.772 | 1.061 | 0.694 | 0.857 | <0.001 | 0.579 | 1.067 | 0.522 | 0.643 | <0.001 |
| zero Season - 2 | | 0.910 | 1.022 | 0.871 | 0.950 | <0.001 | 0.891 | 1.023 | 0.853 | 0.930 | <0.001 |
| zero Season - 3 | | 0.966 | 1.024 | 0.925 | 1.010 | 0.157 | 0.933 | 1.024 | 0.893 | 0.974 | 0.003 |
| zero Season - 4 | | 0.857 | 1.027 | 0.816 | 0.900 | <0.001 | 0.682 | 1.026 | 0.650 | 0.716 | <0.001 |
| zero Age - 45-54 yrs | | 0.917 | 1.072 | 0.877 | 0.959 | 0.210 | 0.929 | 1.068 | 0.888 | 0.970 | 0.259 |
| zero Age - 55-64 yrs | | 0.886 | 1.076 | 0.844 | 0.929 | 0.098 | 0.840 | 1.073 | 0.801 | 0.881 | 0.013 |

| | | | | | | | | | | |
|-----------------------------------|--------|-------|-------|-------|--------|--------|-------|-------|-------|--------|
| zero Age - 65+ yrs | 1.010 | 1.079 | 0.961 | 1.060 | 0.901 | 0.836 | 1.073 | 0.796 | 0.877 | 0.011 |
| zero Sex - male | 1.074 | 1.054 | 1.040 | 1.110 | 0.172 | 1.193 | 1.051 | 1.156 | 1.232 | <0.001 |
| zero Social grade - C1C2 | 0.885 | 1.067 | 0.851 | 0.921 | 0.061 | 1.042 | 1.063 | 1.002 | 1.084 | 0.498 |
| zero Social grade - AB | 0.982 | 1.076 | 0.937 | 1.029 | 0.803 | 1.242 | 1.073 | 1.185 | 1.301 | 0.002 |
| zero - Number of adults | 0.802 | 1.027 | 0.788 | 0.817 | <0.001 | 0.823 | 1.029 | 0.809 | 0.838 | <0.001 |
| zero Presence of children - Yes | 0.660 | 1.068 | 0.633 | 0.688 | <0.001 | 0.719 | 1.061 | 0.690 | 0.749 | <0.001 |
| zero Region - North of England | 0.903 | 1.047 | 0.876 | 0.930 | 0.024 | 0.790 | 1.046 | 0.767 | 0.813 | <0.001 |
| zero Festival - Valentine's Day | 0.855 | 1.046 | 0.780 | 0.938 | 0.001 | 0.780 | 1.044 | 0.712 | 0.855 | <0.001 |
| zero Festival - Easter | 1.020 | 1.047 | 0.926 | 1.123 | 0.664 | 0.682 | 1.048 | 0.618 | 0.753 | <0.001 |
| zero Festival - Halloween | 1.097 | 1.066 | 0.959 | 1.255 | 0.147 | 0.945 | 1.067 | 0.826 | 1.082 | 0.389 |
| zero Festival - Christmas | 1.250 | 1.072 | 1.090 | 1.434 | 0.001 | 1.811 | 1.075 | 1.581 | 2.074 | <0.001 |
| zero PPP - 2 | 0.429 | 1.064 | 0.410 | 0.449 | <0.001 | 0.418 | 1.061 | 0.400 | 0.437 | <0.001 |
| zero PPP - 3 | 0.236 | 1.063 | 0.226 | 0.247 | <0.001 | 0.254 | 1.067 | 0.243 | 0.266 | <0.001 |
| zero PPP - 4 | 0.145 | 1.074 | 0.138 | 0.152 | <0.001 | 0.155 | 1.072 | 0.148 | 0.162 | <0.001 |
| zero Interaction Time*Pandemic | 0.988 | 1.005 | 0.979 | 0.998 | 0.021 | 1.010 | 1.005 | 1.000 | 1.020 | 0.043 |
| zero Interaction Pandemic*PPP - 2 | 1.266 | 1.074 | 1.139 | 1.408 | 0.001 | 1.297 | 1.079 | 1.167 | 1.442 | 0.001 |
| zero Interaction Pandemic*PPP - 3 | 1.379 | 1.072 | 1.238 | 1.536 | <0.001 | 1.410 | 1.076 | 1.266 | 1.570 | <0.001 |
| zero Interaction Pandemic*PPP - 4 | 1.365 | 1.076 | 1.219 | 1.529 | <0.001 | 1.566 | 1.087 | 1.401 | 1.751 | <0.001 |
| Observations | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy purchased from low-sugar soft drinks | | | | | Energy from medium-sugar soft drinks | | | | |
|------------------------------------|---------|---------------------------------------------|-------|-----------|------------|---------|--------------------------------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.016 | 1.202 | 0.014 | 0.017 | <0.001 | 0.040 | 1.280 | 0.032 | 0.051 | <0.001 |
| count Time | | 1.002 | 1.001 | 1.001 | 1.002 | 0.160 | 1.004 | 1.002 | 1.001 | 1.007 | 0.115 |
| count Pandemic - during pandemic | | 1.029 | 1.258 | 0.896 | 1.183 | 0.900 | 0.658 | 1.258 | 0.507 | 0.855 | 0.068 |
| count Season - 2 | | 0.921 | 1.039 | 0.883 | 0.960 | 0.031 | 0.921 | 1.090 | 0.802 | 1.057 | 0.338 |
| count Season - 3 | | 1.174 | 1.043 | 1.126 | 1.225 | <0.001 | 0.946 | 1.102 | 0.827 | 1.082 | 0.567 |
| count Season - 4 | | 1.024 | 1.048 | 0.976 | 1.074 | 0.613 | 0.898 | 1.123 | 0.779 | 1.034 | 0.350 |
| count Age - 45-54 yrs | | 0.844 | 1.082 | 0.811 | 0.879 | 0.032 | 1.246 | 1.188 | 1.090 | 1.425 | 0.201 |
| count Age - 55-64 yrs | | 0.864 | 1.102 | 0.826 | 0.904 | 0.131 | 1.209 | 1.160 | 1.040 | 1.405 | 0.200 |
| count Age - 65+ yrs | | 0.742 | 1.100 | 0.707 | 0.779 | 0.002 | 1.002 | 1.171 | 0.862 | 1.164 | 0.992 |
| count Sex - male | | 1.107 | 1.068 | 1.072 | 1.143 | 0.123 | 1.071 | 1.103 | 0.967 | 1.186 | 0.486 |
| count Social grade - C1C2 | | 0.800 | 1.082 | 0.770 | 0.831 | 0.004 | 0.659 | 1.215 | 0.580 | 0.747 | 0.032 |
| count Social grade - AB | | 0.756 | 1.096 | 0.721 | 0.792 | 0.002 | 0.691 | 1.216 | 0.595 | 0.802 | 0.058 |
| count - Number of adults | | 0.876 | 1.035 | 0.864 | 0.889 | <0.001 | 0.840 | 1.061 | 0.800 | 0.881 | 0.003 |
| count Presence of children - Yes | | 0.763 | 1.070 | 0.736 | 0.792 | <0.001 | 1.118 | 1.184 | 0.983 | 1.273 | 0.506 |
| count Region - North of England | | 0.869 | 1.065 | 0.844 | 0.895 | 0.027 | 0.928 | 1.096 | 0.848 | 1.014 | 0.413 |
| count Festival - Valentine's Day | | 1.073 | 1.077 | 0.980 | 1.176 | 0.339 | 1.391 | 1.218 | 1.047 | 1.848 | 0.094 |
| count Festival - Easter | | 1.086 | 1.079 | 0.993 | 1.188 | 0.277 | 0.800 | 1.131 | 0.594 | 1.076 | 0.070 |
| count Festival - Halloween | | 1.033 | 1.203 | 0.905 | 1.178 | 0.861 | 1.254 | 1.293 | 0.813 | 1.933 | 0.378 |
| count Festival - Christmas | | 1.795 | 1.219 | 1.551 | 2.077 | 0.003 | 0.640 | 1.231 | 0.452 | 0.906 | 0.032 |
| count PPP - 2 | | 0.560 | 1.152 | 0.523 | 0.600 | <0.001 | 0.893 | 1.133 | 0.801 | 0.995 | 0.363 |
| count PPP - 3 | | 0.782 | 1.151 | 0.731 | 0.837 | 0.082 | - | | | | |
| count PPP - 4 | | 2.434 | 1.157 | 2.277 | 2.602 | <0.001 | - | | | | |
| count Interaction Time*Pandemic | | 1.014 | 1.007 | 1.004 | 1.023 | 0.054 | 1.038 | 1.027 | 1.007 | 1.071 | 0.163 |
| count Interaction Pandemic*PPP - 2 | | 1.150 | 1.269 | 0.999 | 1.323 | 0.559 | 1.067 | 1.262 | 0.841 | 1.355 | 0.779 |
| count Interaction Pandemic*PPP - 3 | | 1.056 | 1.263 | 0.922 | 1.210 | 0.815 | - | | | | |
| count Interaction Pandemic*PPP - 4 | | 0.695 | 1.258 | 0.608 | 0.795 | 0.113 | - | | | | |
| zero Constant | | 13.106 | 1.162 | 11.947 | 14.378 | <0.001 | 88.654 | 1.280 | 68.961 | 113.972 | <0.001 |
| zero Time | | 1.000 | 1.001 | 0.999 | 1.001 | 0.931 | 0.996 | 1.002 | 0.992 | 0.999 | 0.064 |
| zero Pandemic - during pandemic | | 0.680 | 1.081 | 0.599 | 0.773 | <0.001 | 0.981 | 1.200 | 0.731 | 1.318 | 0.918 |
| zero Season - 2 | | 0.853 | 1.024 | 0.813 | 0.894 | <0.001 | 0.798 | 1.078 | 0.691 | 0.922 | 0.003 |

| | | | | | | | | | | |
|-----------------------------------|--------|-------|-------|-------|--------|--------|-------|-------|-------|--------|
| zero Season - 3 | 0.783 | 1.026 | 0.746 | 0.822 | <0.001 | 0.845 | 1.088 | 0.732 | 0.976 | 0.046 |
| zero Season - 4 | 0.940 | 1.027 | 0.891 | 0.992 | 0.020 | 0.731 | 1.085 | 0.630 | 0.847 | <0.001 |
| zero Age - 45-54 yrs | 0.967 | 1.100 | 0.921 | 1.015 | 0.725 | 0.909 | 1.156 | 0.788 | 1.048 | 0.510 |
| zero Age - 55-64 yrs | 1.012 | 1.110 | 0.960 | 1.067 | 0.910 | 0.884 | 1.185 | 0.758 | 1.030 | 0.465 |
| zero Age - 65+ yrs | 1.245 | 1.111 | 1.179 | 1.314 | 0.038 | 1.049 | 1.187 | 0.893 | 1.232 | 0.780 |
| zero Sex - male | 1.137 | 1.073 | 1.097 | 1.179 | 0.067 | 1.201 | 1.130 | 1.079 | 1.337 | 0.134 |
| zero Social grade - C1C2 | 1.024 | 1.086 | 0.981 | 1.069 | 0.776 | 0.892 | 1.171 | 0.782 | 1.016 | 0.468 |
| zero Social grade - AB | 1.227 | 1.106 | 1.165 | 1.292 | 0.042 | 0.929 | 1.191 | 0.796 | 1.084 | 0.674 |
| zero - Number of adults | 0.804 | 1.039 | 0.789 | 0.820 | <0.001 | 0.996 | 1.074 | 0.945 | 1.051 | 0.960 |
| zero Presence of children - Yes | 0.708 | 1.091 | 0.677 | 0.741 | <0.001 | 1.077 | 1.145 | 0.941 | 1.232 | 0.585 |
| zero Region - North of England | 0.704 | 1.065 | 0.681 | 0.727 | <0.001 | 1.269 | 1.121 | 1.157 | 1.392 | 0.037 |
| zero Festival - Valentine's Day | 1.033 | 1.046 | 0.934 | 1.142 | 0.472 | 0.896 | 1.164 | 0.664 | 1.208 | 0.468 |
| zero Festival - Easter | 0.950 | 1.048 | 0.855 | 1.055 | 0.272 | 1.092 | 1.159 | 0.794 | 1.501 | 0.552 |
| zero Festival - Halloween | 1.008 | 1.070 | 0.871 | 1.168 | 0.901 | 1.521 | 1.245 | 0.958 | 2.416 | 0.055 |
| zero Festival - Christmas | 1.226 | 1.078 | 1.055 | 1.425 | 0.007 | 0.917 | 1.215 | 0.628 | 1.338 | 0.656 |
| zero PPP - 2 | 0.231 | 1.096 | 0.218 | 0.245 | <0.001 | 0.113 | 1.125 | 0.102 | 0.125 | <0.001 |
| zero PPP - 3 | 0.126 | 1.099 | 0.119 | 0.134 | <0.001 | - | | | | |
| zero PPP - 4 | 0.090 | 1.101 | 0.085 | 0.096 | <0.001 | - | | | | |
| zero Interaction Time*Pandemic | 0.982 | 1.005 | 0.971 | 0.993 | <0.001 | 0.968 | 1.016 | 0.938 | 0.999 | 0.046 |
| zero Interaction Pandemic*PPP - 2 | 1.304 | 1.093 | 1.149 | 1.480 | 0.003 | 2.120 | 1.179 | 1.664 | 2.702 | <0.001 |
| zero Interaction Pandemic*PPP - 3 | 1.377 | 1.092 | 1.213 | 1.564 | <0.001 | - | | | | |
| zero Interaction Pandemic*PPP - 4 | 1.612 | 1.089 | 1.419 | 1.833 | <0.001 | - | | | | |
| Observations | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | Energy from high-sugar soft drinks | | | | | Alcohol volume | | | | |
|------------------------------------|---------|------------------------------------|-------|-----------|------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | p value | Exp. estimate | SE | 95%CI low | 95%CI high | p value |
| count Constant | | 0.091 | 1.207 | 0.079 | 0.105 | <0.001 | 1732.637 | 1.148 | 1599.469 | 1876.892 | <0.001 |
| count Time | | 0.999 | 1.001 | 0.997 | 1.001 | 0.472 | 1.002 | 1.001 | 1.001 | 1.003 | 0.003 |
| count Pandemic - during pandemic | | 0.367 | 2.136 | 0.101 | 1.334 | 0.187 | 1.149 | 1.089 | 1.027 | 1.286 | 0.103 |
| count Season - 2 | | 0.902 | 1.056 | 0.833 | 0.977 | 0.060 | 1.080 | 1.022 | 1.045 | 1.116 | <0.001 |
| count Season - 3 | | 1.150 | 1.076 | 1.059 | 1.248 | 0.056 | 1.123 | 1.026 | 1.086 | 1.161 | <0.001 |
| count Season - 4 | | 0.939 | 1.069 | 0.858 | 1.028 | 0.345 | 1.205 | 1.023 | 1.162 | 1.250 | <0.001 |
| count Age - 45-54 yrs | | 0.764 | 1.113 | 0.711 | 0.821 | 0.012 | 1.164 | 1.075 | 1.122 | 1.207 | 0.036 |
| count Age - 55-64 yrs | | 0.637 | 1.139 | 0.590 | 0.688 | 0.001 | 1.039 | 1.093 | 1.000 | 1.080 | 0.664 |
| count Age - 65+ yrs | | 0.675 | 1.195 | 0.615 | 0.740 | 0.027 | 0.905 | 1.107 | 0.870 | 0.941 | 0.326 |
| count Sex - male | | 1.147 | 1.103 | 1.079 | 1.220 | 0.160 | 1.106 | 1.065 | 1.079 | 1.133 | 0.113 |
| count Social grade - C1C2 | | 0.840 | 1.115 | 0.786 | 0.899 | 0.110 | 0.821 | 1.100 | 0.796 | 0.846 | 0.037 |
| count Social grade - AB | | 0.817 | 1.115 | 0.750 | 0.890 | 0.063 | 0.730 | 1.101 | 0.705 | 0.757 | 0.001 |
| count - Number of adults | | 0.852 | 1.054 | 0.830 | 0.874 | 0.002 | 0.726 | 1.031 | 0.717 | 0.735 | <0.001 |
| count Presence of children - Yes | | 0.695 | 1.091 | 0.649 | 0.743 | <0.001 | 1.017 | 1.073 | 0.983 | 1.052 | 0.811 |
| count Region - North of England | | 0.866 | 1.095 | 0.819 | 0.916 | 0.112 | 1.254 | 1.055 | 1.226 | 1.283 | <0.001 |
| count Festival - Valentine's Day | | 0.837 | 1.087 | 0.705 | 0.996 | 0.033 | 0.920 | 1.036 | 0.859 | 0.985 | 0.019 |
| count Festival - Easter | | 0.948 | 1.093 | 0.816 | 1.102 | 0.549 | 1.085 | 1.036 | 1.014 | 1.161 | 0.022 |
| count Festival - Halloween | | 0.829 | 1.124 | 0.650 | 1.058 | 0.110 | 0.872 | 1.055 | 0.791 | 0.961 | 0.010 |
| count Festival - Christmas | | 0.854 | 1.121 | 0.687 | 1.060 | 0.167 | 1.149 | 1.062 | 1.042 | 1.267 | 0.021 |
| count PPP - 2 | | 1.216 | 1.122 | 1.122 | 1.317 | 0.090 | 1.000 | 1.072 | 0.943 | 1.061 | 0.998 |
| count PPP - 3 | | - | | | | | 2.419 | 1.069 | 2.285 | 2.560 | <0.001 |
| count PPP - 4 | | - | | | | | - | | | | |
| count Interaction Time*Pandemic | | 1.015 | 1.011 | 0.996 | 1.034 | 0.176 | 1.001 | 1.005 | 0.993 | 1.008 | 0.913 |
| count Interaction Pandemic*PPP - 2 | | 0.828 | 1.195 | 0.706 | 0.972 | 0.291 | 1.153 | 1.092 | 1.034 | 1.286 | 0.107 |
| count Interaction Pandemic*PPP - 3 | | - | | | | | 1.017 | 1.086 | 0.917 | 1.127 | 0.841 |
| count Interaction Pandemic*PPP - 4 | | - | | | | | - | | | | |

| | | | | | | | | | | |
|-----------------------------------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|
| zero Constant | 50.033 | 1.285 | 42.483 | 58.924 | <0.001 | 58.976 | 1.160 | 52.873 | 65.783 | <0.001 |
| zero Time | 1.002 | 1.001 | 0.999 | 1.004 | 0.301 | 0.999 | 1.001 | 0.998 | 1.001 | 0.408 |
| zero Pandemic - during pandemic | 1.363 | 2.096 | 0.314 | 5.909 | 0.676 | 0.481 | 1.097 | 0.417 | 0.555 | <0.001 |
| zero Season - 2 | 0.829 | 1.053 | 0.755 | 0.910 | <0.001 | 0.784 | 1.028 | 0.745 | 0.825 | <0.001 |
| zero Season - 3 | 0.874 | 1.053 | 0.794 | 0.963 | 0.010 | 0.767 | 1.031 | 0.728 | 0.807 | <0.001 |
| zero Season - 4 | 0.828 | 1.060 | 0.745 | 0.921 | 0.001 | 0.610 | 1.032 | 0.576 | 0.646 | <0.001 |
| zero Age - 45-54 yrs | 1.647 | 1.167 | 1.513 | 1.793 | 0.001 | 0.791 | 1.100 | 0.751 | 0.834 | 0.014 |
| zero Age - 55-64 yrs | 1.325 | 1.202 | 1.208 | 1.453 | 0.127 | 0.881 | 1.109 | 0.832 | 0.932 | 0.218 |
| zero Age - 65+ yrs | 2.256 | 1.219 | 2.026 | 2.513 | <0.001 | 0.899 | 1.111 | 0.849 | 0.953 | 0.313 |
| zero Sex - male | 0.850 | 1.136 | 0.793 | 0.911 | 0.202 | 0.997 | 1.072 | 0.960 | 1.035 | 0.961 |
| zero Social grade - C1C2 | 1.199 | 1.168 | 1.110 | 1.296 | 0.241 | 0.891 | 1.088 | 0.850 | 0.934 | 0.171 |
| zero Social grade - AB | 1.413 | 1.185 | 1.280 | 1.559 | 0.041 | 0.976 | 1.104 | 0.923 | 1.032 | 0.805 |
| zero - Number of adults | 0.910 | 1.069 | 0.881 | 0.939 | 0.153 | 0.787 | 1.038 | 0.772 | 0.803 | <0.001 |
| zero Presence of children - Yes | 1.118 | 1.160 | 1.032 | 1.210 | 0.455 | 1.223 | 1.091 | 1.165 | 1.284 | 0.021 |
| zero Region - North of England | 1.357 | 1.126 | 1.274 | 1.444 | 0.010 | 0.853 | 1.067 | 0.823 | 0.883 | 0.013 |
| zero Festival - Valentine's Day | 0.951 | 1.097 | 0.776 | 1.165 | 0.586 | 0.775 | 1.051 | 0.696 | 0.863 | <0.001 |
| zero Festival - Easter | 0.693 | 1.087 | 0.578 | 0.830 | <0.001 | 0.968 | 1.050 | 0.869 | 1.079 | 0.507 |
| zero Festival - Halloween | 1.058 | 1.138 | 0.793 | 1.411 | 0.664 | 1.271 | 1.073 | 1.090 | 1.483 | 0.001 |
| zero Festival - Christmas | 0.700 | 1.146 | 0.538 | 0.912 | 0.009 | 1.267 | 1.090 | 1.085 | 1.478 | 0.006 |
| zero PPP - 2 | 0.062 | 1.109 | 0.057 | 0.068 | <0.001 | 0.162 | 1.082 | 0.151 | 0.174 | <0.001 |
| zero PPP - 3 | - | - | - | - | - | 0.032 | 1.089 | 0.030 | 0.035 | <0.001 |
| zero PPP - 4 | - | - | - | - | - | - | - | - | - | - |
| zero Interaction Time*Pandemic | 0.988 | 1.011 | 0.967 | 1.009 | 0.250 | 0.983 | 1.005 | 0.972 | 0.994 | 0.001 |
| zero Interaction Pandemic*PPP - 2 | 1.921 | 1.120 | 1.610 | 2.293 | <0.001 | 1.477 | 1.104 | 1.291 | 1.689 | <0.001 |
| zero Interaction Pandemic*PPP - 3 | - | - | - | - | - | 1.940 | 1.105 | 1.701 | 2.213 | <0.001 |
| zero Interaction Pandemic*PPP - 4 | - | - | - | - | - | - | - | - | - | - |
| Observations | 89,382 | | | | | 89,382 | | | | |

| Term | Outcome | OOH purchasing | | | | p value |
|----------------------------------|---------|----------------|-------|-----------|------------|---------|
| | | Exp. estimate | SE | 95%CI low | 95%CI high | |
| count Constant | | 0.499 | 1.235 | 0.459 | 0.543 | 0.001 |
| count Time | | 0.999 | 1.001 | 0.998 | 1.000 | 0.317 |
| count Pandemic - during pandemic | | 0.644 | 1.203 | 0.523 | 0.793 | 0.017 |
| count Season - 2 | | 0.952 | 1.022 | 0.913 | 0.993 | 0.027 |
| count Season - 3 | | 1.038 | 1.024 | 0.994 | 1.084 | 0.112 |
| count Season - 4 | | 1.025 | 1.022 | 0.976 | 1.076 | 0.264 |
| count Age - 45-54 yrs | | 0.840 | 1.127 | 0.808 | 0.874 | 0.146 |
| count Age - 55-64 yrs | | 0.943 | 1.134 | 0.904 | 0.985 | 0.644 |
| count Age - 65+ yrs | | 0.915 | 1.193 | 0.860 | 0.973 | 0.613 |
| count Sex - male | | 1.288 | 1.097 | 1.248 | 1.329 | 0.006 |
| count Social grade - C1C2 | | 1.146 | 1.138 | 1.098 | 1.196 | 0.293 |
| count Social grade - AB | | 1.235 | 1.182 | 1.171 | 1.302 | 0.207 |
| count - Number of adults | | 1.010 | 1.061 | 0.991 | 1.030 | 0.867 |
| count Presence of children - Yes | | 1.098 | 1.125 | 1.057 | 1.142 | 0.425 |
| count Region - North of England | | 1.067 | 1.089 | 1.035 | 1.099 | 0.449 |
| count Festival - Valentine's Day | | 1.016 | 1.027 | 0.933 | 1.107 | 0.540 |
| count Festival - Easter | | 0.927 | 1.043 | 0.832 | 1.033 | 0.068 |
| count Festival - Halloween | | 0.993 | 1.039 | 0.879 | 1.123 | 0.862 |
| count Festival - Christmas | | 0.754 | 1.064 | 0.650 | 0.875 | <0.001 |
| count PPP - 2 | | 4.200 | 1.087 | 4.047 | 4.359 | <0.001 |
| count PPP - 3 | | - | - | - | - | - |
| count PPP - 4 | | - | - | - | - | - |

| | | | | | |
|------------------------------------|-------------|--------|--------|---------|--------|
| count Interaction Time*Pandemic | 1.009 | 1.011 | 0.994 | 1.024 | 0.380 |
| count Interaction Pandemic*PPP - 2 | 1.037 | 1.190 | 0.872 | 1.233 | 0.835 |
| count Interaction Pandemic*PPP - 3 | - | | | | |
| count Interaction Pandemic*PPP - 4 | - | | | | |
| zero Constant | <0.001 | 3.347 | <0.001 | Inf | <0.001 |
| zero Time | 1.093 | 1.066 | 1.026 | 1.164 | 0.164 |
| zero Pandemic - during pandemic | 4012206.126 | 12.898 | <0.001 | Inf | <0.001 |
| zero Season - 2 | 3.909 | 1.453 | 2.071 | 7.376 | <0.001 |
| zero Season - 3 | 20.944 | 9.676 | 2.927 | 149.891 | 0.180 |
| zero Season - 4 | 8.927 | 5.784 | 2.149 | 37.085 | 0.212 |
| zero Age - 45-54 yrs | - | | | | |
| zero Age - 55-64 yrs | - | | | | |
| zero Age - 65+ yrs | - | | | | |
| zero Sex - male | 1.013 | 1.659 | 0.734 | 1.397 | 0.980 |
| zero Social grade - C1C2 | 0.791 | 1.675 | 0.528 | 1.184 | 0.649 |
| zero Social grade - AB | 1.178 | 1.905 | 0.726 | 1.912 | 0.799 |
| zero - Number of adults | 1.082 | 1.377 | 0.887 | 1.320 | 0.805 |
| zero Presence of children - Yes | - | | | | |
| zero Region - North of England | - | | | | |
| zero Festival - Valentine's Day | - | | | | |
| zero Festival - Easter | - | | | | |
| zero Festival - Halloween | - | | | | |
| zero Festival - Christmas | - | | | | |
| zero PPP - 2 | 3595603.272 | 2.499 | <0.001 | Inf | <0.001 |
| zero PPP - 3 | - | | | | |
| zero PPP - 4 | - | | | | |
| zero Interaction Time*Pandemic | 0.779 | 1.101 | 0.705 | 0.860 | 0.009 |
| zero Interaction Pandemic*PPP - 2 | <0.001 | 12.575 | <0.001 | Inf | <0.001 |
| zero Interaction Pandemic*PPP - 3 | - | | | | |
| zero Interaction Pandemic*PPP - 4 | - | | | | |
| Observations | 16,806 | | | | |