Food purchasing behaviours across ethnic groups in the UK[*]

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Executive summary

The main purpose of this report is to gain a better understanding of food purchases by different ethnic groups in the UK, focusing in particular on 'unprepared food groups', i.e. food items that are basic commodity foods. For this quantitative anlaysis, we use the Kantar Worldpanel fast-moving consumer goods (FMCG) panel over the period 2009-2020.

We find that households where the main shopper is South Asian or Black buy on average larger shares of their calories from unprepared foods than households where the main shopper is White (57 and 58% compared to 53%).

Zooming in on categories within unprepared foods (hence just over half of all calories purchased), we find that White and Black households purchase similar calorie shares across categories, i.e. across (i) fruit and vegetables (12% of calories for both groups), (ii) starchy carbohydrate products (30 and 31% for White and Black households respectively, (iii) protein foods (23 and 25%), and (iv) oils and spreads (15 and 17%). The small differences manifest themselves in White households purchasing a larger share of their unprepared calories from dairy and alternatives than Black households (20 and 15% respectively). The third group considered, South Asians, purchase a similar share of fruit and vegetables compared to White and Black households (13%), less starchy carbohydrates(27%) and protein foods (14%), and larger calorie shares of dairy and alternatives (24%), and oils and spreads (23%).

The report also considers for each of the unprepared food categories, the products which households purchase in the greatest quantities. Generally speaking, no stark differences are observed across ethnic groups.

Contents

1 Introduction

A significant share of the UK population (14 and 18% in the 2011 and 2021 censuses respectively) comes from non-White ethnic groups. Some of these ethnic minorities in the UK are more likely than the White British population to experience poor health outcomes such as cardiovascular disease, type 2 diabetes, and obesity (Raleigh and Holmes, 2021; Toleikyte and Salway, 2018). While the causes for these diseases are multifaceted, diet can play an important role in preventing adverse health outcomes. Policymakers can support individuals to make healthier dietary choices by helping them understand what a healthy and balanced diet looks like. This report provides an exploratory analysis of the types of foods that groups of different ethnic backgrounds in the UK purchase into their home to understand whether there are any potential key differences in purchasing behaviour across groups. Such information could be used to help inform policy tools and wider government messaging on a healthy balanced diet.

Aims and Objectives

This report provides a descriptive analysis of food purchases by UK households into their home (which we will refer to as 'grocery shopping') and compares households where the main shopper is from a minority ethnic group to households where the main shopper is from the white British population. The main focus is on what we term 'unprepared food groups', i.e. food items that are basic commodity foods. This category therefore does not include composite foods made of a combination of ingredients, implying that vegetables purchased as part of a ready-made vegetable soup, for example, are not considered.

In particular, we:

- Discuss for contextualization the amount of calories purchased from unprepared foods as well as remaining food items purchased, namely prepared sweet foods, prepared savoury foods, and drinks - for different ethnic groups.

- Analyse differences in shopping behaviour between ethnicities focusing on unprepared food, which we categorize into the following food groups:

    - Fruit and vegetables
    - Potatoes, bread, rice, pasta and other starchy carbohydrates

- Beans, pulses, fish, eggs, meat, and other proteins
  - Dairy and alternatives
  - Oils and spreads.

- Analyse differences by sub-groups (age of the main shopper and social class).

- Within the listed food groups, we identify those unprepared food items that households purchase in largest quantities into their home for the major ethnic groups in the UK.

2 Data

We use data from the Kantar Worldpanel fast-moving consumer goods (FMCG) panel. Kantar is a market research firm, which collects information on the purchases of food and drinks by a representative sample of British households. The data set is created from household level scanner data that cover all food and drink grocery purchases that are brought into the home. The data record the products that were purchased at the barcode level, the price, and other product characteristics. We use data from 2009-2020. Over this period, just under 60,000 households report the purchases they bring into their home for an average of 5 years and 7 months. Food and drink purchases from any type of source (supermarket, corner stores, fruit stalls, milkman, etc.) are recorded.

The Kantar Worldpanel data also includes information on household demographics, such as the gender and age of all household members, socio-economic status, and additional characteristics of the main shopper. This information on the main shopper includes his/her ethnicity, which is what we use in the analysis. Therefore, whenever we describe households of a given ethnicity, this refers to households where the main shopper is of that ethnicity.

In order to ensure sufficient sample sizes for robust analysis, in the main body of the report we aggregate detailed ethnicities into three broad ethnic groups: White, South Asian and Black. These make up 92.6%, 3.2% and 1.6% of the analysis sample respectively, as shown in Table 1. A further 2.6% of households are categorized as 'Other'.[1] These households are excluded from the analysis.

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[1]This category includes 'Other white', mixed ethnic groups (White and Asian, White and Black Caribbean, White and Black African, Other mixed), and 'Other ethnic group).

Table 1: Ethnic composition of Kantar sample and 2011 census

	Kantar (2009-2020)		2011 Census	2021 Census
	N	%	%	%
White	55,088	92.6	86.0	82.1
South Asian	1,891	3.2	5.3	6.9
Black	953	1.6	3.3	4.0
Other	1,572	2.6	5.4	6.0
Total	59,504	100	100	100

Note: *Source* - Kantar data (columns 1 and 2) are number of unique households in the January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Table 1 also shows how the categorization compares to the shares from each group observed in the 2011 and 2021 population censuses of England and Wales. An equivalent table by more detailed ethnic groups is shown in Appendix Table A1.[2] We see that South Asian and Black households, as well as households of other non-White ethnicities, are under-represented in the Kantar data relative to their share in the population (as measured by the 2011 census). Despite this, the large sample sizes in the Kantar data mean we have close to one thousand Black households, and around 1,900 South Asian households in our sample, which allows us to perform robust analysis at the ethnicity level, a distinct advantage compared to many other smaller survey data sets.

Limitations

Despite the unique advantages of the Kantar Worldpanel over other UK dietary surveys, there are some limitations, relevant to this work, to point out:

- We capture in this report data on food and drink purchases brought *into* the home only. Kantar also collects data on food and nonalcoholic drinks purchased for *out-of-home (OOH) consumption*[3], however, the sample would be too small to allow for informative break-downs by ethnicity. The reasons for the significant

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[2]We show main result figures broken down by detailed ethnicity in Appendix E, but raise caution about small sample sizes.

[3]More specifically, it includes purchases from restaurants, bars and cafes; takeaways; food and drinks purchased in schools and workplaces; and food and drink purchased in shops, but not taken into the home.

drop in sample size include that (i) we have access to data from 2005-2019 only and (ii) the data is recorded for a sub-set of the main sample only. In addition, only selected individuals (typically one per household) record their OOH purchases. The data hence capture individual-level choices, whereas the into-home data captures grocery purchases at the household-level. We further note that OOH purchases are typically not unprepared foods.

- Due to the nature of the Kantar data, we are not able break down ingredients from prepared/composite food into food categories we consider under unprepared food. If a household for example purchases prepared lasagne, the pasta from this lasagne will not be reflected in the unprepared purchased pasta, and similarly for all other ingredients.

- The large sample size of almost 60,000 households is still not sufficient to analyse detailed ethnic minority groups, so we aggregate into broad categories.

- Information on ethnicity is available for the main shopper only. Households that have members of different ethnicities are hence categorized by that of the main shopper in the analysis.

- We note that while the data is broadly representative for the UK population (Leicester and Oldfield, 2009a,b), some minority groups are under-represented.

- We do not observe actual *consumption* of groceries, but *purchases*.

3 Composition of into-home food purchases

We start with a brief description of the composition of food purchases by ethnic groups, focusing on calories purchased.[4,5] We distinguish between unprepared foods and prepared foods, as well as drinks. We start by discussing how much of purchased calories falls into each of these categories, before we zoom into the category of unprepared foods, the main focus of this report.

Figure 1 shows that, on average, unprepared foods constitute just over half of the calories purchased in the household for all three ethnic groups considered, with prepared

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[4]In Appendix B, Figure B1 we repeat the analysis focusing on amounts in terms of percentage weight (rather than calories) purchased. The general patterns across ethnic groups are comparable. Shares of prepared food categories are smaller in terms of weight and shares of unprepared food and drink categories in turn are larger. This change reflects that prepared foods tend to be denser on average in calories per kg than unprepared foods and drinks.

[5]In Appendix E we show and discuss the break-down more detailed ethnicity groups.

foods (sweet and savoury) and drinks accounting for the remainder. The share of calories from unprepared food is slightly higher among South Asian and Black households (57 and 58% respectively) than among White households (53%). Prepared sweet foods (such as cakes, ice cream, biscuits, puddings, etc.) account for between 23 and 26% of calories purchased, around 10 percentage points more than prepared savoury foods (which include things like crackers and crisps, sauces, ready meals, etc.). Drinks (lemonades, teas, flavoured milks, etc., but excluding pure juice and dairy and alternatives, which are included in the unprepared food groups types) account for a much smaller share of calories at around 3% for South Asian, 5% for White, and 6% for Black households.

Figure 1: Share of calories purchased across prepared and unprepared food and drinks - by ethnicity
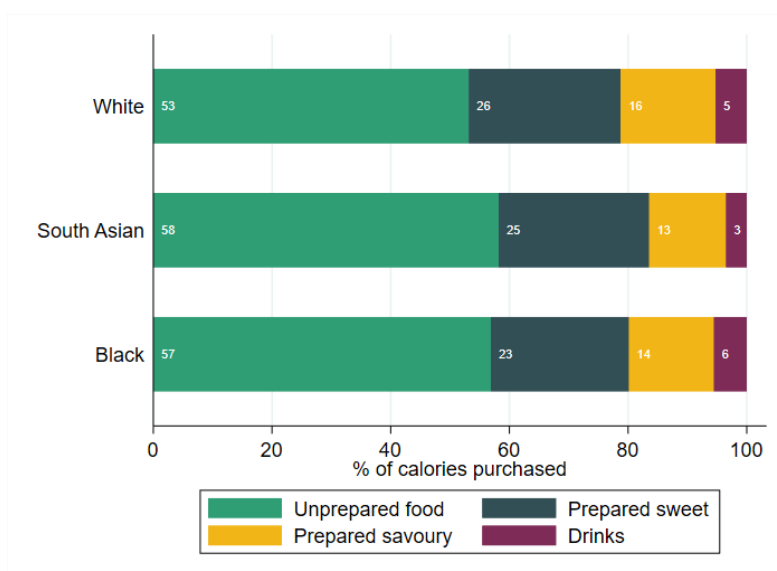
Note: Based on Kantar FMCG data January 2009 to December 2020.

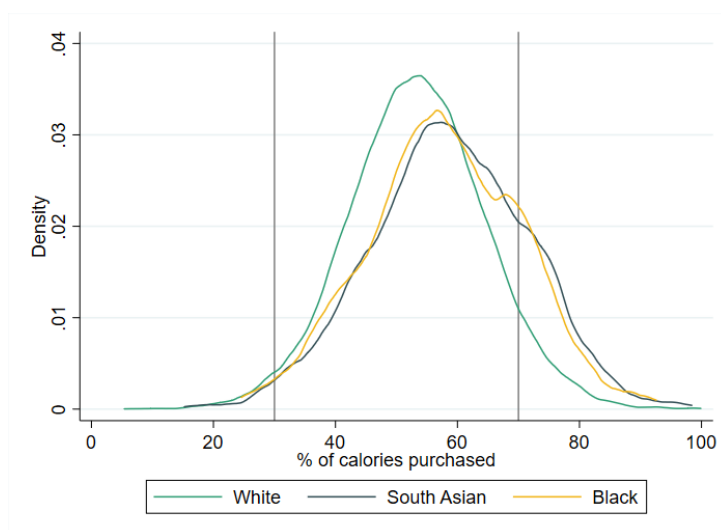## 4   Purchases of unprepared foods

In this section, the focus is on unprepared foods. Therefore, statistics such as shares of calories and total volume of food purchased are calculated based on between 53% and 58% of all food and drinks purchases into the home, as discussed in the previous section.[6]

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[6]We show in Appendix D similar statistics for prepared food categories for reference.

4.1 Shares purchased

We start by showing the distribution of share of calories purchased from unprepared foods by ethnicity. We see in Figure 2 the sizeable variation across households underlying the averages shown in Figure 1. It also shows the considerable difference across ethnicities in the share of households who have very high (>70%) shares of calories from unprepared foods (those falling to the right of the gray vertical line at 70 in Figure 2). This is only around 7% among White households, but closer to 20% for South Asian and Black households (19.9 and 17.8% respectively). The shares of households with low shares (<30%) of calories from unprepared food types is much more similar across groups at between 1.5 and 2% for all groups.

Figure 2: Distribution of calorie shares purchased from unprepared foods - by ethnicity

Note: Based on Kantar FMCG data January 2018 to December 2018.

Figure 3 breaks unprepared foods down. We categorize unprepared purchased food items into 5 categories[7]: (i) fruit and vegetables, (ii) starchy carbohydrates (including potatoes, bread, rice, pasta), (iii) protein foods (beans, pulses, fish, eggs, meat, and other proteins), (iv) dairy and alternatives, and (v) oils and spreads. It is important to reiterate that the statistics we present on these food groups do not necessarily align with total purchase of these food items. Households might for example buy prepared food that contains vegetables, that would not be captured here.

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[7]These categories align with those of the UK government's Eatwell Guide, a policy tool which shows visually how much of our overall food consumption should come from different food groups.

Figure 3: Share of calories purchased across unprepared foods - by ethnicity
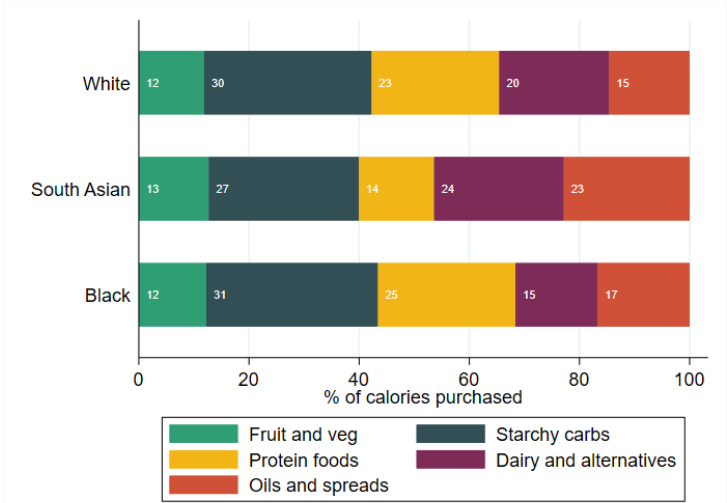
Note: Based on Kantar FMCG data January 2009 to December 2020. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.

The share of calories from purchased fruits and vegetables is very similar across groups at around 12%, but differences are larger for protein foods, dairy and alternatives, and oils and spreads. The figure shows that South Asian households for example purchase a considerably lower share of calories from protein foods, compared to households from the other two groups (23-25% compared to 14%).[8] Instead, a much higher share of the calories they purchase comes from oils and spreads, and a slightly higher share from dairy and alternatives. While the shares of calories from oils and spreads (15-17% for White and Black households, and 23% for South Asian households) might seem high, it needs to be emphasised that the data relates to calories *purchased* rather than calories *consumed*. In particular, we might expect some of the oils purchased to be used in frying food. As vegetable oil is typically used for both food preparation and frying, it is impossible for us to conclusively tell those two uses apart. It is also worth reiterating that the shares shown in Figure 3 are taken as proportion of the calories purchased which can be classified into unprepared foods, which we saw only account for a bit over half of total purchased calories. While the distribution of calories across the food groups is more similar across White and Black households, one difference that stands out is the lower share of calories purchased from dairy and alternatives among the latter group. At 15% this is around a quarter lower than the share of calories for White households (20% of calories).

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[8]This lower % calories from proteins in South Asian group may for example be due to higher proportion of purchases of pulses (as shown in Section 4.3) which are relatively lower in calories.

Figure 4: Distribution of calories from purchased unprepared food - by ethnicity
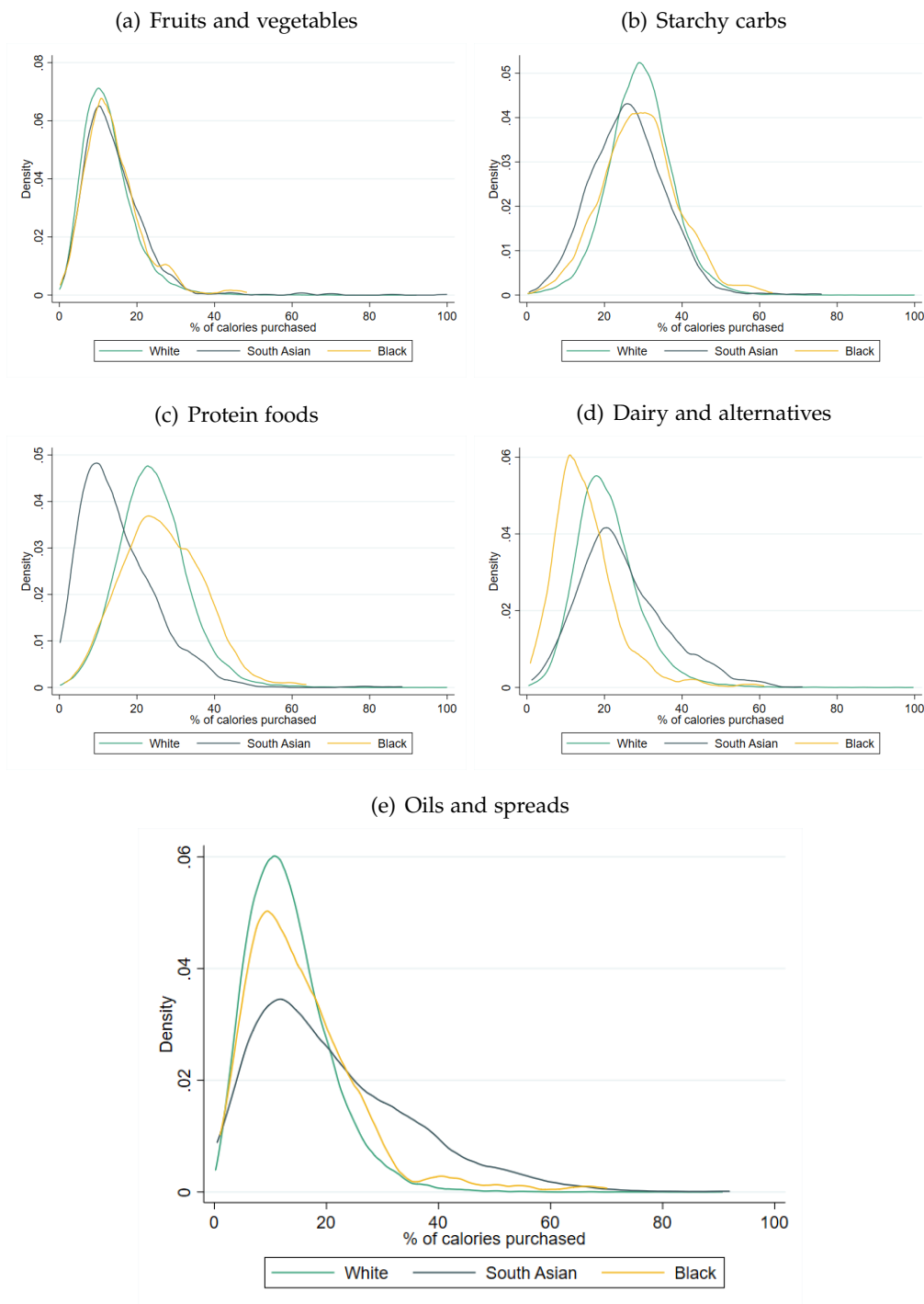
(a) Fruits and vegetables

(b) Starchy carbs

(c) Protein foods

(d) Dairy and alternatives

(e) Oils and spreads

Note: Authors' calculations using Kantar Purchase Panel (Take Home), January 2018 to December 2018. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.

Figure 4 displays the distribution of the share of calories purchased from the different categories of unprepared foods. While the distributions across ethnic groups are similar for the shares of unprepared calories purchased coming from fruits and vegetables (panel a) as well as dairy and alternatives (panel b) - in line with the averages reported above, there are starker differences for other food groups. For example, we see that for protein foods (panel c), a large part of the distribution of South Asian households lies to the left of that of White and Black ethnic groups. On the other hand, while many South Asian households purchase a very similar share of calories from oils and spreads as White and Black households (panel e), there is a subset of South Asian households who purchase extremely high shares of calories from oils and spreads. For more than 15% of South Asian households, but less than 5% of Black, and around 1% of White households, oils and spreads account for more than 35% of all calories from unprepared food purchased.

In Appendix C we show Figures 2 to 4 using shares of weight purchased, rather than calories. We see similar patterns across ethnicities. Differences are, as before, shifts away from amounts of fruits and vegetables when considering weight, rather than calories (resulting from these products typically having lower calories per kg on average) and towards starchy carbs and dairy and alternatives.

4.2 Products purchased in the greatest weight quantities

We now show, for each of the unprepared food groups, the products which households purchase in the greatest quantities. We now focus on *weight* (in kilograms), ranking products by share of total weight purchased in each category. For consistency, we show in Appendix C the products households purchase most of in terms of the share of total *calories* purchased in each category. Generally, we see that calorie dense food items move in/up, such as avocado, or olives, replacing items such as potatoes, cauliflower etc. We reiterate that these are purchased, rather than consumed calories.

Fruits and vegetables

Tables 2 and 3 show the most purchased fruit and vegetable products (in terms of weight) for the three ethnic groups. For both food groups, we see that while the ordering varies a bit, the top products are nearly identical across ethnic groups. For all groups, bananas, pure fruit juice, and apples account for the three most purchased fruit products in terms of weight (columns "%kg"), and account for around half of

all the purchased weight from fruits (columns "% kcal"). Onions, carrots, tomatoes, tinned tomatoes and cucumber make up the top five vegetables (Table 3) across ethnicities.

Table 2: Top products purchased (weight) by ethnicity - Fruits

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	21	31	Banana	18	28	Banana	19	15	Pure Juice
2	15	11	Pure Juice	16	13	Pure Juice	18	26	Banana
3	14	11	Dessert Apples	13	11	Dessert Apples	13	11	Dessert Apples
4	7	8	Grapes	9	3	Melons	8	5	Easy Peelers
5	7	4	Easy Peelers	8	6	Easy Peelers	7	8	Grapes
6	5	3	Berries+Currants	7	8	Grapes	4	2	Melons
7	4	2	Melons	5	4	Fruit - Pears	4	3	Orange
8	4	3	Fruit - Pears	4	2	Berries+Currants	4	3	Fruit - Pears
9	3	2	Orange	3	2	Orange	3	2	Berries+Currants
10	2	2	Fruit - Pineapples	2	2	Fruit - Pineapples	3	1	Lemon

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Table 3: Top products purchased (weight) by ethnicity - Vegs

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	12	11	Carrots	14	21	Onions	14	10	Tinned Tomatoes
2	8	4	Tomato	11	10	Carrots	11	15	Onions
3	8	11	Onions	10	5	Tomato	10	9	Carrots
4	8	6	Tinned Tomatoes	9	6	Tinned Tomatoes	8	4	Tomato
5	5	2	Cucumber	8	3	Cucumber	6	2	Cucumber
6	4	4	Mushroom	5	3	Peppers	5	3	Peppers
7	4	8	Frozen - Peas	4	4	Cauliflower	4	4	Prepared Vegetables
8	4	3	Peppers	4	2	Lettuce	3	2	Lettuce
9	4	3	Cauliflower	4	7	Frozen - Peas	3	5	Broccoli
10	4	3	Lettuce	2	2	Mushroom	3	2	Mushroom
11	4	5	Broccoli	2	3	Broccoli	3	1	Cabbage
12	3	4	Prepared Vegetables	2	2	Prepared Vegetables	3	6	Frozen - Sweetcorn
13	3	2	Cabbage	2	1	Cabbage	2	2	Leafy Salads
14	2	1	Leafy Salads	2	5	Frozen - Sweetcorn	2	4	Canned - Sweetcorn
15	2	0	Celery	1	3	Canned - Sweetcorn	2	4	Frozen - Peas

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Starchy carbohydrates

Table 4 shows the top fifteen products in the starchy carbohydrate category. Potatoes are the most commonly purchased product for all three groups, but make up a much larger component of the total purchases for White households (39% of the total quantity of starchy carbohydrate products purchased) than for South Asian and Black households (29% and 26% respectively). White bread is the next most commonly

purchased product in this category. Together, potatoes and white bread account for 47% (White households) to 32% (Black households) of total weight purchased in this category. Compared to White households, South Asian households purchase a higher share of flour and rice, and Black households purchase higher shares of rice and pasta.

Table 4: Top products purchased (weight) by ethnicity - starchy carbs

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	39	17	Potatoes	29	11	Potatoes	26	10	Potatoes
2	23	30	Bread White	25	28	Bread White	20	22	Bread White
3	5	7	Bread Wholemeal	8	13	Flour	12	15	Rice
4	5	9	Flour	6	9	Rice	8	11	Dry Pasta
5	5	7	Dry Pasta	6	6	Bread Wholemeal	7	8	Bread Wholemeal
6	4	5	Rice	6	7	Dry Pasta	7	11	Flour
7	4	6	Soft rolls	4	5	Soft rolls	4	5	Soft rolls
8	2	3	Bread Brown	2	3	Tortilla Wraps	2	1	Sweet Potatoes
9	2	3	Porridge Oats	2	3	Pitta Bread	2	4	Porridge Oats
10	1	0	Sweet Potatoes	2	2	Bread Brown	2	2	Bagels
11	1	2	Tortilla Wraps	1	2	Porridge Oats	2	2	Bread Brown
12	1	1	Bread Grained	1	0	Sweet Potatoes	1	2	Tortilla Wraps
13	1	1	Other Bread Rolls/Baps	1	1	Bread Grained	1	1	Savoury Noodle
14	1	1	Pitta Bread	1	1	Savoury Noodle	1	1	Pitta Bread
15	1	1	Morning Goods - Partbaked	1	1	Bagels	1	1	Bread Grained

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Protein foods

Chicken, eggs and baked beans are the products purchased in largest weight quantities in the "protein foods" category, as shown in Table 5, consistent across ethnicities. Pulses other than baked beans are only a substantial share of food purchases for the South Asian group. Fish does not constitute a large part of the average food purchases for any of the ethnicity groups: Tuna is the only fish product among the top ten, with 2% of weight purchased by all ethnic groups.

Table 5: Top products purchased (weight) by ethnicity - protein foods

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	19	17	Chicken	25	21	Eggs Hens	27	25	Chicken
2	11	9	Eggs Hens	21	16	Chicken	15	12	Eggs Hens
3	10	5	Baked Beans+Tomato Sce	13	6	Baked Beans+Tomato Sce	8	4	Baked Beans+Tomato Sce
4	6	7	Mince	5	17	Nuts	5	5	Mince
5	5	7	Fresh Sausages	4	7	Dry Pulses+Cereal	4	5	Pork
6	5	6	Pork	3	1	Other Beans In Brine	3	4	Bacon Rashers
7	5	4	Beef	3	3	Mince	3	4	Fresh Sausages
8	5	6	Bacon Rashers	3	2	Tuna	3	8	Nuts
9	4	3	Ham	2	2	Lamb	2	2	Beef
10	2	2	Tuna	2	2	Fresh Sausages	2	2	Tuna

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

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Dairy and alternatives

Table 6 shows products purchased in largest weight quantities in the 'dairy and alternatives' category. Cow milk accounts for a substantial share of dairy purchased for all groups. Around 73% of quantities purchased in this category by white, 82% by South Asian households come from milk, while the equivalent for Black households is 64%. Black and South Asian households are more likely that White households to purchase whole milk, and less likely to purchase semi-skimmed or skimmed milk. Yoghurts, especially flavoured ones, and cheddar are other top products purchased in this category across ethnicities.

Table 6: Top products purchased (weight) by ethnicity - dairy and alternatives

Rank	White			South Asian			Black		
	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	47	28	Semi-SkimmedMilk	49	41	Whole Milk	33	19	Semi-SkimmedMilk
2	15	12	Whole Milk	31	20	Semi-SkimmedMilk	27	20	Whole Milk
3	11	5	SkimmedMilk	6	6	Plain Yoghurt	6	9	Flavoured Yoghurt
4	4	6	Flavoured Yoghurt	3	5	Flavoured Yoghurt	5	2	Soya Milk
5	4	20	Cheddar	2	1	SkimmedMilk	4	18	Cheddar
6	3	2	Specific Low Fat % Milk	2	12	Cheddar	4	2	SkimmedMilk
7	3	2	Fat Free Yoghurt	1	2	Fromage Frais	4	1	Other Non-Cows Milk
8	3	3	Plain Yoghurt	1	0	Soya Milk	3	5	Evaporated Milk
9	1	2	Fromage Frais	1	0	Other Non-Cows Milk	3	3	Plain Yoghurt
10	1	1	Soya Milk	1	1	Fat Free Yoghurt	2	3	Fromage Frais

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other). Unless otherwise mentioned, 'Milk' refers to cow's milk.

Oils and spreads

The most commonly purchased products in the final unprepared food category, 'oils and spreads' are shown in Table 7. The main difference in purchases between ethnic groups in this category is that White households purchase relatively far more butter and vegetable fat spreads, and far less oil than South Asian and Black households.

Table 7: Top products purchased (weight) by ethnicity - oils and spreads

Rank	White			South Asian			Black		
	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	46	37	Vegetable fat spreads	51	59	Vegetable Oil	41	49	Vegetable Oil
2	28	30	Butter	23	16	Vegetable fat spreads	36	27	Vegetable fat spreads
3	17	23	Vegetable Oil	15	14	Butter	12	12	Butter
4	5	7	Olive Oil	7	7	Olive Oil	9	10	Olive Oil
5	1	2	Lard	2	2	Other Cooking Oil	1	1	Other Cooking Oil

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

5 Sub-group analysis within ethnic groups

We explore differences across the three ethnic groups by age of the main shopper as well as by social class of the household, to investigate whether differences across ethnic groups are more pronounced for certain sub-groups.

5.1 Age of the main shopper

For the sub-group analysis by the age of the main shopper, we split households into three age groups: ages 35 or below, 36 to 60, and over 60 years old.[9]

In Figure 5 we first show the composition of food purchases in terms of unprepared food, prepared food and drinks. We then break down unprepared foods into the same categories as before.

We note some differences across age groups. For example, the group of households with the oldest main shopper (60+) purchases a slightly higher share of calories from unprepared food products, and lower share of calories from prepared savoury food than younger age groups. We see these same patterns across all ethnic groups, and overall the differences between ethnic groups do not change much by age.

In terms of differences within unprepared foods, shown in Figure 6 For all ethnicities the oldest age group purchases a slightly higher share of calories from fruit and vegetables, and a slightly lower share of calories from starchy carbohydrates and dairy. These differences are all very small, and do not alter the patterns across ethnicities.

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[9]20% of households in the sample have a main shopper 35 years or younger, 52% one that is 36-60 years and 27% older than 60 years. For South Asian and Black households the average age of the main shopper is younger than for White households.

Figure 5: Share of calories purchased across prepared and unprepared food and drinks
- by ethnicity and age of main shopper
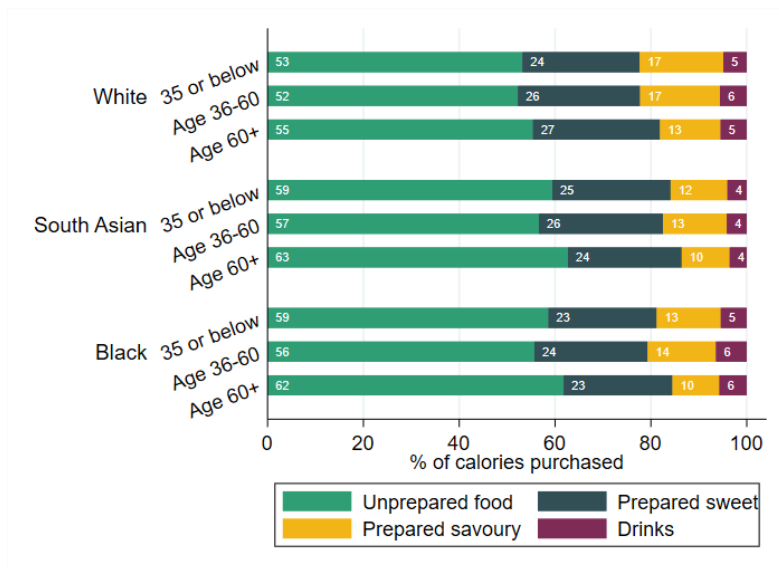
Note: Based on Kantar FMCG data January 2009 to December 2020.

Figure 6: Share of calories purchased across unprepared foods - by ethnicity and age
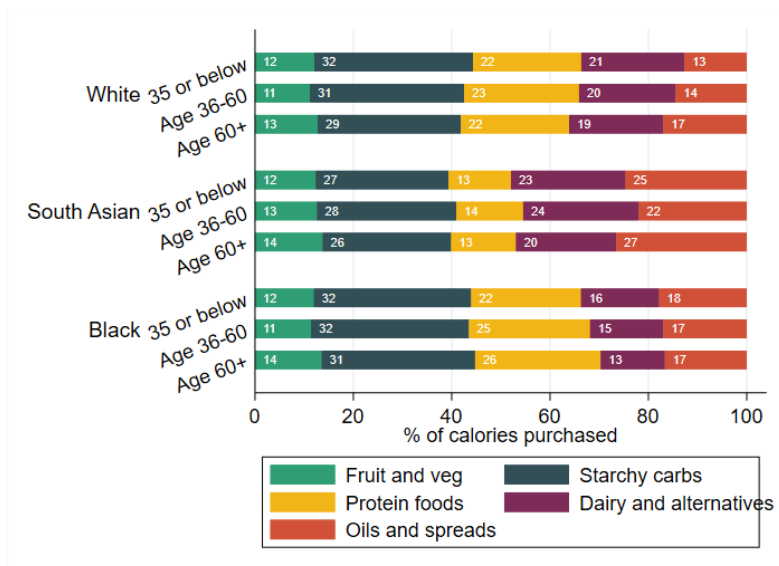
Note: Based on Kantar FMCG data January 2009 to December 2020. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.

5.2 Socio-economic status

We consider whether descriptives for ethnic groups on average conceal differences by socio-economic status of households within these groups. We use a socio-economic classification produced by the UK Office for National Statistics, which Kantar provides on panel households. The classification has four grades: higher & intermediate managerial, administrative, professional occupations (grade 'AB'), supervisory, clerical & junior managerial, administrative, professional occupations ('C1'), skilled manual occupations ('C2') and semi-skilled & unskilled manual occupations, Unemployed and lowest grade occupations ('DE'). For the purpose of this analysis, we form three groups: 'highly skilled' including social grade AB, 'semi skilled' made up of social grades C1 and C2, and 'low skilled', grade DE.[10]

While differences are not very large, we see from Figure 7 that highly skilled households purchase on average slightly higher calorie shares from unprepared foods and lower shares from prepared foods. This pattern is consistent across ethnicities.

In terms of categories within unprepared foods, we see that low skilled households tend to buy less of fruit and vegetables across ethnicities compared to highly skilled households. For South Asian and Black households, we also see that unskilled are less likely to buy protein foods. The one category these households purchase more of than highly (and semi) skilled households - across ethnicities - is starchy carbs and oils and spreads. Generally, highly and semi skilled households are most comparable among White households.

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[10]21% of households in the sample are classified as highly skilled, 56% as semi skilled, and 23% as low skilled. South Asian households have a higher percentage of highly skilled (34%) and lower percentage of low skilled (17%), and Black households have a higher percentage of semi skilled (62%), and lower percentage of low skilled (15%).

Figure 7: Share of calories purchased across prepared and unprepared food and drinks
- by ethnicity and SES
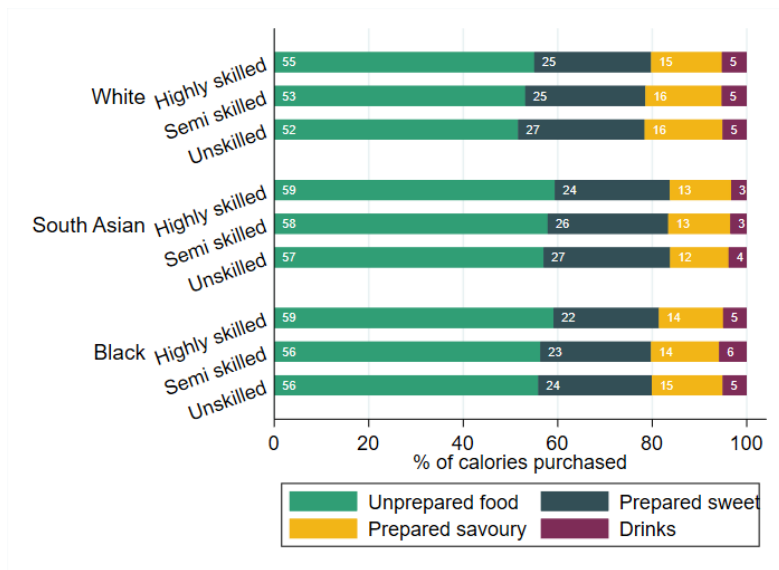
Note: Based on Kantar FMCG data January 2009 to December 2020.

Figure 8: Share of calories purchased across unprepared foods - by ethnicity and SES
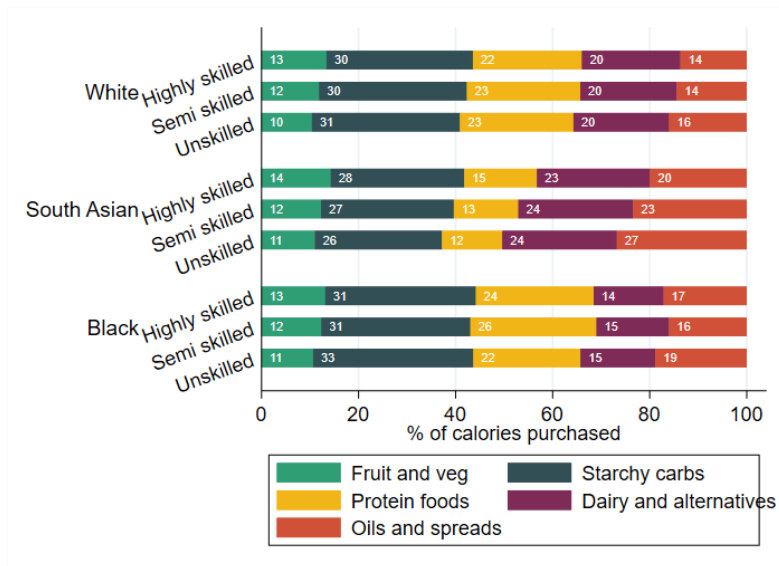
Note: Based on Kantar FMCG data January 2009 to December 2020. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.

References

Leicester, A. and Oldfield, Z. (2009a). An analysis of consumer panel data. IFS Working Paper W09/09.

Leicester, A. and Oldfield, Z. (2009b). Using Scanner Technology to Collect Expenditure Data. *Fiscal Studies*, 30(3–4):309–37.

Raleigh, V. and Holmes, J. (2021). The health of people from ethnic minority groups in England. The Kings Fund Publication. https://www.kingsfund.org.uk/publications/health-people-ethnic-minority-groups-england.

Toleikyte, L. and Salway, S. (2018). Local action on health inequalities Understanding and reducing ethnic inequalities in health. Public Health England. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/730917/local_action_on_health_inequalities.pdf.

APPENDIX

A   Ethnicity

Table A1: Ethnic composition of Kantar sample and 2011/21 census - detailed categories

	Kantar (2009-2020)		2011 Census	2021 Census
	N	**%**	**%**	**%**
White: British	51,937	87.30	80.50	74.7
White: Irish	322	0.50	0.90	0.9
White: Other White	2,829	4.80	4.50	6.5
Asian/Asian British: Indian	1,120	1.90	2.50	3.1
Asian/Asian British: Pakistani	621	1.00	2.00	2.7
Asian/Asian British: Bangladeshi	150	0.30	0.80	1.1
Black/African/Caribbean/Black British: African	514	0.90	1.80	2.5
Black/African/Caribbean/Black British: Caribbean	390	0.70	1.10	1.0
Black/African/Caribbean/Black British: Other Black	49	0.10	0.50	0.5
Mixed/multiple ethnic groups: White and Asian	238	0.40	0.60	0.8
Mixed/multiple ethnic groups: White and Black Caribbean	75	0.10	0.80	0.4
Mixed/multiple ethnic groups: White and Black African	148	0.20	0.30	0.9
Mixed/multiple ethnic groups: Other Mixed	237	0.40	0.50	0.8
Asian/Asian British: Chinese	317	0.50	0.70	0.7
Asian/Asian British: Other Asian	236	0.40	1.50	1.6
Other ethnic group	321	0.50	1.00	2.2
Total	**59,504**	**100**	**100**	**100**

Note: *Source* - Kantar data (columns 1 and 2) are number of unique households in the January 2009 – December 2020 reporting period.
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B   Composition of into-home food purchases (% weight, kg)

Figure B1: Share of weight (kg) purchased across prepared and unprepared food and drinks - by ethnicity
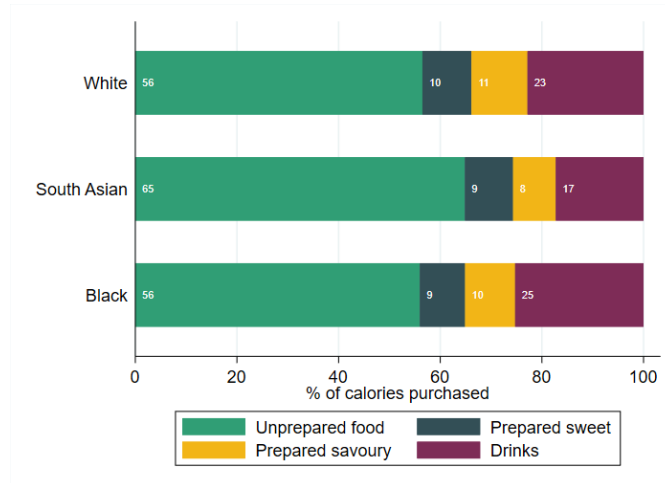
Note: Based on Kantar FMCG data January 2009 to December 2020.

C Purchases of unprepared foods (% weight, kg)

This appendix repeats results presented in Section 4 now focusing on weight, rather than calories, of grocery purchases made by households.

C.1 Shares purchased

Figures C2, C3 and C4 and analogue to Figures 2, 3, and 4 respectively.

Figure C2: Distribution of weight (kg) shares unprepared foods - by ethnicity
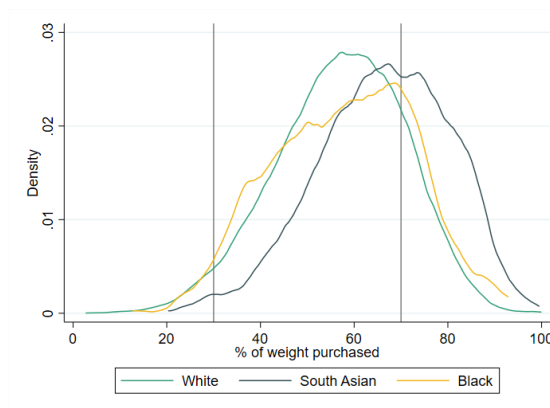
Note: Based on Kantar FMCG data January 2018 to December 2018.

Figure C3: Share of weight (KG) purchased across unprepared foods - by ethnicity
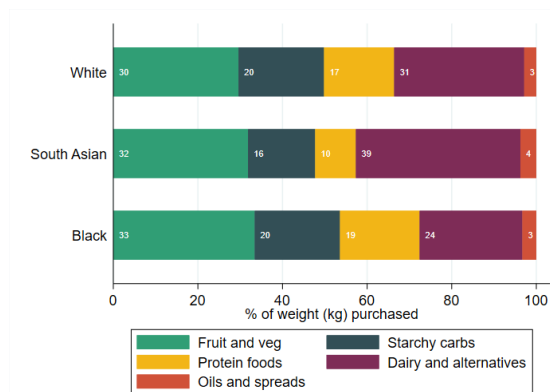
Note: Based on Kantar FMCG data January 2009 to December 2020. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.

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Figure C4: Distribution of weight (kg) from purchased unprepared food - by ethnicity
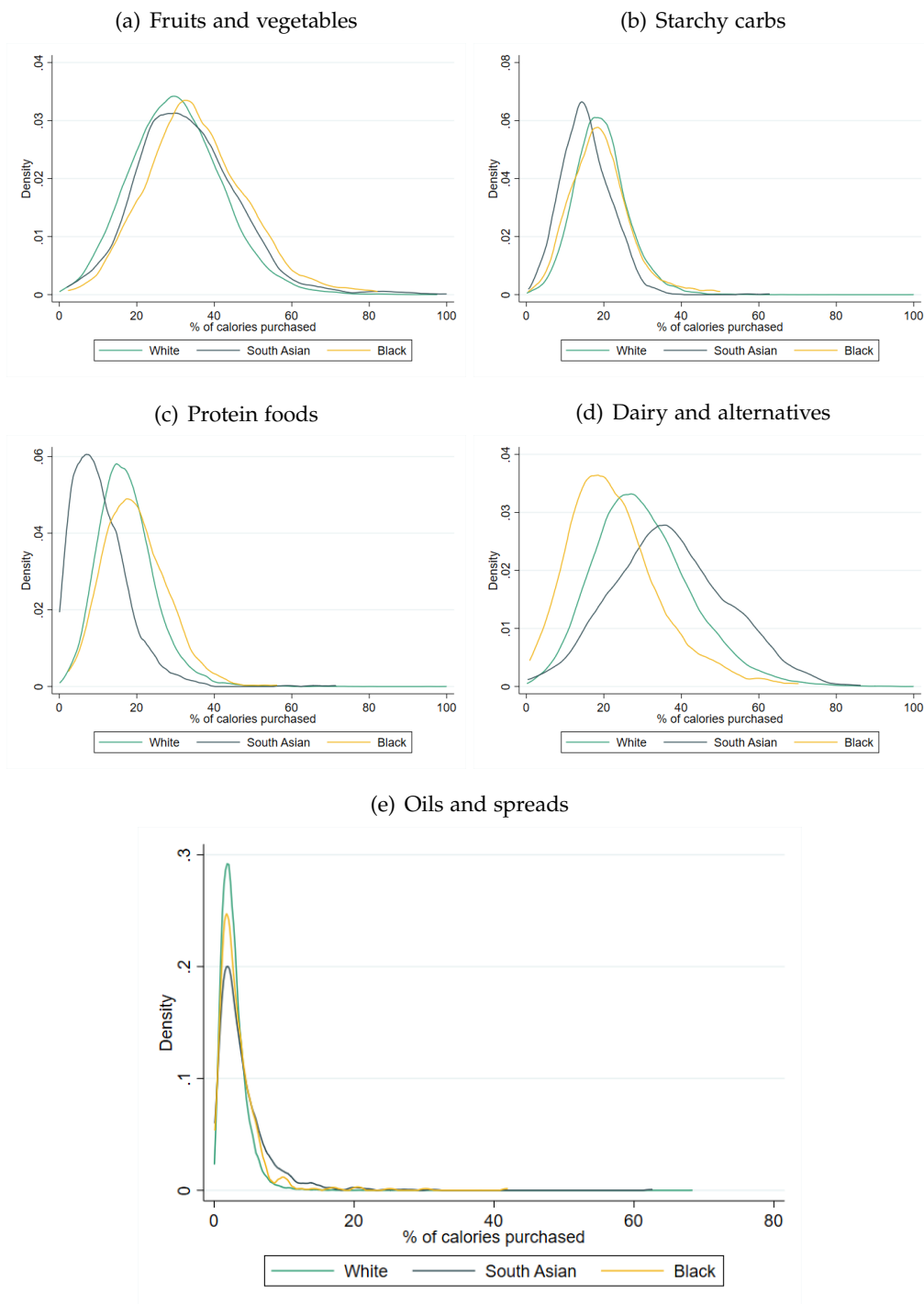
(a) Fruits and vegetables

(b) Starchy carbs

(c) Protein foods

(d) Dairy and alternatives

(e) Oils and spreads

Note: Authors' calculations using Kantar Purchase Panel (Take Home), January 2018 to December 2018. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.

C.2 Products purchased in the greatest weight quantities

Fruits and vegetables

Tables C2 and C3 show the most purchased fruit and vegetable products in terms of calories. Compared to the ranking by weight, presented in the main body of this report, we find for fruit that the top 3 products are the same for White and South Asian households and for Black households positions 1 ans 2 switch. Avocado enter for all three groups, reflected by the fact that these are characterised by high calorie density per kilogram.

Table C2: Top products purchased (calories) by ethnicity - Fruits

Rank	White			South Asian			Black		
	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	31	21	Banana	28	18	Banana	26	18	Banana
2	11	15	Pure Juice	13	16	Pure Juice	15	19	Pure Juice
3	11	14	Dessert Apples	11	13	Dessert Apples	11	13	Dessert Apples
4	8	7	Grapes	8	7	Grapes	8	7	Grapes
5	7	1	Baking Fruits	6	8	Easy Peelers	6	2	Avocado
6	4	7	Easy Peelers	4	5	Fruit - Pears	5	8	Easy Peelers
7	4	1	Snacking Fruits	3	9	Melons	3	1	Baking Fruits
8	3	4	Fruit - Pears	3	1	Avocado	3	1	Snacking Fruits
9	3	5	Berries+Currants	3	1	Snacking Fruits	3	4	Fruit - Pears
10	2	1	Avocado	3	0	Coconut	3	4	Orange

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Table C3: Top products purchased (calories) by ethnicity - Vegs

Rank	White			South Asian			Black		
	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	11	12	Carrots	21	14	Onions	15	11	Onions
2	11	8	Onions	10	11	Carrots	10	14	Tinned Tomatoes
3	8	4	Frozen - Peas	7	4	Frozen - Peas	9	10	Carrots
4	6	8	Tinned Tomatoes	6	9	Tinned Tomatoes	6	3	Frozen - Sweetcorn
5	5	4	Broccoli	5	10	Tomato	5	3	Broccoli
6	4	8	Tomato	5	2	Frozen - Sweetcorn	4	4	Prepared Vegetables
7	4	3	Prepared Vegetables	4	4	Cauliflower	4	2	Sweetcorn
8	4	4	Mushroom	3	1	Garlic	4	2	Canned - Sweetcorn
9	3	4	Cauliflower	3	1	Olives	4	2	Frozen - Peas
10	3	4	Lettuce	3	5	Peppers	4	8	Tomato
11	3	1	Frozen - Sweetcorn	3	2	Broccoli	3	5	Peppers
12	3	1	Frozen - Onions	3	1	Canned - Sweetcorn	3	1	Olives
13	3	2	Parsnips	3	1	Sweetcorn	3	1	Garlic
14	3	4	Peppers	3	8	Cucumber	2	3	Lettuce
15	2	1	Canned Sweetcorn	2	1	Other Natural Vegs	2	3	Mushroom

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Starchy carbohydrates

Table C4 shows the top fifteen products by calories in the starchy carbohydrate category. Compared to products ranked based on weight, changes include that white bread moves from second to first position for all groups, replacing potatoes

Table C4: Top products purchased (calories) by ethnicity - starchy carbs

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	30	23	Bread White	28	25	Bread White	22	20	Bread White
2	17	39	Potatoes	13	8	Flour	15	12	Rice
3	9	5	Flour	11	29	Potatoes	11	7	Flour
4	7	5	Dry Pasta	9	6	Rice	11	8	Dry Pasta
5	7	5	Bread Wholemeal	7	6	Dry Pasta	10	26	Potatoes
6	6	4	Soft rolls	6	6	Bread Wholemeal	8	7	Bread Wholemeal
7	5	4	Rice	5	4	Soft rolls	5	4	Soft rolls
8	3	2	Porridge Oats	3	2	Tortilla Wraps	4	2	Porridge Oats
9	3	2	Bread Brown	3	2	Pitta Bread	2	2	Bagels
10	2	1	Tortilla Wraps	2	1	Porridge Oats	2	2	Bread Brown
11	1	1	Bread Grained	2	2	Bread Brown	2	1	Tortilla Wraps
12	1	1	Morning Goods - Partbaked	1	1	Bread Grained	1	1	Pitta Bread
13	1	1	Other Bread Rolls/Baps	1	1	Bagels	1	1	Savoury Noodle
14	1	1	Pitta Bread	1	1	Morning Goods - Naan Bread	1	2	Sweet Potatoes
15	1	1	Bagels	1	1	Savoury Noodle	1	1	Bread Grained

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Protein foods

Table C5 shows the ranking for protein foods. The top purchased category does not change for all ethnic groups. Nuts is one of the products that moves up several rankings.

Table C5: Top products purchased (calories) by ethnicity - protein foods

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	17	19	Chicken	21	25	Eggs Hens	25	27	Chicken
2	9	11	Eggs Hens	17	5	Nuts	12	15	Eggs Hens
3	7	5	Fresh - Sausages	16	21	Chicken	8	3	Nuts
4	7	6	Mince	7	4	Dry Pulses+Cereal	5	5	Mince
5	6	2	Nuts	6	13	Baked Beans+Tomato Sce	5	4	Pork
6	6	5	Bacon Rashers	3	3	Mince	4	3	Bacon Rashers
7	6	5	Fresh Sausages	2	2	Fresh Sausages	4	3	Fresh Sausages
8	5	10	Baked Beans+Tomato Sce	2	1	Peanut Butter	4	8	Baked Beans+Tomato Sce
9	4	5	Beef	2	2	Lamb	3	1	Peanut Butter
10	3	4	Ham	2	3	Tuna	2	2	Lamb

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Dairy and alternatives

In terms of dairy products and alternatives, we see in Table C6 that cow milks remain the products purchased in largest quantities also when considering the ranking by calories. Changes are that products such as cheddar and double cream move up for all ethnic groups, pushing out products such as soy milk and skimmed milk.

Table C6: Top products purchased (calories) by ethnicity - dairy and alternatives

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	28	47	Semi-SkimmedMilk	41	49	Whole Milk	20	27	Whole Milk
2	20	4	Cheddar	20	31	Semi-SkimmedMilk	19	33	Semi-SkimmedMilk
3	12	15	Whole Milk	12	2	Cheddar	18	4	Cheddar
4	6	4	Flavoured Yoghurt	6	6	Plain Yoghurt	9	6	Flavoured Yoghurt
5	5	11	SkimmedMilk	5	3	Flavoured Yoghurt	5	3	Evaporated Milk
6	3	1	Double Cream	2	0	Double Cream	3	3	Plain Yoghurt
7	3	3	Plain Yoghurt	2	1	Fromage Frais	3	2	Fromage Frais
8	2	3	Fat Free Yoghurt	1	2	SkimmedMilk	2	5	Soya Milk
9	2	1	Fromage Frais	1	0	Cow Mozzarella	2	0	Double Cream
10	2	3	Specific Low Fat % Milk	1	0	Processed Cheese Snack	2	4	SkimmedMilk

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Oils and spreads

Basically no changes are observed in terms of most commonly purchased products in the final unprepared food category, "oils and spreads', as shown in Table C7.

Table C7: Top products purchased (calories) by ethnicity - oils and spreads

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	37	46	Vegetable fat spreads	59	51	Vegetable Oil	49	41	Vegetable Oil
2	30	28	Butter	16	23	Vegetable fat spreads	27	36	Vegetable fat spreads
3	23	17	Vegetable Oil	14	15	Butter	12	12	Butter
4	7	5	Olive Oil	7	7	Olive Oil	10	9	Olive Oil
5	2	1	Lard	2	2	Other Cooking Oil	1	1	Other Cooking Oil

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

D Purchases of prepared foods and drinks

We repeat analysis from Section 4 (and related analysis on calories in Appendix C) for prepared food categories (sweet, savoury) and drinks.

D.1 Shares purchased

The distribution of calories purchased from prepared food and drinks is a mirror of Figure 2, showing again the considerable variation, and difference across ethnicities especially in the share of households who have very low (>30%) shares of calories from prepared foods and drinks (those falling to the left of the gray vertical line at 30).

Figure D5: Distribution of calorie shares purchased from prepared foods and drinks - by ethnicity
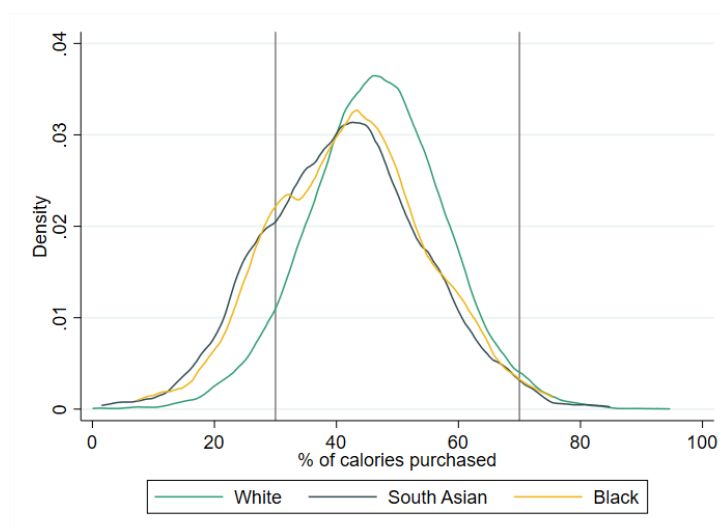
Note: Based on Kantar FMCG data January 2018 to December 2018.

D.2 Products purchased most of

Prepared sweet

The two most common food purchased in the sweet prepared foods category are ready to eat cereals. This holds for both ranking in terms of weight purchased (Table D8) and calories purchased (Table D9). In terms of weight, cereals account for 15-16% of weight

and 12-15% of calories purchased in this category. Sugar confectionery, chocolate, ice cream tubs and cakes are all common products in this category Sugar, ice cream lollies, ice cream cones, croissants, honey, are all purchased in large quantities compared to other items.

Table D8: Top products purchased (weight) by ethnicity - prepared sweet

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	12	13	Ready To Eat Cereals	15	15	Ready To Eat Cereals	15	16	Ready To Eat Cereals
2	10	13	Biscuits	12	15	Biscuits	11	14	Biscuits
3	9	12	Chocolate Confectionery	9	9	Sugar	9	10	Sugar
4	8	9	Sugar	8	11	Chocolate Confectionery	6	3	Ice Cream - Tubs
5	6	3	Ice Cream - Tubs	6	7	Cakes	6	8	Chocolate Confectionery
6	6	6	Cakes	6	3	Ice Cream - Tubs	5	6	Cakes
7	4	4	Sugar Confectionery	3	2	Ice Cream - Lollies	4	4	Sugar Confectionery
8	3	2	Ice Cream - Lollies	2	2	Sugar Confectionery	3	2	Ice Cream - Lollies
9	2	3	Chocolate Biscuit Bars	2	2	Croissants	2	2	Honey
10	2	1	Crumpets/Pikelets	2	1	Ice Cream - Filled Cones	1	1	Instant Porridge

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Table D9: Top products purchased (calories) by ethnicity - prepared sweet

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	13	12	Ready To Eat Cereals	15	15	Ready To Eat Cereals	16	15	Ready To Eat Cereals
2	13	10	Biscuits	15	12	Biscuits	14	11	Biscuits
3	12	9	Chocolate Confectionery	11	8	Chocolate Confectionery	10	9	Sugar
4	9	8	Sugar	9	9	Sugar	8	6	Chocolate Confectionery
5	6	6	Cakes	7	6	Cakes	6	5	Cakes
6	4	4	Sugar Confectionery	3	6	Ice Cream - Tubs	4	4	Sugar Confectionery
7	3	2	Chocolate Biscuit Bars	2	2	Chocolate Biscuit Bars	3	6	Ice Cream - Tubs
8	3	6	Ice Cream - Tubs	2	2	Sugar Confectionery	2	3	Ice Cream - Lollies
9	2	3	Ice Cream - Lollies	2	3	Ice Cream - Lollies	2	1	Chocolate Biscuit Bars
10	1	1	Cereal Bars	2	2	Croissants	2	2	Honey

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Prepared savoury

Table D10 shows that chips account for the largest shares of weight quantity purchased in the 'prepared savoury' food category for South Asian and Black households, accounting for 18% for both groups in terms of % kilograms. For White households, chips take the second place (15%). When considering calories purchased (Table D11) chips are in place one for all households. Other frequently purchased products across all ethnicity groups include ready meals, pizzas and crisps.

Table D10: Top products purchased (weight) by ethnicity - prepared savoury

Rank	White % kg	% kcal	Product name	South Asian % kg	% kcal	Product name	Black % kg	% kcal	Product name
1	16	12	Ready Meals	18	15	Chips	18	15	Chips
2	15	12	Chips	8	9	Pizzas	11	8	Ready Meals
3	7	2	Soup	7	3	Cooking Sauces	7	9	Pizzas
4	6	3	Cooking Sauces	6	4	Ready Meals	6	3	Cooking Sauces
5	6	8	Pizzas	6	13	Savoury Snacks	5	1	Rice
6	4	10	Crisps	5	13	Crisps	4	1	Soup
7	3	9	Savoury Snacks	4	2	Tomato Sauce/Ketchup	4	10	Crisps
8	3	4	Pies	4	1	Rice	4	2	Tomato Sauce/Ketchup
9	2	1	Rice	3	1	Soup	4	9	Savoury Snacks
10	2	1	Tomato Sauce/Ketchup	3	3	Fish Fingers	2	2	Coleslaw

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Table D11: Top products purchased (calories) by ethnicity - prepared savoury

Rank	White % kg	% kcal	Product name	South Asian % kg	% kcal	Product name	Black % kg	% kcal	Product name
1	12	15	Chips	15	18	Chips	15	18	Chips
2	12	16	Ready Meals	13	6	Savoury Snacks	10	4	Crisps
3	10	4	Crisps	13	5	Crisps	9	7	Pizzas
4	9	3	Savoury Snacks	9	8	Pizzas	9	4	Savoury Snacks
5	8	6	Pizzas	6	2	Mayonnaise	8	11	Ready Meals
6	4	3	Pies	4	6	Ready Meals	5	2	Mayonnaise
7	4	2	Mayonnaise	3	7	Cooking Sauces	3	6	Cooking Sauces
8	3	6	Cooking Sauces	3	2	Other Frozen Foods	3	1	Cream Crackers
9	2	7	Soup	3	3	Fish Fingers	2	2	Pies
10	2	1	P/P Fresh Meat+Veg+Pastry - Sausage Rolls	2	2	Garlic	2	2	Bites

Note: *Source* - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other).

Drinks

Finally, Tables D12 and D13 provide product rankings for drinks. Considering first rankings of purchased products in terms of weight, we find that still mineral water appears as one of the top three products in terms of quantity purchased for all three ethnicity groups, top one for South Asian and Black households. The top product for White households is bottled diet cola, followed by lager, whereas the second most purchased product for South Asian and Black households are juice drinks.

Since many of these products have low to no calories, we see a significant change in products featuring in ranking by calories (Table D13). In addition to lager beer, red and white wine, as well as cider and whiskey now feature in the top ten for White households. No alcohol is in the top ten products for Black households and lager now features 8th for South Asian households.

Table D12: Top products purchased (weight) by ethnicity - drinks

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	9	0	Bottled Colas - Diet	16	1	Still mineral water	20	1	Still mineral water
2	8	10	Lager	10	14	Juice Drinks	10	13	Juice Drinks
3	7	0	Still mineral water	9	12	Bottled Other Flavours	8	11	Pure Juice
4	7	3	Total Fruit Squash	8	7	Ambient One Shot Drinks	7	11	Bottled Other Flavours
5	5	0	Canned Colas - Diet	7	10	Bottled Colas	6	6	Ambient One Shot Drinks
6	4	0	Flavoured mineral water	6	3	Total Fruit Squash	6	4	Total Fruit Squash
7	4	6	Pure Juice	5	0	Bottled Colas - Diet	4	1	Flavoured mineral water
8	4	0	Bottled Other Flavours - Diet	4	6	Pure Juice	4	0	Carbonated
9	4	5	Bottled Other Flavours	4	0	Canned Colas - Diet	3	0	Bottled Colas - Diet
10	4	5	Bottled Colas	3	0	Bottled Other Flavours - Diet	3	4	Bottled Colas

Note: Source - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other). Unless otherwise mentioned, drinks are regular (not diet).

Table D13: Top products purchased (calories) by ethnicity - drinks

	White			South Asian			Black		
Rank	% kg	% kcal	Product name	% kg	% kcal	Product name	% kg	% kcal	Product name
1	10	8	Lager	14	10	Juice Drinks	13	10	Juice Drinks
2	7	3	Red	12	9	Bottled Other Flavours	11	8	Pure Juice
3	6	3	White	10	7	Bottled Colas	11	7	Bottled Other Flavours
4	6	4	Pure Juice	7	8	Ambient One Shot Drinks	6	6	Ambient One Shot Drinks
5	5	4	Cider	6	4	Pure Juice	4	3	Bottled Colas
6	5	4	Bottled Other Flavours	5	2	Yoghurt Drinks And Juices	4	6	Total Fruit Squash
7	5	4	Bottled Colas	5	3	Canned Colas	4	0	Other Spirits
8	4	3	Juice Drinks	4	3	Lager	3	2	Canned Other Flavours
9	4	1	Whisky	4	2	Flavoured Milk	3	2	Cider
10	3	4	Ambient One Shot Drinks	4	3	Canned Other Flavours	3	1	High Juice

Note: Source - Kantar data, January 2009 – December 2020 reporting period. Ethnicity of the household based on ethnicity of the main shopper. "White" includes white British and White Irish; "South Asian" includes Asian/Asian British: Indian, Pakistani or Bangladeshi. "Black" includes all those who identify as Black/Black British (including Black African, Black Caribbean and Black Other). Unless otherwise mentioned, drinks are regular (not diet).
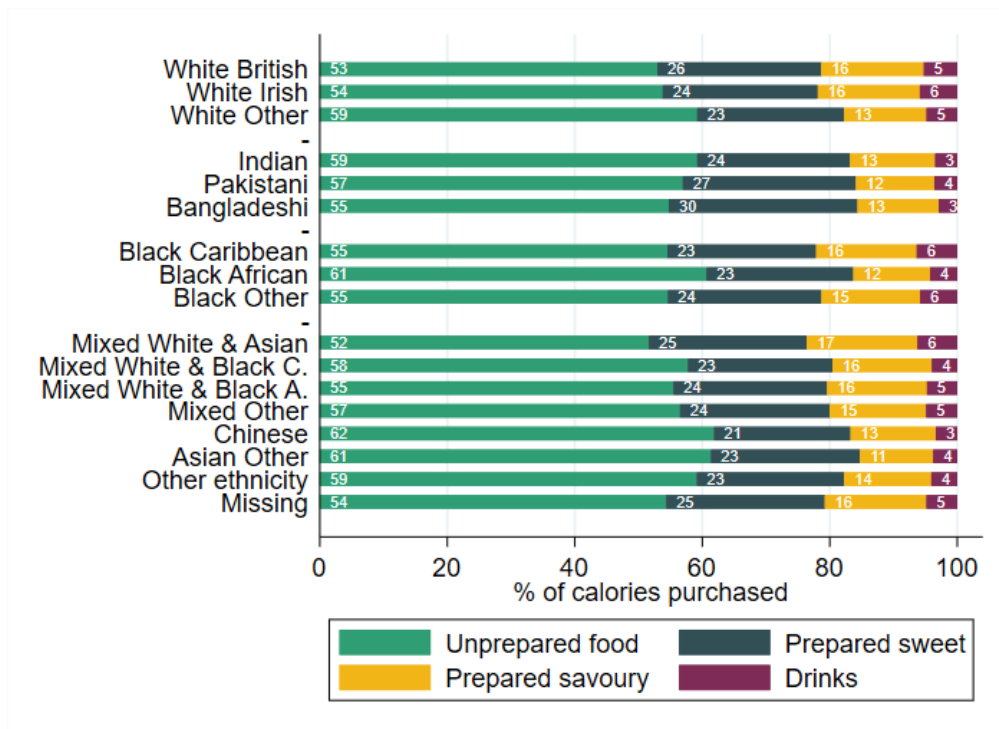
E Main results by detailed ethnicity

We show here the average share of calories purchased by detailed ethnicity. We remind the reader that some of these groups are quite small in terms of sample size, as shown in Appendix Table A1. For example White Irish households make up only 0.50% of the sample (322 households), Bangladeshi only 0.30% (150 households) and Other Black households are only 0.10% (49 households). Not much weight should therefore be placed on differences observed for these households. The same holds for groups not shown in the main report (households where the main shopper is of mixed ethnic background, Chinese or among any 'other' category.

Figure E6 shows the average shares of calories purchased across unprepared food, prepared food (sweet and savoury) and drinks, in line with Figure 1 but now by detailed ethnicity of the main shopper. Looking first at different White ethnicities, we see that White British purchase the smallest calorie share of unprepared food types. The marginal difference to White Irish is small (53% compared to 54%) but the difference to 'White Other', who make up 4.8% of the sample, is starker, with this group purchasing 59% of their calories from unprepared foods. Considering South Asian households, we see that Indians purchases the largest share of unprepared food, and instead less calories from prepared sweet food types. Black African groups purchase the highest share of calories from unprepared foods compared to other Black groups.

Figure E7 breaks down main Figure 3, which zooms in on unprepared food categories, by detailed ethnicities.
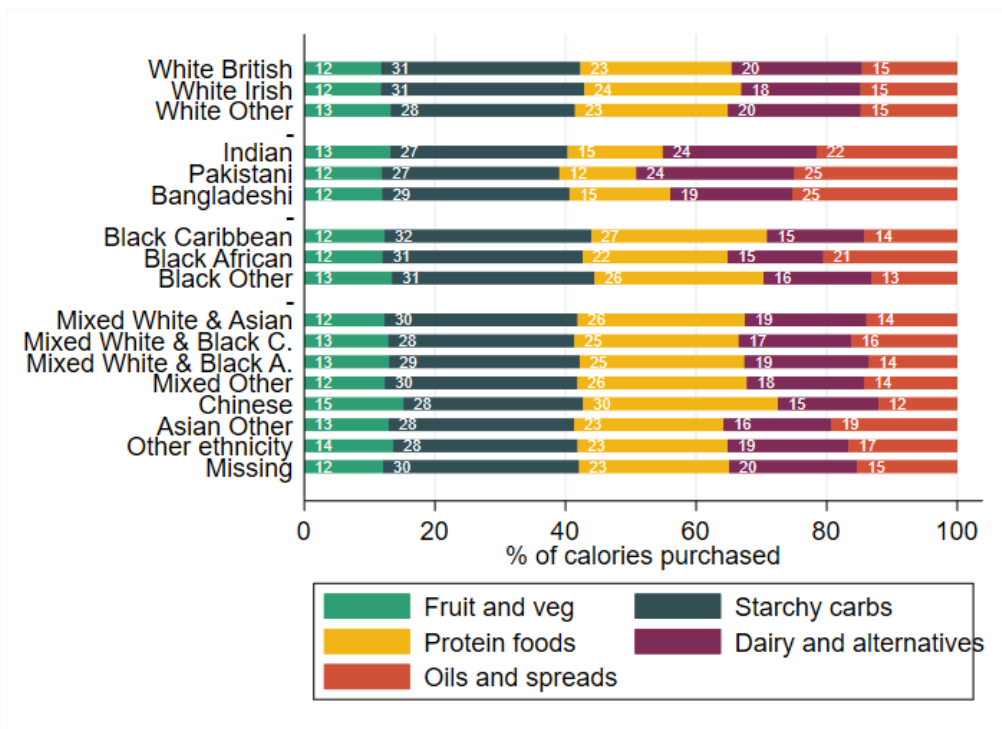
We find that among White households, White Other purchase slightly more calories from fruit and vegetables and less from starchy carbohydrates. Among South Asian households, we see that Indians purchase significantly less calorie shares from oils and spreads compared to Pakistani and Bangladeshi households, and instead purchase more dairy and alternatives. While Pakistani and Bangladeshi households purchase the same shares from oils and spreads, Bangladeshi households purchase on average less dairy and alternatives. Among Black ethnicities, we see that Black Africans purchase the largest share of their calories from fruit and vegetables. Their share of 61% is only higher for Chinese households, who purchase 62% of their calorie shares from fruit and vegetables. More generally we see though that the pattern for households not covered in the main report (those with a main shopper of mixed ethnicity, Chinese, Asian other and 'other' more generally) are in line with those reported for Whites, South Asian and Black households.

Figure E6: Share of calories purchased across prepared and unprepared food and drinks - by detailed ethnicity

Note: Based on Kantar FMCG data January 2009 to December 2020.

Figure E7: Share of calories purchased across unprepared foods - by detailed ethnicity

Note: Based on Kantar FMCG data January 2009 to December 2020. Share of calories from each food group is shown as a proportion of the overall calories purchased from unprepared foods.