Price and Placement Promotions on Meal Delivery Applications

Food Active insight work

FOOD ACTIVE

HEG Health Equalities Group

Image provided by Pablo Cordero via Pexels

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Acknowledgements

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We would like to thank Myra Doherty for her assistance in carrying out the data collection for this research.

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Abbreviations:

MDA: Meal delivery applications

OOH: Out of home

FES: Food environment scoring tool

NPM: Nutrient Profiling Model

HFSS: High in fat, sugar and/or salt

Executive summary

Introduction: Meal delivery applications (MDAs) such as Deliveroo, Just Eat and Uber Eats are a key player in today's food system, offering consumers convenient access to a wide range of food and drink at their fingertips. However, research suggests the majority of food and drink offered and promoted on these applications is less healthy, containing high amounts of fat, salt and sugar (HFSS) and exceeding portion size recommendations. The out of home (OOH) sector is exempt from legislation designed to restrict the promotion of less healthy food and drink by price and place, meaning retailers within the sector are freely able to position less healthy options in the spotlight on MDAs. This report aims to provide insight into the marketing tactics food companies use on MDAs to encourage consumer usage and purchase by price and place.

Methods: Data on the first 30 results, profiled by the three leading MDAs (Deliveroo, Just Eat, Uber Eats) was collected across two postcodes in Liverpool (L16, least deprived quintile and L21, most deprived quintile), resulting in 180 outlets being included in the data collection. Data was collected in two parts. Part 1 collected the total number of outlets and the total number of outlets tagged as 'healthy' across each MDA. Part 2 collected the following for each food outlet - listing number, name of outlet, outlet classification (including prevalence of dark kitchen's), tags, featured items and discounts available.

Key findings

- The availability of 'healthy' options is limited on MDAs; however, it remains unclear how this is defined.
- Fast food and takeaways dominate the types of outlets found on MDAs, followed by restaurants and a small number of potential dark kitchens were identified.
- Less healthy food items are in the spotlight across MDAs at the top of menus, and promotional activity is frequently used by restaurants, fast food outlets and takeaways, specifically utilising volume-based discounts and offering free delivery.

Recommendations at a glance (see page 29 for full recommendations)

- *National government:* Ensure existing legislation which restricts the promotion of less healthy food and drink at key locations in-store and online (grocery and supermarket sector) extends to the OOH sector.
- *Local government:* Take a whole systems approach to promote healthier weight and improve the local food environment by adopting the Local Authority Declaration on Healthy Weight; working with the local food and drink sector to encourage them to take steps to improve their menu and offer healthier options.
- *MDAs*: Consider how consumers can be better informed about the healthiness of the foods available on MDAs; adopt a uniform system to assess the healthiness of the food and drink offer, for example the 'Health Rating Score', to enable customers to find healthier options and place healthier food and drinks in the spotlight, including at the top of menus and move away from applying volume-based promotions..
- *Research*: Replicate this research on a greater scale, to include a larger number of outlets on MDAs and in several parts of the UK to understand the picture at a national level.

Background

'Digital food environments,' including meal delivery applications (MDAs) and online food and drink marketing, are a major player in today's food system [1]. The use of MDAs such as Just Eat, Deliveroo and Uber Eats has steadily increased over recent years, with a significant surge in use during the Covid-19 pandemic [2]. Globally, the UK is the third biggest online food delivery market, with Just Eat the most popular MDA in the UK (2.4 million downloads) [3]. Research suggests young adults with a higher disposable income and higher education, and those with a higher BMI, tend to be the most prevalent users of MDAs [4,5].

How do they work?

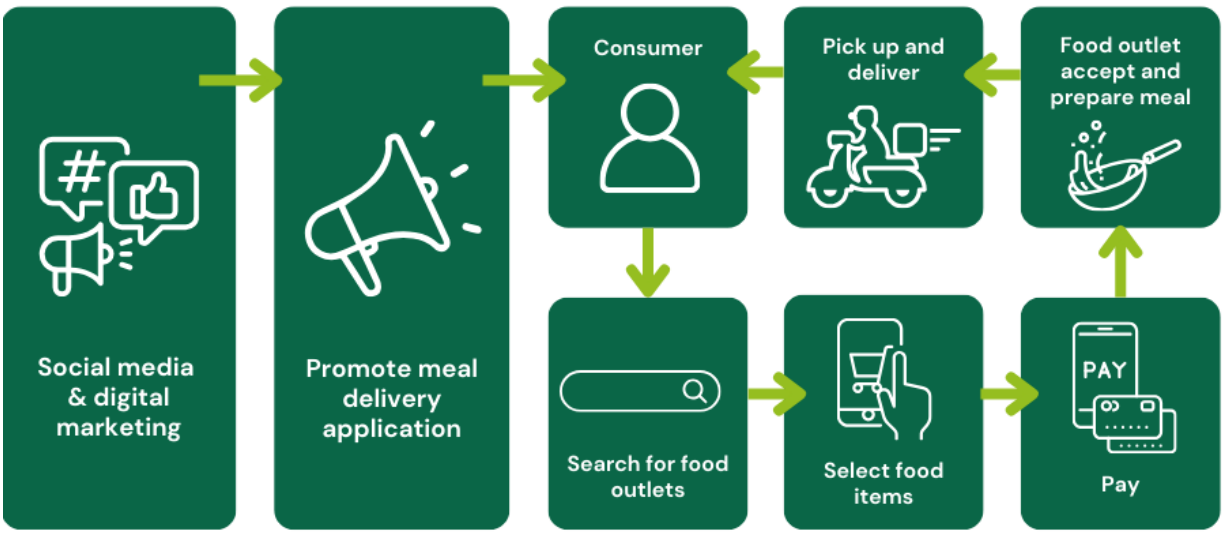


Figure 1: Meal delivery application process

Types of food and drink available

A majority of the UK population consume food OOH at least once a week, with over a quarter of fast-food purchases ordered online. MDAs offer convenient access to a wide range of food and drink, but food prepared OOH is generally energy-dense and high in sugar, saturated fat and salt [6]. Meals eaten OOH on average, contain twice as many calories as equivalent retailer own branded products in the UK, with takeaway meals exceeding government recommended portion sizes [7,8]. The rise in popularity of MDAs to purchase food prepared OOH may lead to more frequent consumption of less healthy food owing to increased accessibility, competitive price-promotions and discounts on less healthy products [9].

Marketing activities

Research suggests children and young people are particularly susceptible to the effects of online marketing, with millions of young people following popular brands such as Coca Cola and McDonald's on social media [10]. This brand loyalty likely extends to MDAs - brands and food outlets can pay to promote their products to appear at the top of the search and are able to promote two-way communication with consumers, using push notifications and location-based offers to drive up orders [11].

A systematic review identified that online food retail settings have advanced marketing ability to disguise healthier products and promote less healthy products [12], with the majority of studies reporting that the use of MDAs was associated with negative diet-related disease risk factors, such as weight gain and emotional eating. However, despite the prevalence of less healthy food and drink available on MDAs, a UK study identified 9 out of 10 online shoppers use MDAs to purchase fresh food at least once a month [13]. Healthier options may be available, but less healthy food outlets have greater prominence on MDAs due to brand-funded marketing.

Inequalities

Research suggests that access to less healthy OOH food outlets, both in the physical food environment and online, is more prevalent in deprived neighbourhoods, disproportionally affecting low income and ethnic minority groups [14,15,16]. In 2019, the number of food outlets on Just Eat UK was 50% higher in the most deprived areas compared with the least deprived [17]. Despite greater availability of less healthy food in more deprived areas, the most common users of MDAs are individuals with higher education and income [5]. An Australian study extracted Uber Eats menu items classified as 'popular near you' and found most items included were rated 'less healthy' using the food environment scoring (FES) tool, with significantly higher healthier food scores in the most affluent areas [18]. Data is currently limited on promotions and marketing on MDAs in the UK, and on other MDA platforms such as Deliveroo and Just Eat.

Implications on public health

The food environment is directly linked to dietary habits and health outcomes. Evidence demonstrates that online marketing, including use of social media platforms, influences food choices, preferences and consumption [19]. MDAs are centred on convenience, taking away the effort involved in food preparation, cleaning up or walking to pick up a takeaway meal, therefore encouraging sedentary behaviour [20, 21]. There is also a lack of nutrition information on MDAs, particularly for small to medium sized retailers (less than 250 employees) who are exempt from calorie labelling regulations, limiting consumer's ability to make informed choices [21].

However, MDAs present an opportunity to deliver interventions to improve public health nutrition. Healthy eating habits can be promoted through food labelling such as nutrient labelling or traffic light systems, as seen on supermarket products and in chain food outlets [22, 23], and placing healthier brands and products at the top of the page with price promotions.

Current policy landscape

Although MDAs are a major player in today's food system, they are exempt from certain food and drink marketing restrictions. Since October 2022, medium to large retailers in England are no longer able to display certain food and drink products, defined as 'less healthy' by the Nutrient Profiling Model (NPM), in prominent locations in store and online [24]. Research from Food Active and Obesity Health Alliance found overall good compliance with the legislation [25], but the OOH sector is exempt from the legislation, fast food outlets and takeaways are free to market and promote their products to consumers via these applications.

From April 2022 onwards, it has been a legal requirement for all UK medium to large food retailers (with 250 or more employees) to display calorie information on their menus, with smaller retailers being exempt from this law [26]. This legislation also applies to large retailers on MDAs, however, the many small to medium sized retailers on MDAs who are exempt from the calorie labelling regulations means consumers are limited in their ability to make informed choices when using these applications.

A note on dark kitchens

Dark kitchens (also known as ghost, cloud or virtual kitchens) are commercial production spaces that prepare food solely for delivery through MDAs [21]. A company leases a residential or industrial space to operate delivery-only services, with no physical location for either eating or collecting from the premise. In some cases, these businesses produce food under multiple restaurant and food brands. The delivery-only nature of dark kitchens means consumers are placing orders often without the knowledge of where, or how, this food is prepared. Although MDAs Just Eat [27] and Uber Eats [28] require businesses to have a minimum food hygiene rating of 3 to operate, with Deliveroo requiring 2 or above [29], some new kitchens have to wait a significant period of time before food hygiene inspections are carried out, raising concerns around sanitation regulation. Currently, the evidence on the volume of dark kitchens operating on MDAs, and the implications on public health and planning, are unknown.

About this research and what it aims to cover

This report aims to provide insight into the marketing tactics food companies use on MDAs to encourage consumer usage and purchase by price and place; an area which is currently under researched in the UK. The report also aims to generate further evidence on the availability of healthier options on MDAs and explore any differences in accessibility across a less deprived postcode, and a more deprived postcode in Liverpool. As an emerging area of interest for public health, we also aimed to determine if a food outlet operated as a dark kitchen to provide further insight on the volume of such outlets in Liverpool.

Based on the findings and key themes from the discussion, the report includes a series of recommendations for national and local government, MDAs and future research.

Methods

Two postcodes were selected using the Indices of Multiple Deprivation [30] to represent one area in the least deprived decile (9th) (L16, Childwall) and one area in the most deprived decile (1ST) (L21, Seaforth) in Liverpool.

For both postcodes, data was collected from the first 30 results generated on Deliveroo, Uber Eats and Just Eat, creating a total of 180 outlets for inclusion. Data was not collected for the outlets in the top rows of a MDA homepage, for example, 'Top picks in your neighbourhood' or 'Offers near you'. Data collection began after these rows, not attached to any promotion so outlets appear at the top of the page.

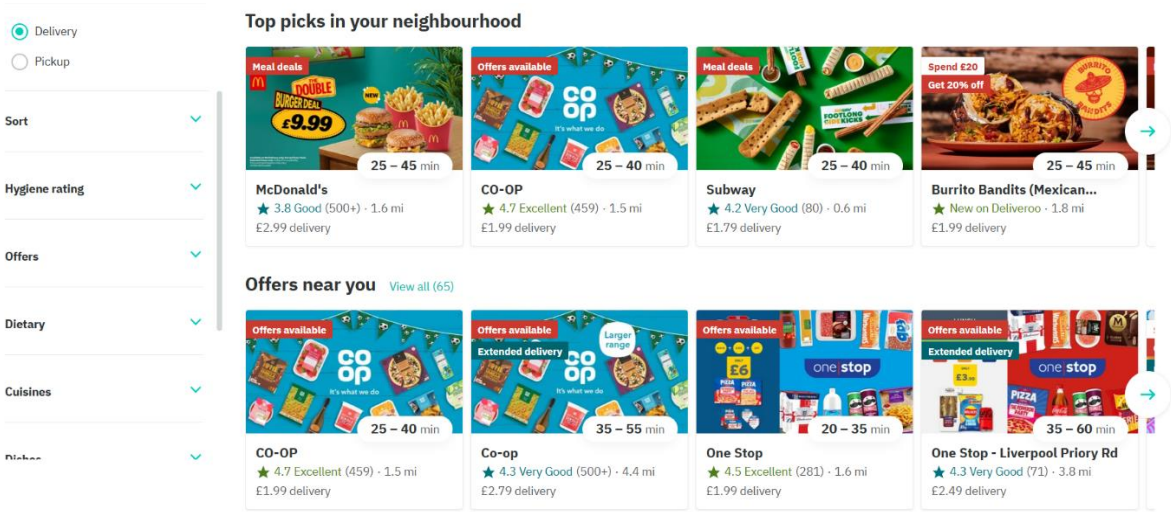


*Figure 2: Top rows **not** included in data collection*

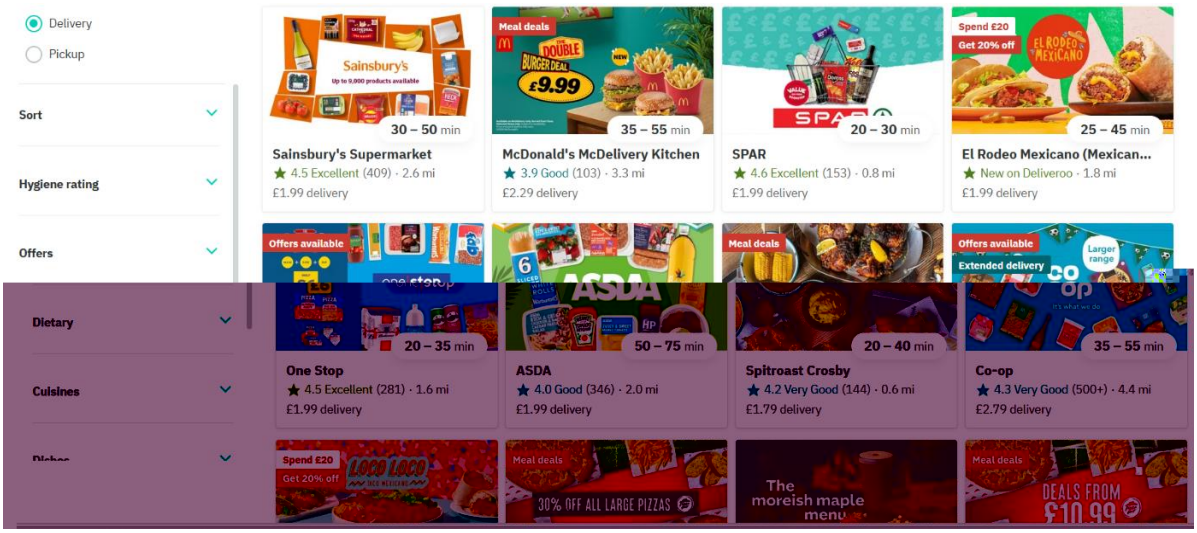


Figure 3: Outlets included in data collection

Data was collected over 3 days in March 2024, between 12-2pm. To identify any issues with the data collection protocol, we undertook a pilot data collection before formal data collection commenced.

Data collection was in two parts. Part 1 collected the total number of outlets, and the total number of outlets tagged as 'healthy'* from each MDA, Deliveroo, Just Eat and Uber Eats. Data was recorded and analysed in Microsoft Excel.

**Note: The outlets tagged as healthy were identified by the MDAs. Please see page 22 for further information.*

Data collection part 1

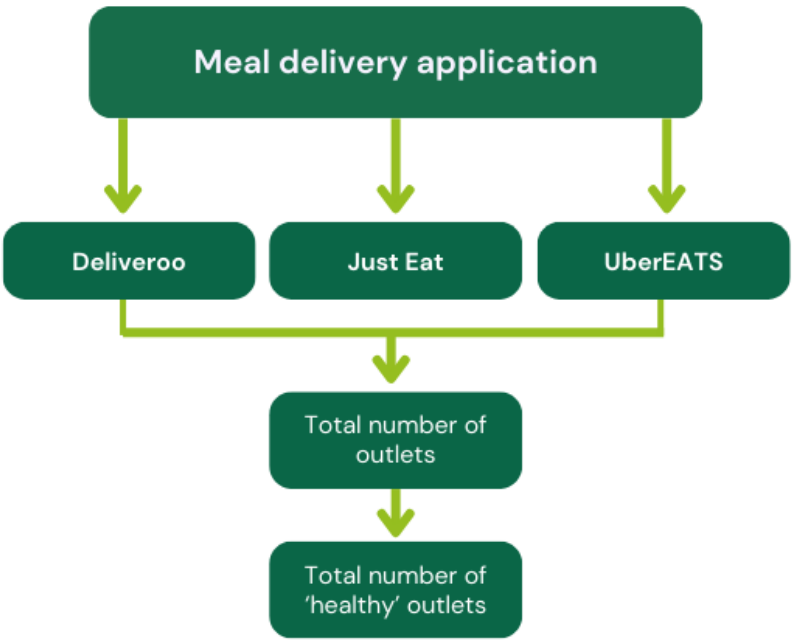


Figure 4: Data collection protocol part 1

Example data collection part 1

Total no. outlets: Deliveroo	Count
Total no. outlets available	189
Total no. outlets that are 'healthy'	45
Percentage of 'healthy' outlets	24%

Part 2 collected the following information from the first 30 outlets on each MDA, for both postcodes – listing number, name of outlet, outlet classification, tags, featured items and discounts available (see appendix 1, 2 and 3 for example screen shots). See Appendix 6 for more information on how outlet types were classified. See Appendix 7 for more information on food classification, which were adapted from food categories featured in the sugar and calorie reduction programmes.

Data collection part 2

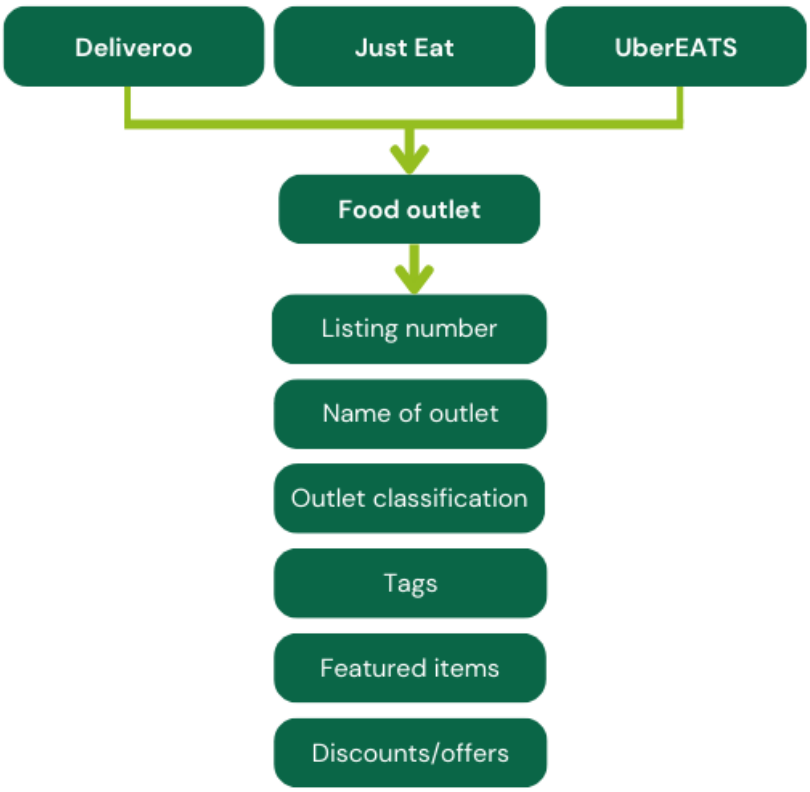


Figure 5: Data collection protocol part 2

Example data collection part 2

Listing no.	Name	Outlet classification	Tags	Featured items	Discounts & offers available	Details of offer
1	Burger King	Fast food and takeaway	Burgers American Vegan friendly	Burger – 8 Chips – 4 Diet/artificially-sweetened drink – 7 Water - 1	Meal deals	20% off entire menu if you spend +£20

Part 2 also aimed to identify whether a food outlet may be operating as a dark kitchen. Using the methodology taken by Huang et al. (2023) the following indicators were explored: collection-only, multiple businesses operating out of one address and businesses operating from an industrial unit 2 [31]. Please see Appendix 8 for further details. Please note that this is not a foolproof method of guaranteeing an outlet is a dark kitchen, however in the absence of a gold standard measure, the approach by Huang et al. (2023) is the most suitable option.

Image by Rowan Freeman from Unsplash

Key findings

A total of 180 food and drink outlets were recorded through the data collection, across two different postcodes with differing levels of deprivation (L16 – less deprived and L21 – more deprived) and across the three leading MDAs, Deliveroo, Uber Eats and Just Eat.

Types of food and outlets available

Proportion of 'healthy' outlets

Across all MDAs, food outlets are able to tag the types of food that they offer so that customers can filter the types of food they are looking for. Across all three MDAs, the tag 'healthy' was a filter. Figure 6 represents the percentage of outlets generated in one search which were tagged as 'healthy'. Uber Eats had the greatest proportion of outlets which were tagged as 'healthy', whereby 42% of the outlets generated in the search were 'healthy', whilst just 1% of outlets generated on Just Eat were tagged as 'healthy'.

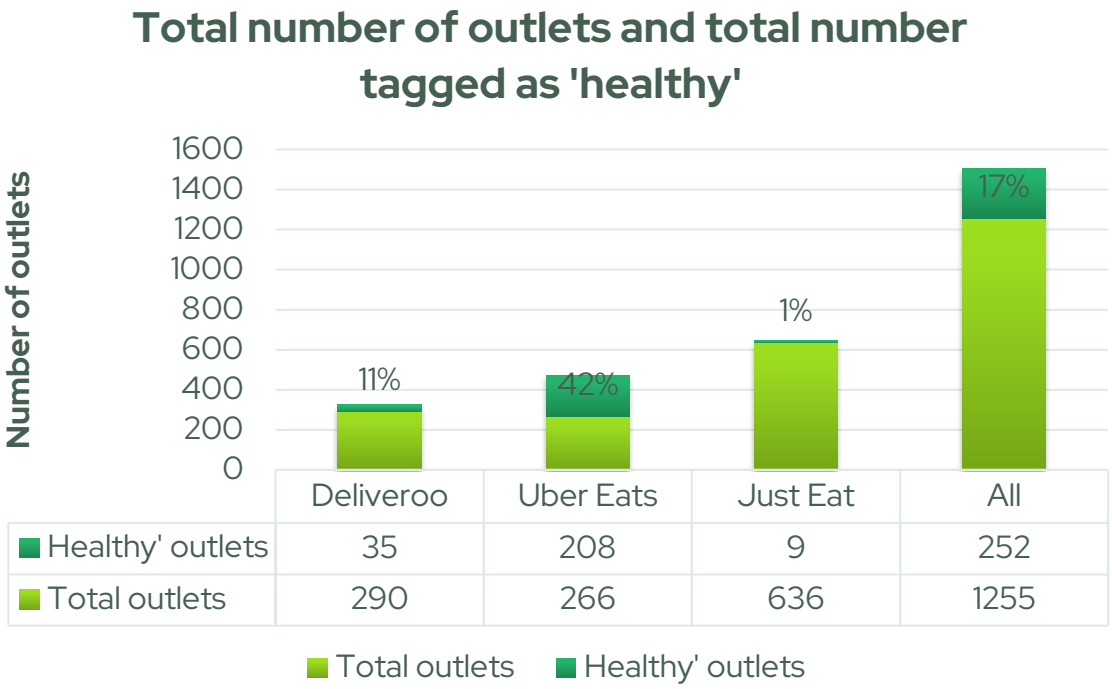


Figure 6: Percentage of 'healthy' outlets across MDAs

When we compared this across the two postcodes, there was no significant difference and, on some MDAs, there were more outlets tagged as 'healthy' in the deprived postcodes.

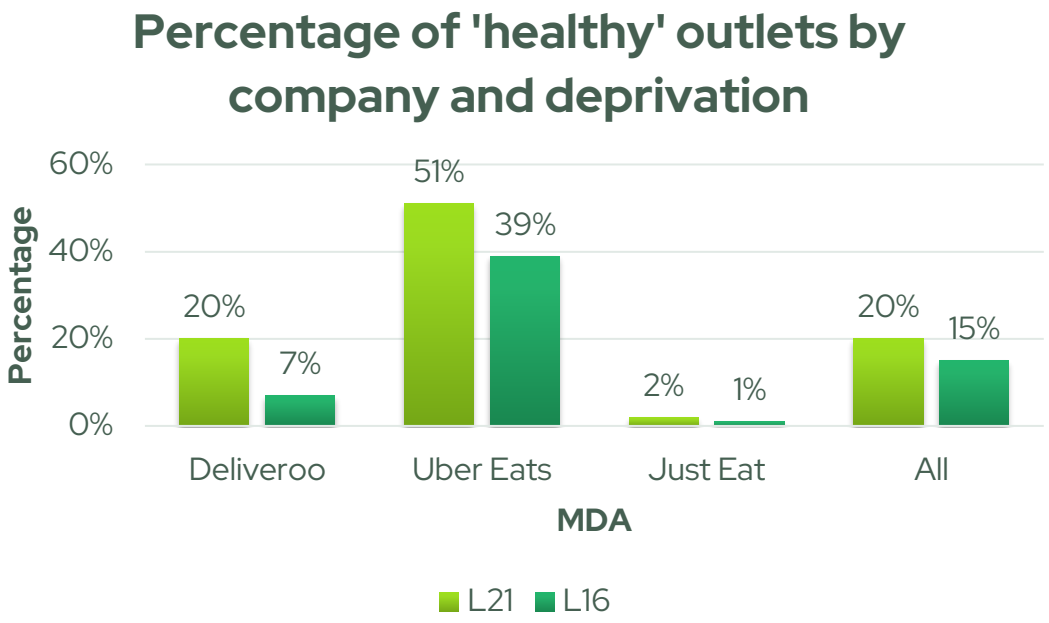


Figure 7: Percentage of 'healthy' outlets across delivery companies and postcodes

Outlet classification

The 180 outlets included for data collection were classified using an adaptation of Lake et al. (2012) outlet classification model (see Appendix 8, [32]) and are displayed in Figure 8 below. Over a third of outlets (38%) recorded were Fast Food and Takeaways, followed by restaurants (34%) and Cafés / Coffee Shops (19%).

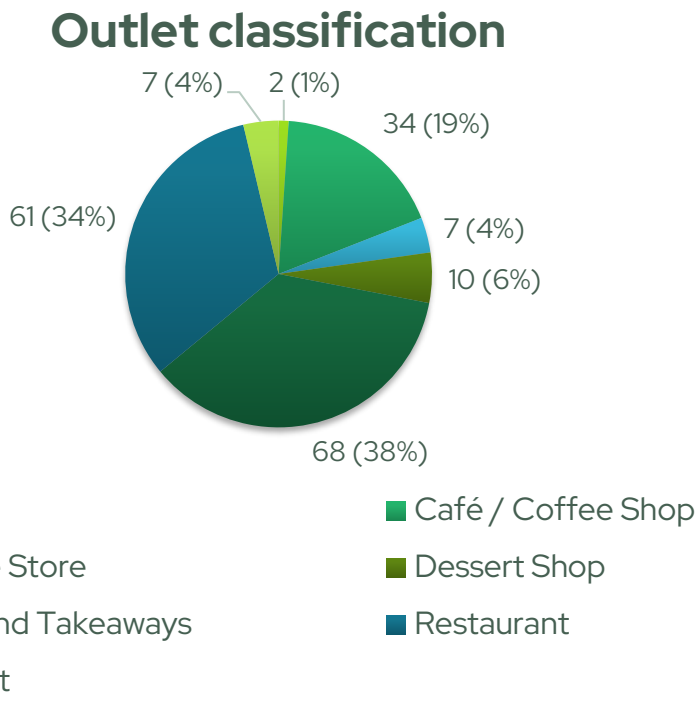


Figure 8: Outlet classification of all outlets

Outlet classification was also analysed between the two postcodes included in the data collection. Figure 9 highlights there were just under double the number of restaurants available on MDAs in L16 compared to the more deprived postcode, L21. The most deprived postcode, L21, had over three times more Café/Coffee Shops and more takeaways compared to the least deprived postcode.

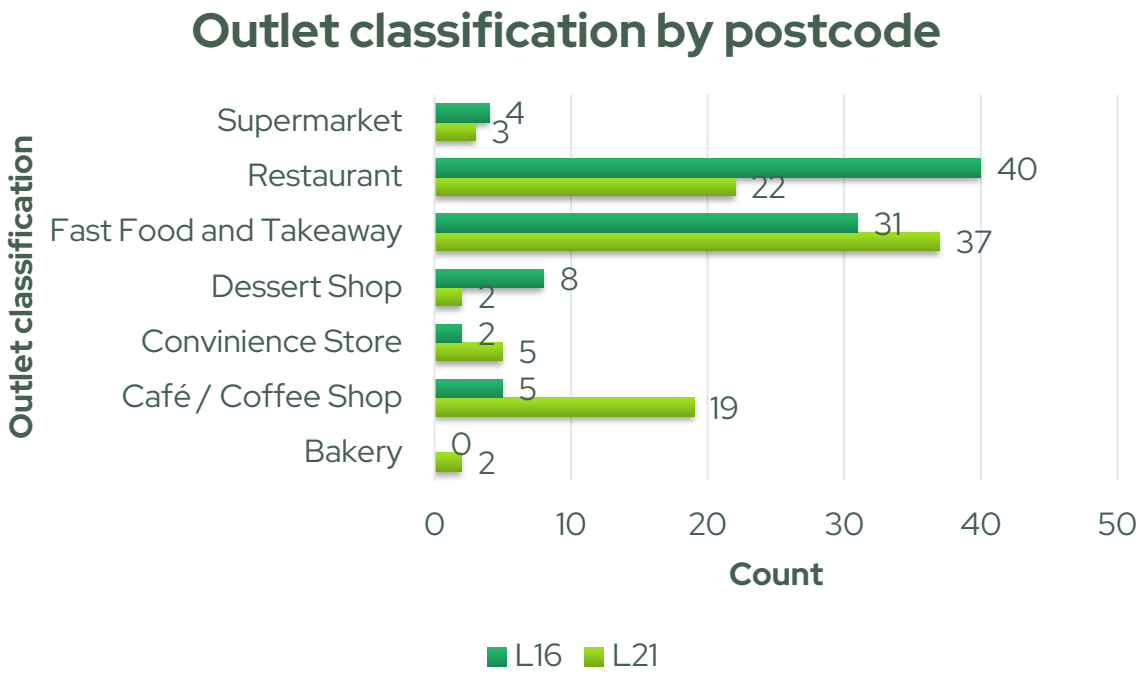


Figure 9: Outlet classification by postcode

Tags

Tags are used by outlets to describe the type of food and cuisines they offer; these can be multiple tags for each outlet. Across all delivery applications, a total of 586 tags were recorded in the outlets included in this data collection, representing 65 different words or phrases. The word cloud below presents the range of tags included in this data collection (the size of the word indicates the frequency it was reported).

As highlighted in Figure 10, the most frequently reported tags were Burgers (n=62, 11%), American (n=60, 10%), Chicken (n=47, 8%) and Breakfast and brunch (n=45, 8%).

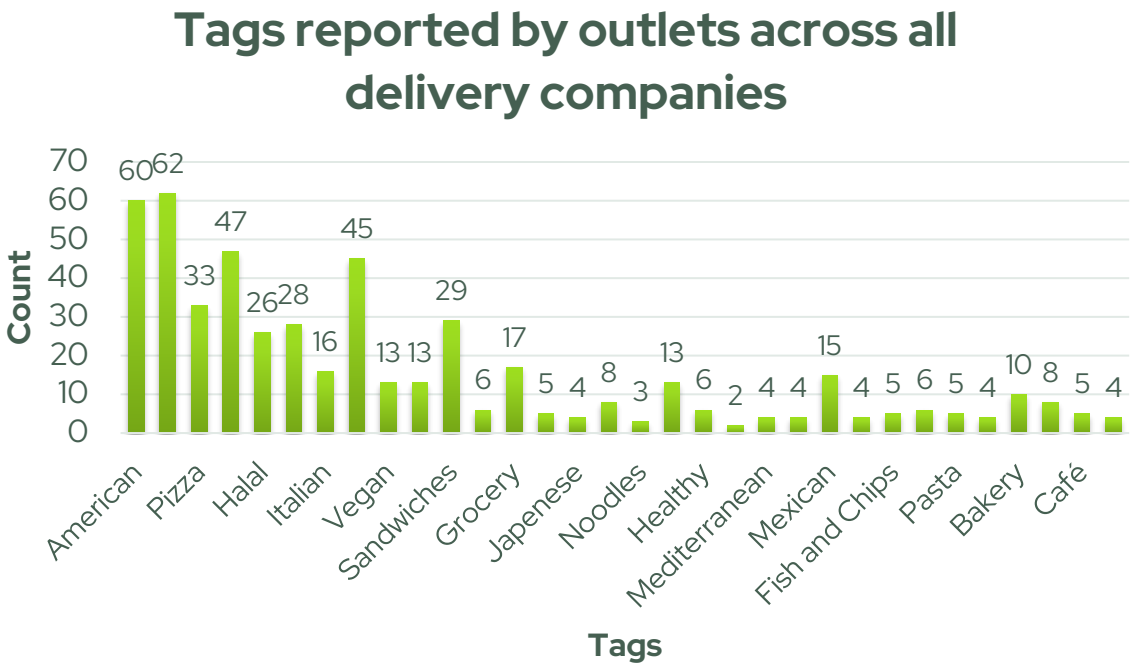


Figure 10: Tags reported by outlets across all delivery companies

We also examined the proportion of tags by postcode and between delivery companies and found no notable differences. These graphs can be found in Appendix 4 and 5.

Promotions by place

Search results

Below presents the first three search results presented for each MDA and postcode, including the outlet name, classification and whether it is a chain or independent.

	1st result	2nd result	3rd result
Deliveroo (L16)	YumCha (independent, restaurant)	Co-op (chain, supermarket)	Morrisons (chain, supermarket)
Deliveroo (L21)	One Stop (chain, convenience store)	88th Street Burger Bar (chain, fast food and takeaway)	McDonalds (chain, fast food and takeaway)

	1st result	2nd result	3rd result
Uber Eats (L16)	McDonalds (chain, fast food and takeaway)	KFC (chain, fast food and takeaway)	Burger King (chain, fast food and takeaway)
Uber Eats (L21)	McDonalds (chain, fast food and takeaway)	KFC (chain, fast food and takeaway)	Stuffed (independent, fast food and takeaway)
Just Eat (L16)	Subway (chain, fast food and takeaway)	Pizza Express (chain, restaurant)	Burger King (chain, fast food and takeaway)
Just Eat (L21)	Subway (chain, fast food and takeaway)	Popeyes chicken (chain, fast food and takeaway)	Tortilla (chain, fast food and takeaway)

Use of featured items

Across the 180 outlets included in this data collection, 79% (n= 142) included featured items as part of their menu. As Figure 11 shows, this was spread equally across all MDAs, and there was no difference between the two postcodes.

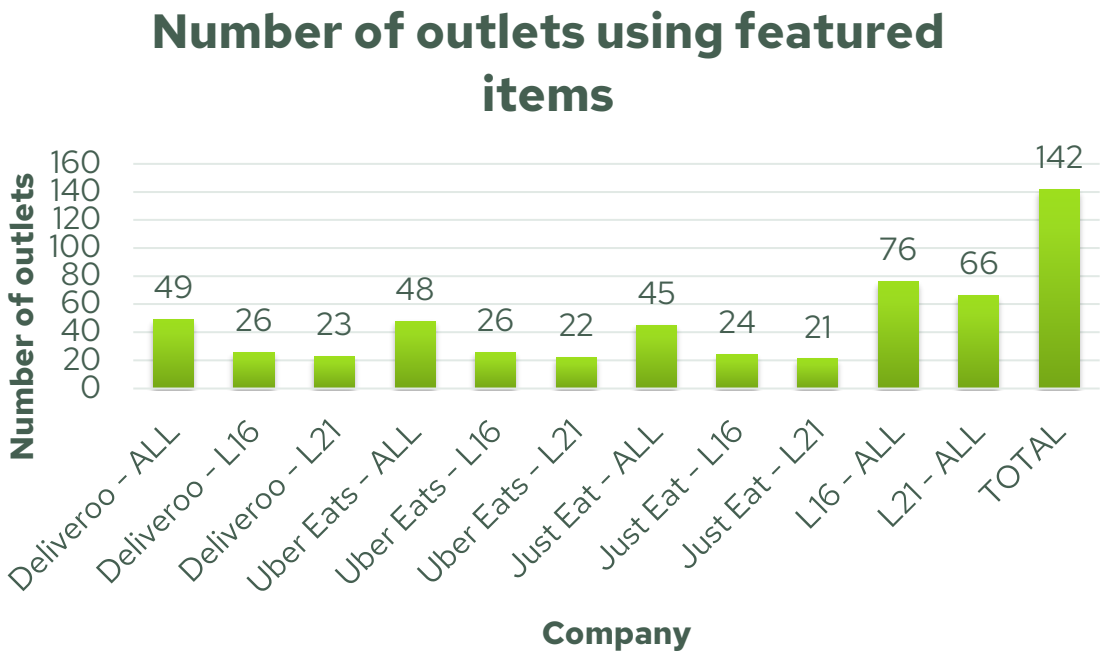


Figure 11: Number of outlets including featured items

Types of food and drink promoted in featured items area

1447 food and drink items were identified within the 'featured items', representing 33 different food categories (see Appendix 7 for food category classification). Uber Eats hosted the largest number of food and drink items within the featured items area, representing 41% (n=607) of all the featured items, followed by Deliveroo (36%, n=530). Just Eat had the lowest number of food and drink items in the featured items area (21%, n=312).

Figure 12 indicates that the most common food categories were chips / fried potato products (n=257, 18%), burgers (n=199, 14%) and pizza (n=150, 10%).

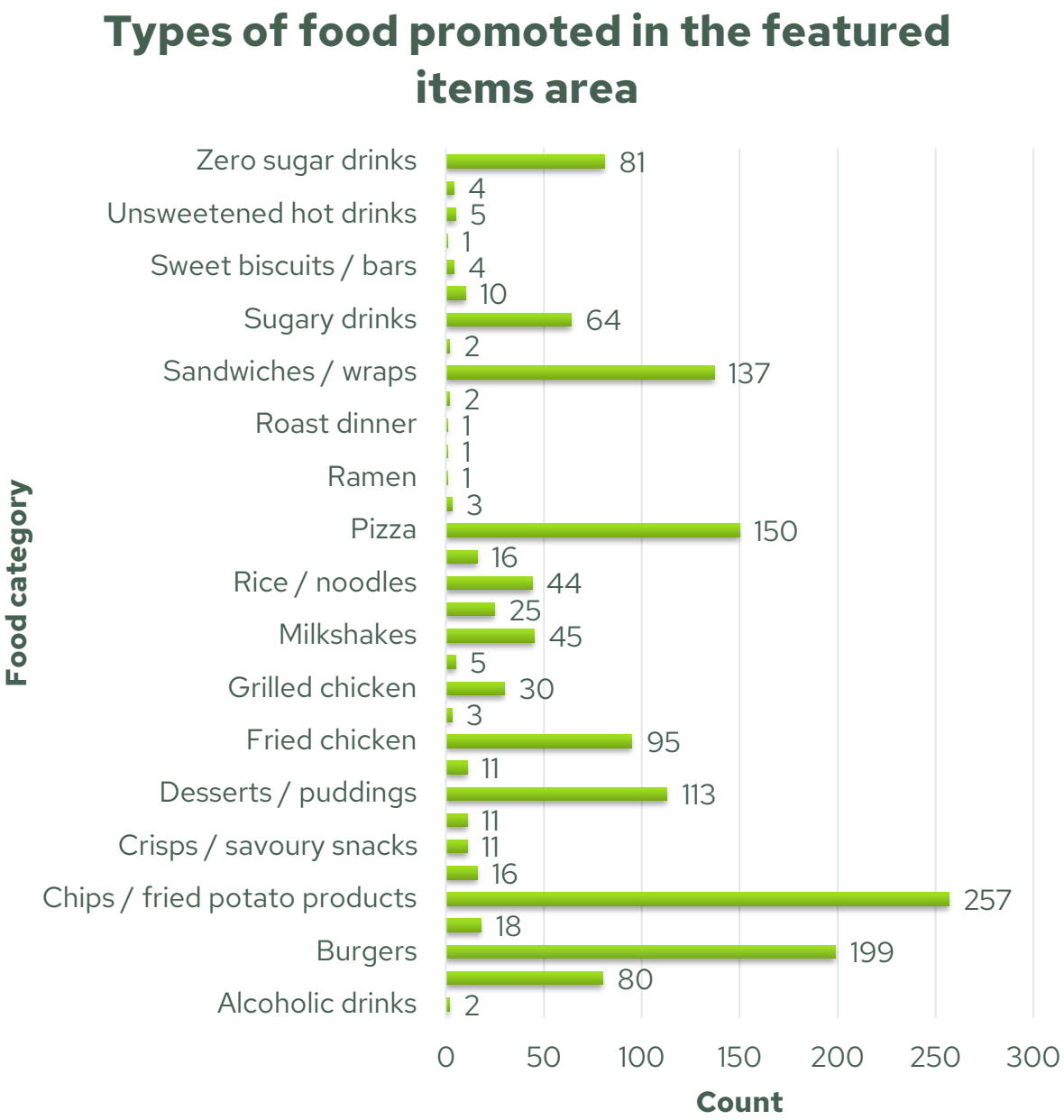


Figure 12: Types of food and drink promoted in featured items area

Promotions by price

Total number of outlets offering price promotions

Across the 180 outlets recorded in this data collection, over half (56%, n=102) offered some form of promotion.

Across the three delivery sites, Deliveroo and Just Eat hosted the greatest number of outlets offering promotions, representing 39% (n=40). Uber Eats hosted the lowest, with just 22 outlets offering promotions.

There were slightly more outlets offering promotions in the deprived postcode (62%, n=56), when compared to the less deprived postcode (n=47, 52%).

Outlet classifications by price promotion

Of the 102 outlets offering price promotions, over a third were restaurants (n=37, 36%) and fast food and takeaways (n=37, 36%).

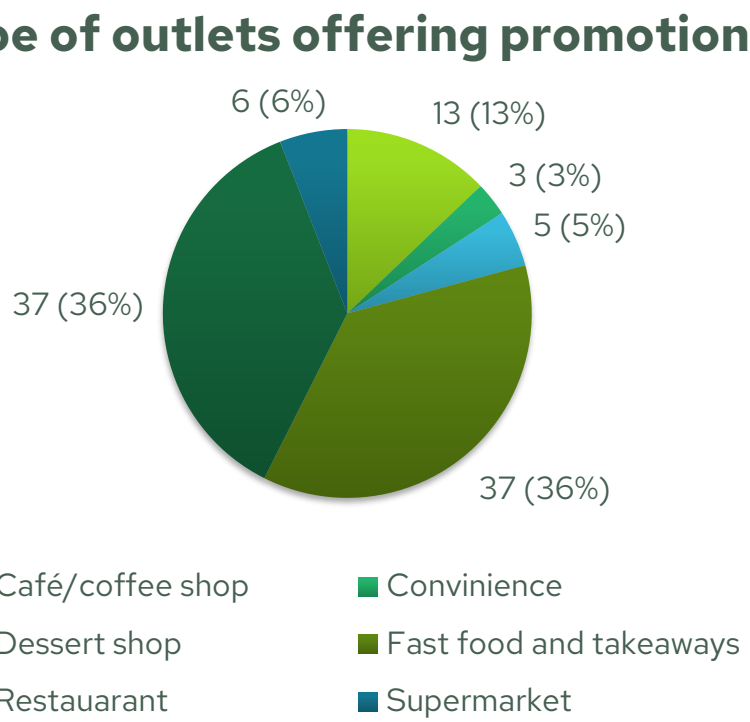


Figure 13: Type of outlets offering price promotions

Types of price promotions reported

Across the 102 outlets offering some form of promotional activity, the most common offer was 'Discount' (i.e. spend £15 get 10% off), representing 38% of all promotions recorded. This was followed by 'Free or low delivery' (n=30, 29%) and 'Loyalty card or reward scheme' (n=12, 11%).

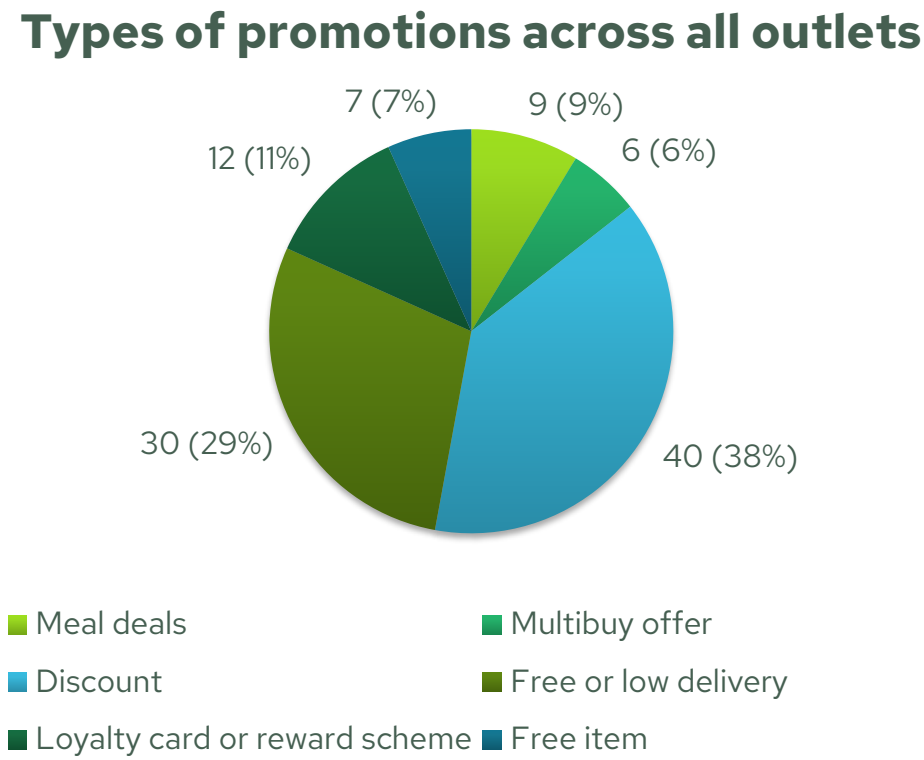


Figure 14: Types of promotions across all outlets

We also collected details of the promotions recorded, and included:

- £0.99 delivery fee if you spend over £9
- Free item when you spend over £30
- Spend £15 and get 15% off
- Spend £25 and get 20% off
- Spend £15 and get 20% off
- Spend £25 and get 15% off
- Free delivery if you spend over £15
- Spend £9 and get delivery for £0.49
- Spend £10 and get delivery for £0.99
- Spend £30 and get 15% off
- Spend £10 and get 25% off
- 20% off selected items
- Spend £30 and get free delivery
- Free item when you spend over £25
- Buy one get one free
- Spend £20 and save £5
- Spend £20 and get 10% off
- 25% off your order if you spend over £25
- Stamp Card Restaurant
- Spend £15 and get 10% off
- Spend £25 and get 10% off
- Spend £15 and get 15% off before 15:00
- £0.40 off selected items
- Free delivery when you spend over £20
- Spend £20 and get 10% off
- Free delivery if you spend over £10
- Spend £15 and get 25% off
- Free delivery when you spend over £30
- Free delivery if you spend over £10

Volume of promotions by delivery platform

Promotions were compared by delivery platform. Just Eat was the only platform to offer a loyalty card or reward scheme (i.e. collect stamps to receive a discount). Free or low-cost delivery (i.e. free delivery when you spend £15 or limited time low-cost delivery fee) was predominantly found on Deliveroo, and Uber Eats was the only platform to offer Multibuy offers (i.e. buy one item, get one free).

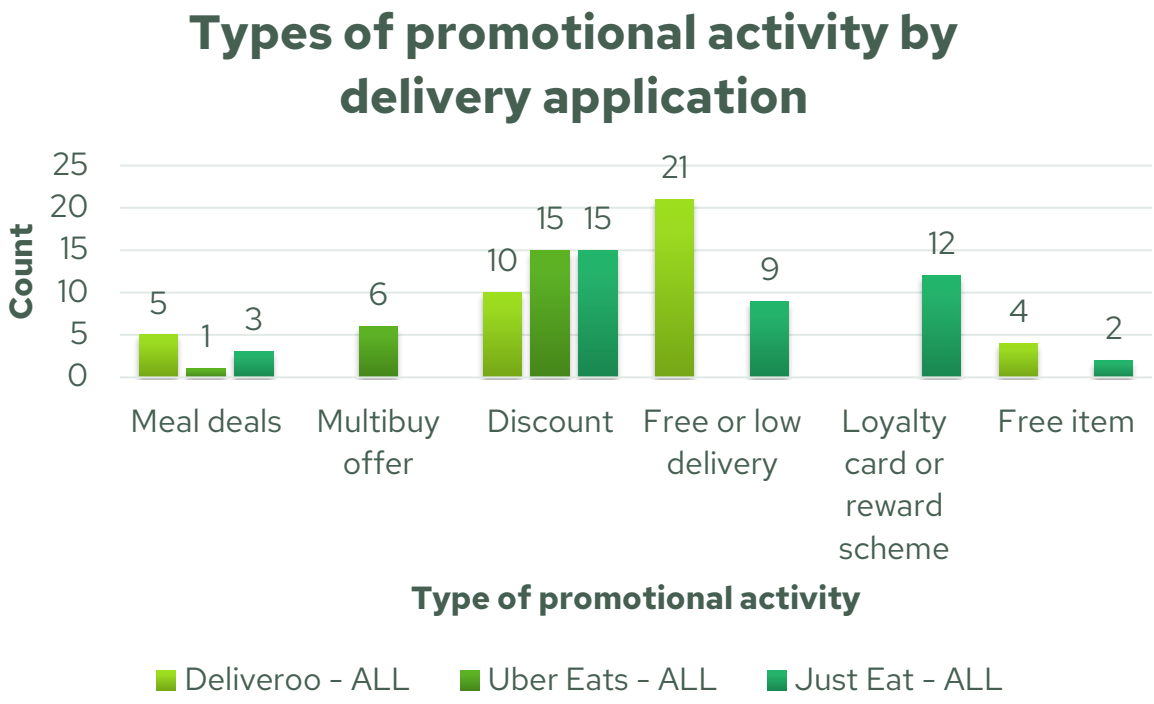
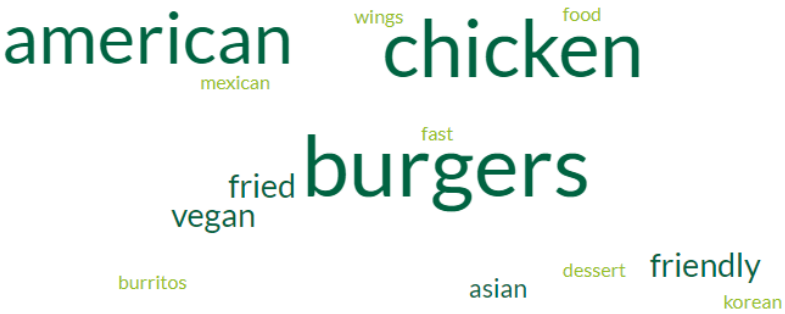


Figure 15: Types of promotional activity be delivery application

Prevalence of dark kitchens on MDAs

Using a method of identifying potential dark kitchens (see Appendix 8 for further details), a total of 16 outlets across the three MDAs were identified. This represents 9% of the total outlets included in this research. The majority of the dark kitchens identified were operating out of one address, which were typically chain pubs. These pubs would be offering multiple different food offerings through virtual brands; however, they would be delivery only and not customer facing.

All of the potential dark kitchens identified had an outlet classification of 'fast food', and the tags identified on these outlets are highlighted in the word cloud below; dominated by burgers and fried chicken. The potential dark kitchens were evenly spread across all MDAs and both postcodes.



Discussion

The number of outlets tagged as 'healthy' were limited MDAs; however, it remains unclear how this is defined.

This research suggests that only a small number of food and drink outlets hosted on MDAs featured the tag 'healthy'. This is consistent with other findings that MDAs tend to be dominated by less healthy options [33, 34]. Across the three MDAs, this varied from 42% of outlets that were tagged with 'healthy' on Uber Eats, yet this reduced to just 1% on Just Eat.

For those outlets that identify themselves as 'healthy' however, it is unclear how this is defined across the three MDAs included in this research, and whether an assessment tool is used to delineate whether an outlet can use this tag. In terms of variation of outlets tagged as 'healthy' across the three MDAs, this could be as a result of more stringent methods of assessment used by Just Eat, for example.

Furthermore, some of the outlets that are generated when using the 'healthy' tag are not typically associated with healthy options (burger outlets, carveries, doner kebab outlets and more as pictured below) and this prompts the question whether such outlets should be able to tag themselves as 'healthy'.

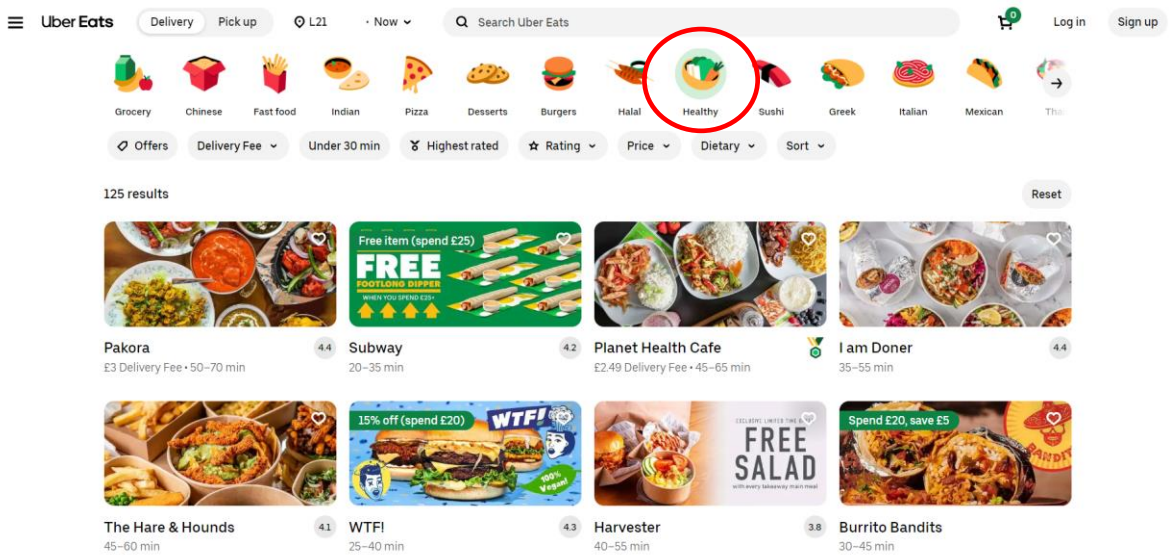


Figure 16: Top 8 results for outlets tagged as 'healthy', Uber Eats, L21

Food consumed OOH contributes to a growing proportion of the nation's daily diet. Analysis from Kantar's report 'Winning food & drink occasions out-of-home,' found that takeaway spend now accounts for 12.3% of total OOH spend across the UK [35]. A recent report from Nesta also suggests the majority of the population (~60%) uses the OOH sector at least once a week, with a small proportion of the population (11%) using it, on average, at least once a day [36].

These trends are expected to continue; therefore, it is important to ensure consumers who may be seeking healthier options can access these when using MDAs. This primary research and other pieces of research within the literature suggest this is not currently the case. Where customers may be seeking healthier options and looking for additional nutritional information, calorie labelling is mandatory for medium to large businesses in England. However, this only affects a small number of outlets hosted on MDAs, as many small, independent food outlets trade on MDAs. Furthermore, the OOH sector has largely failed to engage in the voluntary calorie reduction programme, which challenged the food industry to reduce the calories in specific product categories between 10-20% by 2024. Some categories such as main meals, starters and side dishes and sandwiches have in fact seen small increases in calories per serving (2.3%, 1.4% and 1% respectively). It is pertinent to consider how consumers browsing MDAs can be provided with accurate and transparent nutritional information, as well as how the current food offer can be improved to contain less fat, sugar and/or salt.

Fast food and takeaways dominate the types of outlets found on MDAs, followed by restaurants.

This research found that fast food and takeaways dominate the types of outlets available on MDAs, which is consistent with other research in this field. However, this was closely followed by restaurants (those that are typically seated establishments, with waiter/waitress service). This is perhaps a result of the pandemic and forced closures; many restaurants previously not on MDAs opted for takeaway and delivery to continue trading [37]. Whilst the nutritional content of fast food and takeaways is typically well documented, the evidence base on food served in restaurants is still growing and such establishments may not receive the level of scrutiny of the healthiness of the food they offer compared to fast food and takeaway outlets. However, growing evidence shows the energy content is excessive in restaurant starters, sides, main meals and desserts; one in four starters and one in five sides and desserts in UK chain restaurants exceed the recommended energy intake for an entire meal [38]. In another study, the mean energy content of restaurant meals was 977kcal; and only 9% met public health recommendations for energy content [39]. A recent report by Nesta echoes this; two-thirds of meals purchased OOH exceed the recommended intake for a meal (600 calories) [36].

There was also a notable number of supermarkets and convenience stores operating on MDAs included in this research, which is also a growing trend following the Covid-19 pandemic. This could potentially help to bridge the gap in areas that have limited or poor access to healthier food and drink and households with limited public and private transport options, also known as food deserts. However, there is evidence to suggest this may not be the case. One study found that rapid grocery delivery services offer a wide variety of items, with a focus on pre-packaged foods high in fat, salt and sugar, alcoholic beverages and tobacco. Furthermore, these items were also most likely to be promoted through offers and promotional language, and fruits and vegetables were less commonly available and mainly on grocery delivery apps [40].

Less healthy food and drink are placed in the spotlight across MDAs

Ample evidence suggests that positioning of foods can play a role in influencing purchasing decisions, providing yet another cue to consume. In the case of MDAs, menus are typically presented to consumers vertically as they are predominantly accessed using smart phones. Research has shown that vertical positions on menus are associated with a top–bottom analogy, with consumers making the perception that "the higher, the better" [41]. It is clear from this research that less healthy and drink food items are commonly the top of menus and in the spotlight to consumers on MDAs (i.e. 'popular with other people,' 'featured items' and highlighted in a different colour). The most common food items found in these areas were chips and other fried potato products, followed by burgers, which are typically high in calories, fat and salt. In the example on Figure 17, calorie information is displayed on the larger chains including Burger King and McDonalds (but not Urban Chicken & Pizza as this is a small to medium establishment and therefore exempt from the calorie labelling legislation). Some of the meals promoted at the top of these MDAs contain upwards of 1,500kcal in one serving, over double the government's recommended 600kcal per meal and accounting for two thirds of a woman's recommended daily calorie intake, and two fifths of a man.

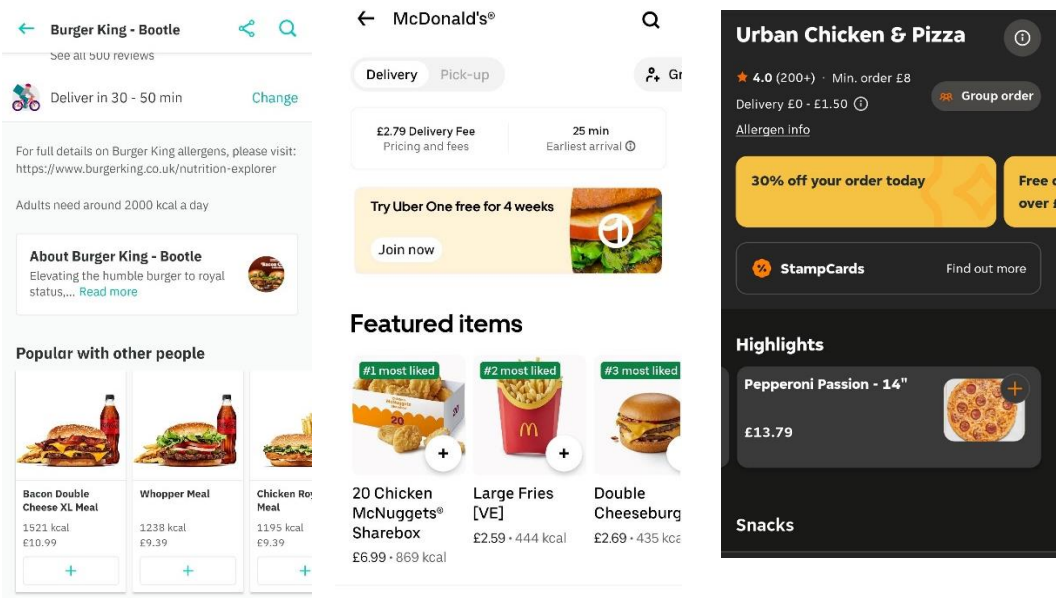


Figure 17: Food and drink items in the featured area of MDAs

The government has recognised the role of promotions by place within legislation since 2022, meaning specific food categories and food and drinks that fail the nutrient profiling model (NPM) cannot be placed at key locations in medium and large stores (i.e. end of aisles, store entrances and checkouts), and equivalent spaces in online stores.

However, the OOH sector is excluded from this legislation and therefore, less healthy food and drink can continue to be placed at key locations on MDAs such as the homepage, checkout (i.e. you may like to add to your order) and pop ups. However, even if the OOH sector was included in this legislation, the restricted areas online would not cover the featured items area at the top of the menu which has been examined in this research. The result of these policy exemptions means that MDAs can use a wide range of marketing techniques to position predominantly less healthy food items from restaurants and takeaways in the eyes of consumers. Medium and large supermarkets and convenience stores selling pre-packaged foods are, however, in scope with online restrictions applying to these outlets on MDAs. However, our 'Location, Location, Location' report with the Obesity Health Alliance [25] found that enforcement of the legislation both online and instore is very limited, and it may still be the case that less healthy food and drinks are being promoted by supermarkets and convenience stores at restricted areas on MDAs.

A report by the WHO also suggests that restaurants and takeaways can pay to be positioned at the top of MDA homepages and are usually dominated by large HFSS brands such as McDonald's, Subway and KFC, with huge marketing budgets and strategies [21]. In this research, large international chains were regularly found in the top three search results across all MDAs. It is unclear how menus are designed on MDAs, whether the OOH businesses themselves chose the items that are placed at the top of menus or whether this is based on algorithms and decided by the MDA themselves. Regardless of how they are designed, it is important to consider how they can be improved to take less healthy food and drinks out of the spotlight.

Promotional activity is frequently used by restaurants, fast food outlets and takeaways, specifically utilising volume-based discounts and offering free delivery.

In addition to less healthy options placed in the spotlight on MDAs, price promotions are regularly used, such as discounts, multi-buy offers and free delivery. This research uncovered that over half of the businesses included in the data collection offer some form of price promotion. Restaurants, fast food outlets and takeaways were the most common type of outlet to offer these promotions. Discounts such as 'spend £20 get 20% off' was the most common type of promotional activity used, which encourages consumers to spend more in order to receive a discount on the total cost of their order. Evidence suggests such price promotions increase the likelihood of purchase and positively influence consumer's purchasing decisions [9], and therefore pose a specific concern where they are available with outlets that sell a large proportion of less heathy food and drink.

Of particular concern are the use of multibuy offers that could encourage over consumption e.g. 'two for one' or 'buy one meal, get one free'. Such discounts deceive consumers, believing offers provide value for money, but evidence suggests the opposite and these marketing practices actually encourage consumers to buy more [41] and ultimately consume more [42]. There is also evidence to suggest such promotions can result in food waste [43].

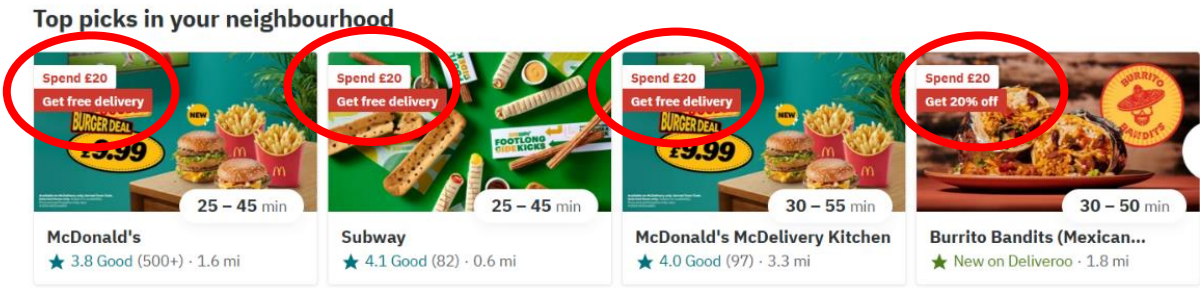


Figure 18: Promotion activity included free delivery, 20% off and meal deals featured on 'top picks in your neighbourhood', Deliveroo, L21

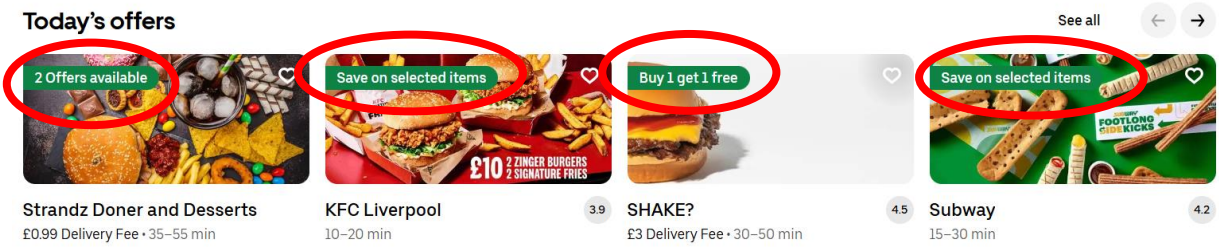


Figure 19: 'Today's offers' including buy 1 get 1 free, save on selected items '£10 for 2 burgers and 2 fries', Uber Eats, L21

The government was due to implement legislation to restrict multibuy promotions on less healthy food and drink product categories alongside the legislation on location-based promotions in October 2022. This would have included offers found in this research including free items and multi-buy offers, and discounts which are a financial incentive to buy more (spend £20 and get 10% off). However, this piece of legislation was delayed until October 2025, and it does also not cover the out of home sector (except for free refills of sugar sweetened drinks). This exemption also means retailers in the out of home sector are freely able to offer attractive discounts and offers on MDAs that may encourage overconsumption of foods that may be less healthy.

A small number of dark kitchens were potentially identified; however, questions remain about their public health and planning implications.

This research found a small number (n=16, 9%) of the outlets recorded in this research have the potential to be a dark kitchen. It is worth noting that in the absence of a validated measurement, we cannot guarantee that those identified are a dark kitchen, but using a range of markers can give us a good indication. Such markers have been utilised in other research in this field, including Rindaldi, D'Agulair and Egan (2022) [40]. As identification is a challenge, this means our understanding of the volume of dark kitchens is limited.

As a relatively new phenomenon, dark kitchens are a growing area of interest within local government, in particular, from a public health and planning perspective.

From a public health standpoint, there is uncertainty around concerns the food hygiene and safety standards of dark kitchens and at present it is unclear whether they comply with environmental health processes and food hygiene and safety requirements. There are also concerns that dark kitchens are increasing the availability of less healthy food and drink, as multiple types of outlets can operate out of one premises. This was identified in this research, whereby two to three different food businesses were offering a range of food services from one pub but the food outlets themselves are not open to the public, only accessible via MDAs. MDAs are already highly saturated with a significant number of restaurants, fast food outlets, takeaways, café/coffee shops, dessert shops and more. Whilst this research only sampled the first 30 outlets of each postcode and MDA, over 1,500 results were generated. Furthermore, one study conducted in Haringey, London, found most businesses renting dark kitchen spaces were 'virtual restaurants' (52%) selling fast food (47%) or desserts (21%) through MDAs [44]. Whilst the sample of dark kitchens in this research was very small, there was a similar food offer reported with all offering fast food.

With regards to planning, dark kitchens can challenge regulatory frameworks and undermine local planning policies, as they are not subject to the same planning regulations as conventional takeaways [45].

Dark kitchens can offer a cost-effective business model, with smaller overheads compared to a takeaway or restaurant with store fronts, seating, staff etc., and are therefore expected to grow further. At present, the extent and impact of dark kitchens is unknown and further research is required to inform any future policy developments.

Conclusions

This research provides further insight into how less healthy food and drinks are in the spotlight to consumers, and we have highlighted how MDAs and the OOH sector are manipulating price and place promotions in order to do this. This is an area that has not been explored extensively in a UK context. This report also suggests that the number of outlets who are tagged as 'healthy' are limited on MDAs and, where they are available, there are concerns on exactly how this 'healthy' criteria is identified.

The findings have important public health implications given the evidence indicating the growing influence the OOH sector plays on the nation's diet, the increasing use of MDAs and the availability and accessibility of less healthy food and drink items on these applications.

The voluntary calorie reduction programme has so far failed to catalyse reformulation within the OOH sector and the sector's exemption to the price and placement promotions legislation means the sector is largely unregulated when it comes to promotion of their products.

Finally, the report has generated a small piece of insight into the prevalence of dark kitchens and type of food offer available within two postcodes of Liverpool, however further research is needed with a greater sample size to better understand the volume and implications of this growing sector.

A newly elected Labour government has taken office following the 2024 General Election. Featured within the party's manifesto was a commitment to stop the targeting of school children by fast food outlets, which could suggest the party is sensitised to the impact the OOH sector is having on public health and is open to legislating the sector. There may be an opportunity to strengthen existing and forthcoming legislation to better regulate the way in which the OOH sector and MDAs place less healthy food and drink in the spotlight across the digital space. We look forward to working with the government to achieve this.

Recommendations

National government

- Review and extend the existing legislation which restricts the promotion of less healthy food and drink at key locations in-store and online to include the OOH sector, and ensure it captures specific areas on MDAs such as those promoted at the top of the menu.
- Implement legislation to restrict the promotion of less healthy food with multibuy offers by October 2025 as planned; with extensions to the businesses in scope, to include the OOH sector.
- Widen calorie labelling legislation to include small OOH businesses to help provide more information for customers. This must be accompanied by sufficient support to local enforcement agencies and retailers to implement this effectively and conduct a review to better understand the impact of calorie labelling on different groups in society.

Local government

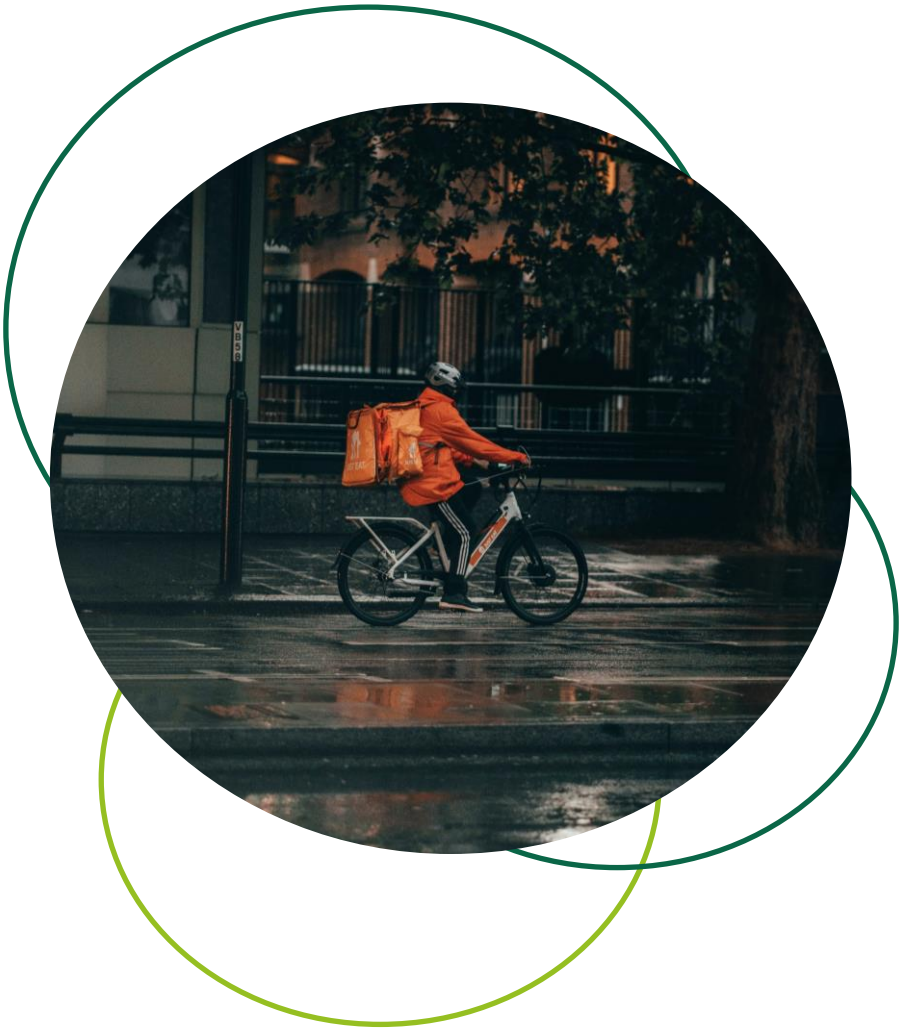
- Take a whole systems approach to promote healthier weight and improve the local food environment by adopting the Local Authority Declaration on Healthy Weight. This includes working with the local food and drink sector to encourage them to take steps to improve their menu and offer healthier options. This could be addressed through a local healthier catering scheme, for example the Recipe 4 Health scheme in Lancashire and Blackburn with Darwen.
- Increase awareness of dark kitchens within relevant local government departments and consider how existing planning policies relating to fast food outlets and takeaways may be undermined by dark kitchens.

MDAs

- Consider how consumers can be better informed about the healthiness of the foods available on MDAs. Review and strengthen the process of identifying 'healthy' outlets, to ensure greater transparency and enable customers who are looking for healthier options can easily find them. Ideally, adopt a uniform system across all MDAs to assess the healthiness of the food and drink offer, for example the 'Health Rating Score'.
- Where healthier catering schemes are in operation locally, consider how this can be promoted on menus and to consumers, ensuring the healthier options available are promoted and visible.
- Place healthier food and drinks in the spotlight, including at the top of menus and move away from applying volume-based promotions.

Research

- Replicate this research on a greater scale, to include a larger number of outlets on MDAs and in several parts of the UK to understand the picture at a national level.
- Further evidence on the volume of dark kitchens nationally, and their potential impacts on public health is required to inform any future policy responses.
- Further testing and tools are required to support local governments to identify dark kitchens and consider this within the context of public health and local planning policy.
- Further testing of tools to support the consistent measurement of healthfulness of the OOH sector.



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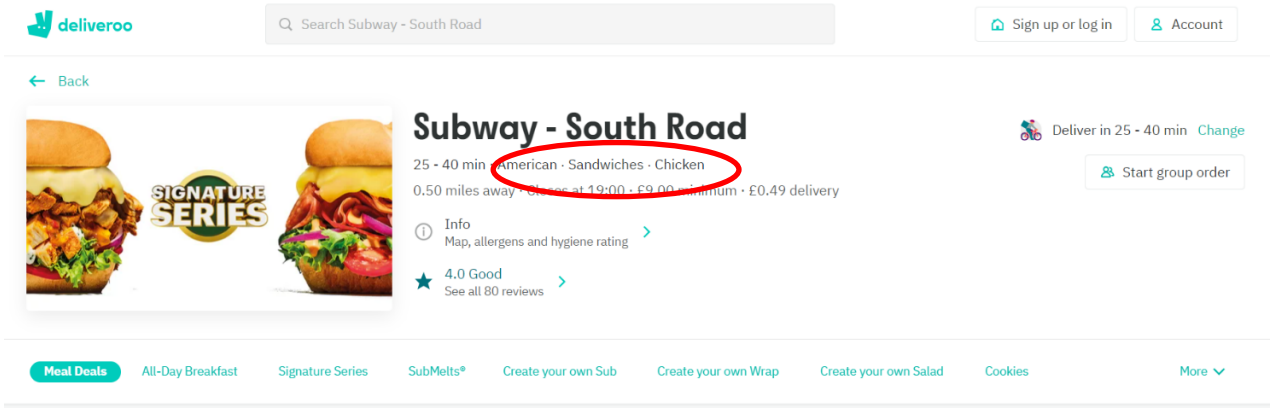
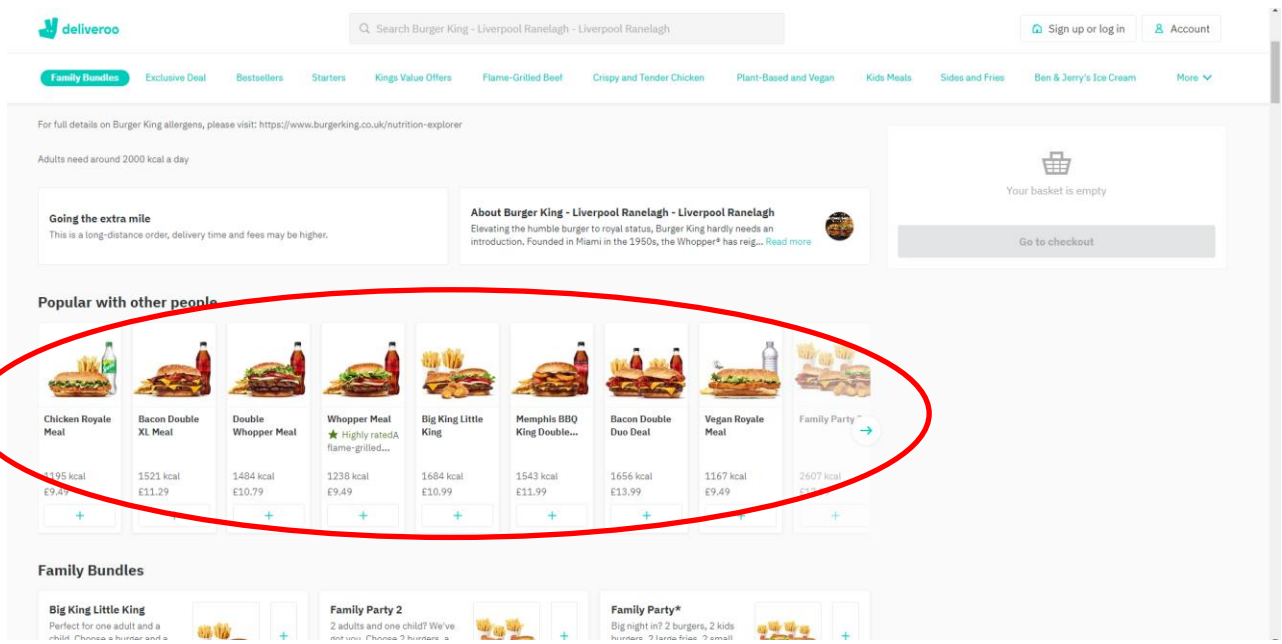
Appendices

Appendix 1: Examples of tags on food outlet

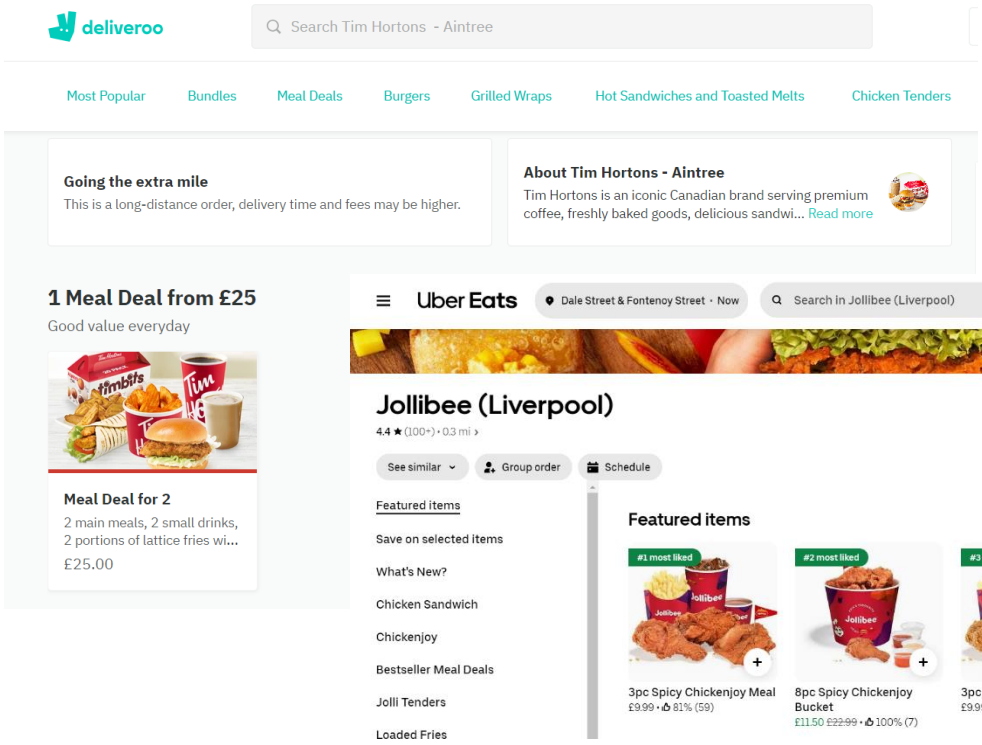


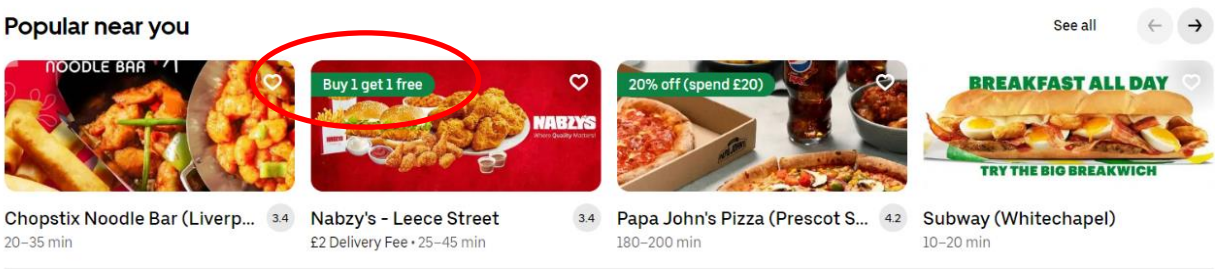
Appendix 2: Examples of featured items on food outlet

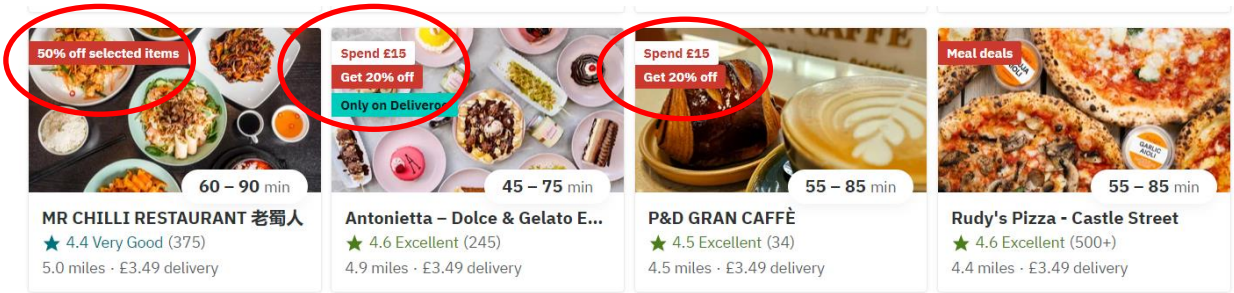


Appendices

Appendix 3: Examples of offers (meal deals, multibuy offers discounts, free delivery)

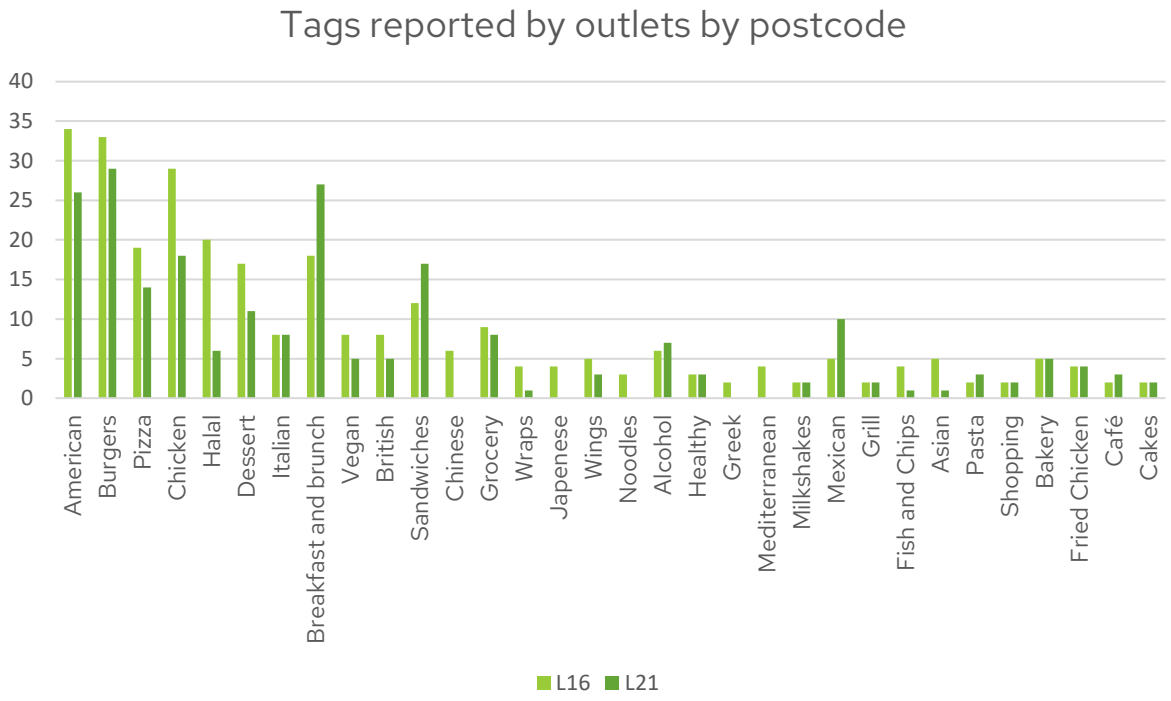




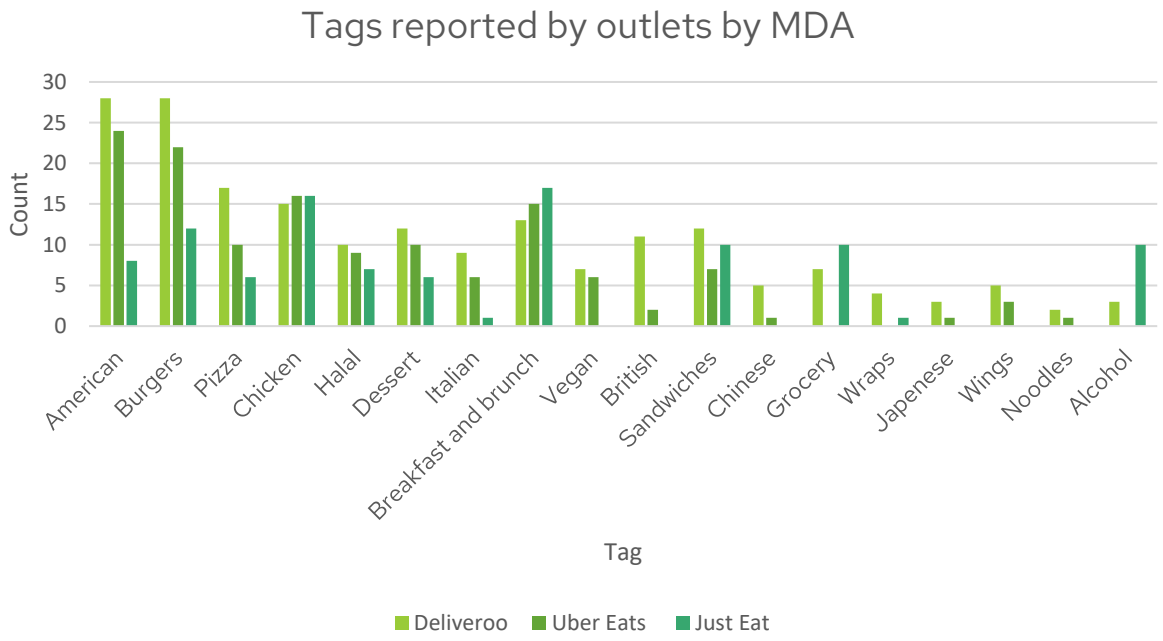


Appendices

Appendix 4: Tags reported by postcode



Appendix 5: Tags reported by MDA



Appendix 6: Outlet classification (Lake et al. 2012)

Outlet	Definition	Example
Restaurant	Sit down restaurant, waiter/waitress service.	Pizza Express, Nando's
Fast food and takeaways	Food ordered and paid for at the till, available instantly as commonly cooked in bulk in advance. Food that can be eaten without cutlery. Some seating may be available, as well as takeaway and drive-thru facilities.	McDonalds, KFC, Burger King,
Café/Coffee Shop	Predominantly coffee and hot beverages sold, informal seating area	Costa, Starbucks
Bakery	Bread and baked products prepared fresh and sold in store	Waterfield's, Greggs
Convenience store	Sells groceries, newspapers/magazines, snacks, drinks, lottery, tobacco products and sometimes pre-packed sandwiches	One Stop, Bargain Booze
Supermarket	Large, departmentalised, self-service food store selling food and household goods	Co-op, Tesco
Dessert shop	Sells predominantly desserts, milkshakes and hot drinks, seated or waiting area can be available	Heavenly Desserts

Appendix 7: Food classification

Adapted from food categories featured in the sugar and calorie reduction programmes

Burgers	Chicken, beef, fish, vegan, vegetarian, cheese
Chips and potato products	Roast potatoes, potato and sweet potato chips, fries and wedges, potato waffles, novelty potato shapes (such as smiley faces), hash browns, rostis, crispy potato slices, potato croquettes. Includes loaded fries.
Sandwiches and wraps	Sandwiches, subs and wraps
Salads	Prepared salads (main or side)
Pizza	Any size, any topping
Garlic or cheesy bread	Any size
Fried chicken	
Fried fish	
Battered and breaded sides	Cheesy bites, battered mushrooms
Breakfast cereals	
Yogurts	
Sugar sweetened cold drinks	Including ready to drink coffee with sugar, energy drinks,
Sugar sweetened hot drinks	Coffee and tea drinks prepared with added sugar and served hot
Diet/zero sugar drinks	
Unsweetened coffee and tea	
Milkshakes	
Fruit juice	
Water	
Chocolate and sweets confectionery	Bags of sweets and bars of chocolate
Crisps and savoury snacks	Crisps, salted nuts, rice cakes
Ice cream, ice lollies, frozen yoghurt	Ice cream, ice lollies, frozen yoghurt, water ices and similar frozen products.
Cakes and cupcakes	Including sweet or savoury waffles
Sweet biscuits and bars	Sweet biscuits and bars based on one or more of nuts, seeds or cereal.
Morning goods	Including croissants, pains au chocolat and similar pastries, crumpets, pancakes, buns, teacakes, scones, waffles, Danish pastries and fruit loaves
Desserts and puddings	
Ready meals	
Pasta	
Rice and noodles	
Fruit	
Vegetables	

Appendix 8: Potential dark kitchens (identified using a similar approach as Yuru et al. (2023)

Note: *This is not a foolproof method of identification, but in the absence gold standard measurement these proxy measures are helpful indicators.*

1. Does the outlet have a collection option for customers on meal delivery apps? If delivery only, potential evidence of a dark kitchen.
2. Does the outlet have any Google Reviews in which customers mention dining in? If no, potential evidence of a dark kitchen.
3. Does the outlet have a store front on Google Street View? If no, potential evidence of a dark kitchen.
4. Is the food outlet registered on the Food Standards Agency website? If no, potential evidence of a dark kitchen.
5. Is the outlet registered to an address that has multiple brands/kitchens operating out of or within i.e. 'Unit 3'? If yes, potential evidence of a dark kitchen.

Price and placement promotions on Meal Delivery Applications

Food Active insight work

About Food Active

Food Active is a healthier weight programme of work originally based in the North West of England, delivered by the public health charity the Health Equalities Group. The programme aims to address the environmental, social, economic and legislative factors that influence people's lifestyle choices and behaviours. To achieve this we take three approaches:

- **Influence Policy:** We work to influence policy to promote healthier weight at local and national level.
- **Campaigns & Tools**: We develop tools, campaigns, and training opportunities to promote healthier weight, including balanced diet and physically active lifestyles, to populations who suffer the greatest level of health inequalities.
- **Research & Partnerships**: We undertake research and develop strategic partnerships to lobby and advocate on issues pertaining to healthier weight and the impact of both the food and built environment.

Click here to follow us on socials, subscribe to our podcast and join our mailing list: https://linktr.ee/food_active

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