
Final summary report

Understanding out of home consumer food waste



In 2012, WRAP undertook a consumer survey and qualitative discussion groups to identify barriers to, and opportunities for, food and drink waste prevention in restaurants, pubs, quick service restaurants, hotels, staff restaurants and leisure venues.

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Executive summary

WRAP research published in 2012 estimated that in 2009 UK hotels, pubs, restaurants and quick service restaurants disposed of 0.6 million tonnes of food waste.¹ To help tackle this WRAP launched the Hospitality and Food Service Agreement (hereafter H&FSA) in June 2012 which aims to prevent waste by 5% and increase recycling to 70%.

In 2012 WRAP commissioned this current research to help support the H&FSA, this research aimed to:

- Identify consumer barriers to and opportunities for preventing food waste when eating out; and
- Develop research suggestions for how the Hospitality and Food Service sector could support consumers in reducing food waste out of home.

This research was designed to explore why customers leave food when eating out at restaurants, pubs, quick service restaurants, hotels, staff canteens and leisure venues in the UK. It comprised an omnibus survey, a bespoke quantitative survey of over 5,000 customers and a series of discussion groups. The tailored quantitative survey asked respondents about a single specific eating out occasion at one of the abovementioned venues within the last three months as well as a series of more general behavioural and attitudinal questions about eating.

The findings address the following research questions:

- What is the profile of customers who eat out across different venues?
- Who leaves food when eating out? On what occasions is food left? What is left?
- Why do customers leave food when eating out?
- What can be done to address food waste generated when eating out?

This executive summary now briefly addresses each of the research questions in turn.

The profile of diners

Eating out is a frequent habit for respondents. Half of respondents stated they ate out either daily or weekly.

The UK's 'eating out-of-home-public' is split evenly between men and women and, when compared to the UK population as a whole tends to be older and from higher socio-economic groups.

When examining the psychological role of eating out, respondents can be split into two categories: those that saw the meal's 'functional purpose' as fuel to keep them going (44%); and those that saw the meal as a 'collective treat' – a fun social occasion to be shared with friends, partner and/or family (55%).

Who leaves food when eating out? On what occasions is food left? What is left?

Over a quarter of respondents (27%) left food at the end of their meal. These individuals were more likely to be women and to be younger. Hotels, pubs and restaurants had bigger proportions of meal leavers than other venues.

Diners who are eating out for the social experience rather than simply to 're-fuel' are more likely to leave food at the end of their meal. Meal leavers, in the quantitative survey, and

¹<http://www.wrap.org.uk/sites/files/wrap/RSC%20Facts%20%20Figures%20for%20web%2C%2014%20Nov%202011%20final%20.pdf> WRAP is also currently working to complete this evidence base and further research will be published in summer 2013.

participants, generally in the qualitative research, perceived having a meal out to be a treat, an occasion for customers to indulge and not think about whether or what food is left.

Meal leavers are more likely to want the full meal experience and therefore will order more courses (starter, main and dessert). Almost three-quarters of non meal leavers (71%) just had a main course compared to just over half (54%) of meal leavers. As meal leavers become satiated, however, they choose to leave food rather than order less. The research suggests that meal leavers either inaccurately judge the quantity they are able to eat or are more concerned about having the social experience (of several courses) than leaving food when eating out.

The main dish and the accompanying side dishes were the courses most likely to be left; while appetisers, starters and desserts were less likely to be left. The staple foods that were reported left at the end of the meal included chips, vegetables and salad. Chips, vegetables and salad (including garnishes) are seen by some customers as plate fillers rather than part of the meal they ordered. Some do not even consider these food types, especially salad garnishes, to be actual food.

Why do consumers leave food when eating out?

Food is mainly left because portions are too big. Over half of meal leavers linked leaving food to various aspects of portion sizes. Two-fifths of meal leavers stated that one of the reasons why they had left food was because the portion was too big and one in ten stated they ordered/served themselves too much.

Meal leavers who left food because of the portion being too big were more likely to be women and older.

The majority of meal leavers knew what the portion size was going to be when ordering; only one in ten asked for information on portion size. Meal leavers do not feel a sense of ownership or responsibility over the food left, do not believe the amount of food they get is within their control and many will not ask for information on portion sizes.

The key UK headline that meal leavers felt that their meal size was too much when compared to non meal leavers is supported across the venues. This pattern is less pronounced in staff restaurants and leisure venues and slightly more pronounced when looking at restaurants and pubs

Overall, close to three-fifths of respondents are not concerned by leaving food at the end of their meal. Non meal leavers, however, seem to value food more. Amongst respondents who claimed to be concerned about leaving food, non meal leavers were more likely to show a greater degree of concern than meal leavers. Three quarters of concerned non meal leavers stated leaving food was a 'waste of good food' compared to three-fifths of concerned meal leavers.

In addition to portion size, food quality and social norms were given as reasons for leaving food.

About a fifth of meal leavers admitted some sort of responsibility for having left food; namely not liking certain things in the meal and being a fussy eater. Younger respondents were more likely to have given these reasons.

11% of meal leavers claimed that one of the reasons for leaving food was because it had not met their expectations. This included aspects like the food being of poor quality or being cold or having been badly cooked.

Meal leavers tend to be more influenced by whether others leave parts of their meal and seem to care more about how they are perceived by others than non meal leavers.

When asked directly only 11% of meal leavers gave reasons for leaving food that were related to social norms; namely that they thought it was normal to leave a bit of food and that they left food because they did not want to appear greedy. Social norms, however, seem to have a bigger role to play in explaining why customers leave food.

When respondents were asked to what extent they agreed or disagreed with the statement 'When eating out, how much I eat depends on who I'm with', nearly a quarter of all respondents agreed. Interestingly, meal leavers were more likely to agree than non meal leavers.

What can be done to address food waste generated when eating out?

When respondents were asked to suggest ideas for reducing plate waste both the quantitative and qualitative findings concur that the solution needs to be centred on offering different portion sizes.

When asked to suggest their own ideas about what could be done to help waste less food the most popular proposition was around provision of different portion sizes. Almost two-fifths of respondents stated that a potential solution to reducing plate waste was by addressing portion sizes in terms of choice, size and price

When asked about different proposed options the two most favoured were 'being given the option of smaller portion sizes for a lower price' and 'choice of larger and/or smaller portion sizes for individual part of meals' – around eight in ten respondents were in agreement with these two suggestions.

The results of the qualitative exercise conducted in the discussion groups concur with these findings as the favoured idea was to have 'smaller meals for a lower price on the menu'.

Respondents seemed to be ambivalent about doggy bags. Though over half of respondents claimed to have asked for a doggy bag in the past; two-fifths of respondents agreed with the statement 'asking for a container to take leftovers home is embarrassing'. Meal leavers (46%) were slightly more likely to agree with this statement than non meal leavers (41%). Furthermore, respondents more generally claimed to need double reassuring: that it is socially acceptable to ask for a doggy bag and that it is safe to consume its contents at home at a later date.

Suggestions from research

From a technical and behavioural perspective, the key opportunities for tackling food left at the end of a meal are around portion sizes.

From a technical point of view, signatories and partners to the H&FSA could prevent food waste by promoting and offering more choice of portion sizes in their outlets especially restaurants, pubs and hotels. Venues could offer different sized main courses as well as different sized side dishes which would give customers more choice and empower them to order 'the right amount' thereby reducing plate waste.

Eating venues could further train their front of house staff so that they are better able to talk about portion sizes with customers and provide more information on the meals (e.g. ingredients, cooking). The research findings suggest that portion sizes can, at times, be a sensitive subject so discretion and skill need to be used when communicating relevant information to customers.

WRAP's continued work with signatories to develop suitable messages around portion sizes and empowering customers to ask for more information will help reduce waste. Tools like an online resource pack where different messages tailored to the specific venue are trialled and tested could offer additional insights into which types of message wording and on what channels (e.g. on menus with/without pictographic aids, on table cards, on specials' boards, communicated by staff) work best.

Such behavioural initiatives would also benefit from a general unobtrusive awareness raising programme on the need to value food, similar to the Love Food Hate Waste campaign for food waste in the home.

Customers need to feel empowered to enquire about portion sizes irrespective of whether a venue advertises different portion sizes or not. A social norm needs to be promoted that encourages customers to ask for different portion sizes. Messages in venues (e.g. on menus, table cards, posters) could help communicate the fact that certain requests are encouraged.

By addressing the provision and communication of different portion sizes, both technically with industry and behaviourally with staff and customers, a decline in the amount of plate waste can be expected.

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1.0 Introduction and methodology

1.1 Introduction

Over the years WRAP has built up a robust evidence base which has informed both behaviour change activities (including the launch of Love Food Hate Waste (LFHW)² in 2007) and innovation on products (including packaging and labelling) to help UK households recognise and tackle the issue of food waste.

To date WRAP has not focussed on food waste generated out of home and this research aims to help address this gap and support efforts to reduce food waste when eating out.

As incomes rise and lifestyles change there is an increase in the amount of food and drink consumed outside of the home and, by extension, a likely increase in the amount of waste produced when eating out. WRAP research estimated that UK hotels, pubs, restaurants and quick service restaurants disposed of 0.6 million tonnes of food waste in 2009.³

A very small pilot study run by the Sustainable Restaurant Association (SRA) using a snapshot of 10 restaurants based in London, found that the average restaurant may produce 21 tonnes of food waste per year. Based on the number of covers of the restaurants participating in the audit, this could mean that the average UK restaurant generates nearly half a kilo of food waste per diner. While approximately two thirds was waste generated as part of food preparation, around a third of the waste audited was customer plate waste.⁴ In order to better assess the robustness of these results WRAP is currently conducting more research with bigger sample sizes to better quantify both the volume and cost of food waste produced by the hospitality and food service sector.

To tackle food waste generated out of home, WRAP has launched the Hospitality and Food Service Agreement (hereafter H&FSA) which is designed to support the sector to reduce waste and improve recycling. WRAP is carrying out research on understanding food waste arising when eating out both on the consumer side and the industry side (e.g. kitchen supply and preparation).

In 2012 WRAP commissioned this current research to help support the H&FSA, this research aimed to:

- Identify consumer barriers to and opportunities for preventing food waste when eating out; and
- Develop research suggestions for how the Hospitality and Food Service sector could support consumers in reducing food waste out of home.

1.2 Methodology

The study addressed the following research questions:

- What is the profile of customers who eat out across different venues?
- Who leaves food when eating out? On what occasions is food left? What is left?
- Why do customers leave food when eating out?
- What can be done to address food waste generated when eating out?

The main purpose of the research was to unpick the reasons why diners leave food when eating out; in order to explore these reasons the research adopted a 'people-centred

² <http://www.lovefoodhatewaste.com/>

³ See:

http://www.wrap.org.uk/sites/files/wrap/RSC%20Facts%20%20Figures%20for%20web%2C%2014%20Nov%202011%20final_0.pdf

⁴ Sustainable Restaurant Association (2010). *Too Good to Waste: Restaurant Food Waste Survey Report*.

<http://www.thesra.org/wp-content/uploads/2012/02/SRA002-SRA-Food-Waste-Survey-Full-Report.pdf> In the hospitality and food service sector plate waste refers to served food that remains uneaten by customers.

approach'. This means that the research first explored how consumers interact with food in terms of what food they buy, where, when, how they eat out and with whom. In effect respondents were asked about their overall eating out experience first. How this experience and the various related behaviours resulted in leaving food when eating out was explored as a secondary effect. The selected approach offers a window into people's ordinary lives; rather than starting with the target behaviour of wasting less food upfront which tends to result in a more primed sample and more biased findings.

The venues which were included in the research were:⁵

- Quick service restaurant (QSRs hereafter) – outlets (fast food or café) which may have take away or eat-in, or both, and where the customer pays and, generally, collects their food up front – before sitting down or leaving with their food;
- Staff restaurant – a cafeteria in a workplace where customers normally use a tray to collect the food they want, pay and then sit down;
- Restaurant – outlets with table service and where customers generally pay on departure;
- Pub – an establishment which primarily sells drinks and, therefore, food sales are less than 50% of turnover;
- Hotel – outlets which provide overnight accommodation and where food accounts for less than 50% of turnover; and
- Leisure venue – outlets which are located in places where leisure services (e.g. entertainment or recreational activities) are the prime focus of activity (e.g. a sports centre or club, a theme park, a cinema or a museum).

The research was designed to enhance the evidence base around why customers leave food when eating out at the above listed venues.⁶ Figure 1 overleaf provides details of the different research components: an omnibus⁷, a quantitative survey and a series of discussion groups.

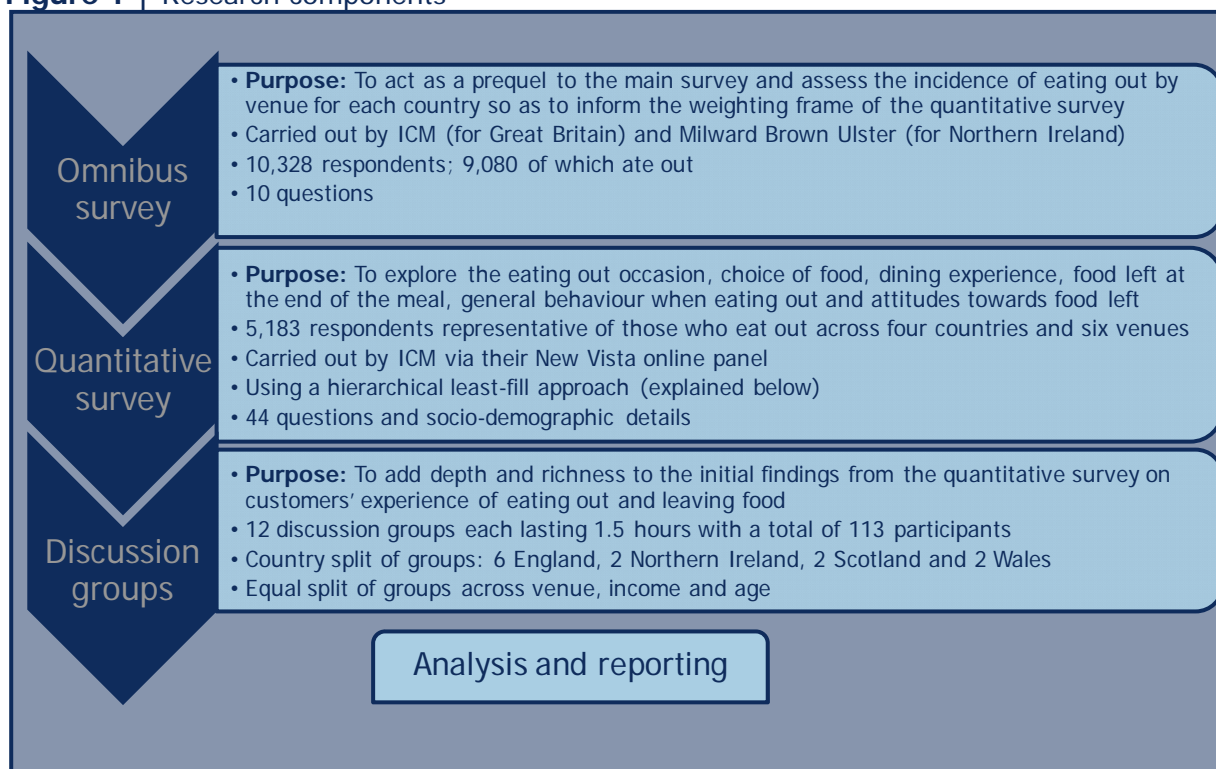
⁵ Definitions of these venues draw from Horizons' definitions:

<http://www.horizonsforsuccess.com/files/Standard%20Definitions%20and%20Terms.pdf>

⁶ Outlets in education, healthcare and Government services were excluded in this study as users of these facilities could not be surveyed in the same way (i.e. via an online survey). Respondents who eat in schools, hospitals and Government services would need to be targeted directly at specified locations as the incidence of the general population having frequented these venues in the last three months is low.

⁷ An omnibus in market research is a technique where data on different subjects are collected during the same survey. Ordinarily multiple clients will provide exclusive content for the survey but share the common demographic data collected.

Figure 1 | Research components



The main quantitative survey was conducted between May 31st and June 15th 2012. This survey was representative of the 'eating out-of-home public' in certain UK venues. Respondents were asked to recall and describe their recent (within the last three months) experience of one specific eating out occasion in a certain venue.

Approximately 80% of the questions were focused on this specific eating out occasion while the remaining 20% of questions were generic questions not linked to that particular eating out occurrence.

There are two main details of the quantitative survey which are worth noting: the hierarchical least-fill approach and the sampling.

The sampling was informed by WRAP's requirement to have equal size samples in each country (with a minimum of 1,100 in each of the nations with the exception of Northern Ireland⁸) and the need to meet target samples of 500 for each of hotels, leisure venues and staff restaurants, 875 for each of QSR and pubs, and 950 for restaurants.

To meet these target samples a hierarchical least-fill method was used in the online questionnaire. This meant that respondents were asked *'have you eaten at any of the following locations in the past three months?'* and presented with the full list of six venues: QSR, staff restaurant, restaurant, pub, hotel and leisure venue. Where respondents selected multiple eating venues priority was given to venues with the lowest known incidence from the omnibus survey (i.e. respondents were first allocated to their least 'popular' selection to ensure that all venues were filled as per the target samples). For example, if a respondent selected 'leisure venue' and 'restaurant' as venues where they had eaten in the last three months the respondent was then asked to answer the survey recalling and describing their

⁸ Given the smaller population size and the well-known issues with market research electronic panels in Northern Ireland, a sample of 750 was deemed sufficient.

last meal at the leisure venue rather than at the restaurant. This enabled the target samples of the least frequented venues (like leisure venues) to be filled first.

The research focused on the UK, drawing respondents from England, Scotland, Wales and Northern Ireland. Table 1 below shows the numbers of respondents to the online survey by venue allocation and by nation.

Table 1 | Number of respondents interviewed by venue and nation (Base: 5,183)

Venue	Count	Nation	Count
Restaurant	1,153	England	1,749
Quick service restaurant	1,103	Wales	1,366
Pub	1,098	Scotland	1,251
Hotel	627	Northern Ireland	817
Leisure venue	612		
Staff restaurant	590		

The venue target quotas originally set were exceeded because additional interviews were conducted to ensure robust sample sizes for gender and age brackets across each of the venues.⁹

The data used in this report have been weighted to be representative of the UK eating out population¹⁰ and the specific venue's eating out population. The following factors were used in developing the weighting frame:

- Socio-demographics (gender, age, employment status, socio-economic group);
- Nation; and
- Venue allocation and incidence.

The survey data was first processed by running a question-by-question topline of the results split by meal leavers and non meal leavers. From emerging patterns, correlations and differences in these results a cross break specification was drawn up listing all the variables selected to form the table columns. A cross break specification allows for the cross-sectioning of data from the individual questions and answer options which in turn allows for comparison. Cross breaks for this study included standard socio-demographic variables such as gender and age and many other variables derived from survey questions such as whether respondents left food or not, what type of meal they had, who they ate with and whether they were concerned about leaving food.

ICM Research, who carried out the survey fieldwork, used the software Quantum provided by IBM SPSS to run tables as per the specified cross breaks. They also conducted t-tests on column proportions to establish whether two answers in a cross break set are significantly different¹¹ from each other based on the normal distribution. Each t-test was conducted on independent variables derived from the cross breaks and accounted for the 5% risk level that an event occurred by chance. This significance testing was conducted at a UK level, country level and venue level using the relevant different weighting frames. Additional analysis on the quantitative data was conducted using standard descriptive statistics like

⁹ These additional interviews were conducted in September – October 2012.

¹⁰ The impact of the weighting was accounted for when undertaking statistical testing. For the purposes of statistical significance, an effective base is an indicator of the impact of the weights on the sample. In this UK eating-out-of-home population sample, given the three types of weighting variables, the effective base is 1,970. The weighting efficiency is the ratio of the effective base (1,970) to the sample (5,183). The weighting efficiency for this sample is 38%.

¹¹ Measuring the likelihood that an event occurs by chance is the idea behind 'statistical significance.' If there is, at most, a five per cent chance (or expressed as 'at the 95% confidence level') that two events would happen together it can be inferred that there is a reason that the events occurred together – a pattern or correlation is present.

multi-variable generation, cross-tabulations and frequencies.¹² Throughout this report where there was a statistical difference between two numbers greater than 5% this has been noted in the text.

Qualitative data was collected via notes from the facilitators after each discussion group and analysis of verbatim transcripts via researcher coded Excel spreadsheets.

This report draws on both the quantitative and qualitative data¹³ to summarise the UK findings on:

- The profile of diners;
- Leaving food after a meal out;
- Portion sizes;
- Doggy bags; and
- What can be done to help reduce plate waste?

The next chapter on the profile of diners sets the scene by presenting the type of people who eat out before exploring who leaves food, what food is left and why in Chapter 3. The subsequent two chapters explore participants' experience of and attitudes towards portion sizes and doggy bags. Before the summary and suggestions, the penultimate chapter is dedicated to investigating what can be done to help reduce plate waste.

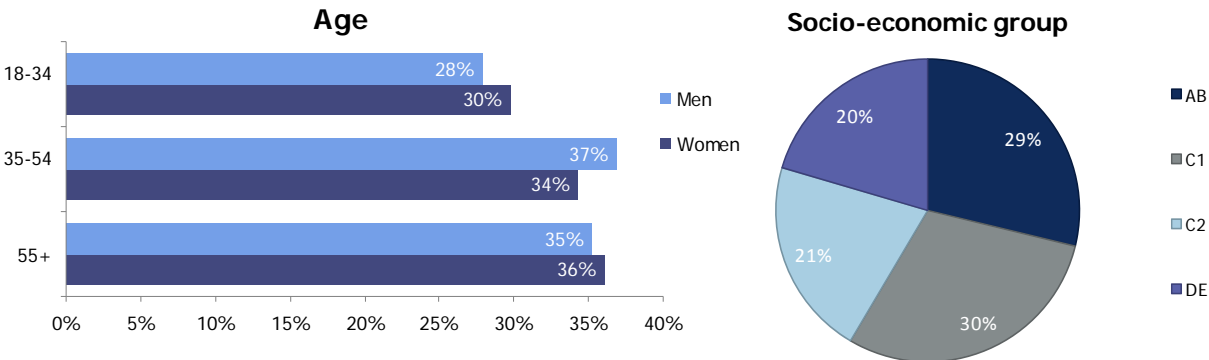
2.0 The profile of diners

2.1 Characteristics of those who eat out

Eating out is a frequent habit for respondents. Half of respondents (51%) stated they ate out either daily (12%) or weekly (39%), while three in ten (29%) said they ate out monthly.

The profile of those who eat out is presented in Figure 2 below. The UK's 'eating out-of-home-public' is split evenly between men and women and, perhaps unsurprisingly, when compared to the UK population as a whole tends to be older and from higher socio-economic groups (AB and C1).¹⁴

Figure 2 | Profile of those who eat out (Base: 5,183)



¹² For more information on t-tests in SPSS see Chapter 9 in Field, A (2009). *Discovering Statistics: Using SPSS*. Sage Publications.

¹³ Quotes from discussion groups are used to support quantitative and qualitative data in this report. Quotes have the gender, age and location of who said them. Quotes from a dialogue are preceded by a 'W' for woman or an 'M' for man.

¹⁴ Socio-economic groups divide the population into different categories, based on the occupation of the head of the household. The groups are defined as follows: A- Higher managerial, administrative, professional e.g. Chief executive, senior civil servant; B - Intermediate managerial, administrative, professional e.g. bank manager, teacher; C1- Supervisory, clerical, junior managerial e.g. shop floor supervisor, sales person; C2 - Skilled manual workers e.g. electrician, carpenter; D- Semi-skilled and unskilled manual workers e.g. assembly line worker, refuse collector; and E - Casual labourers, pensioners, unemployed.

When asked which venues they frequented in the past three months the majority of respondents had eaten at restaurants (82%), QSRs (74%) and pubs (68%). Only a quarter had eaten at a hotel (24%), less than a fifth at a leisure venue (17%) and only 13% had eaten at a staff restaurant. The majority of respondents were describing either a lunch (46%) or an evening meal (36%) they had consumed in the last two weeks (59%).

The type of meal (e.g. breakfast, lunch, snack or evening meal) consumed was inextricably linked to the venue frequented by respondents. Across the venues, however, lunches and evening meals were the most described. In QSRs and leisure venues, snacks were also mentioned and in hotels, breakfasts were also described by a sizable minority of respondents.

2.2 Characteristics of the eating out occasion

When it comes to the psychological role of eating a meal out, respondents can be split broadly into two categories: those that saw the occasion as a 'function' - where the food is seen as fuel to keep them going (44%); and those that saw the meal as a 'treat' - where the food is seen as a fun, social occasion shared with friends, partner and/or family (55%).

M: "I think going out for a meal is more than going out for a meal it's a social thing.

W: A social event.

M: It's a combination of the company, the food, the service, the ambience, the whole package."

Dialogue, 55+, York

"It's a social thing. I enjoy going out for something to eat with friends, like on a Sunday we all go for a roast or something like that, altogether."

Woman, 18-34, London

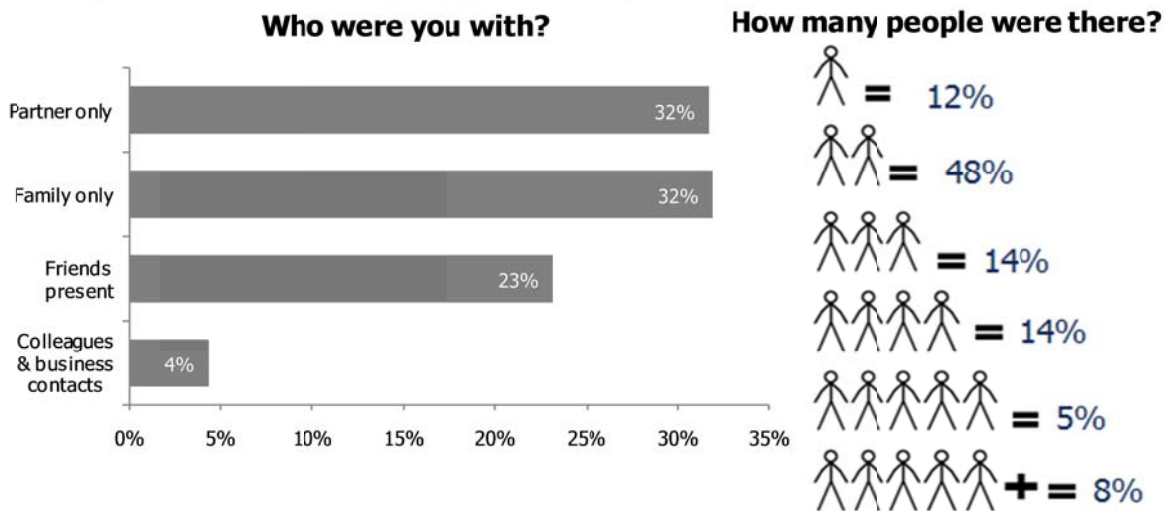
Over a quarter of respondents (28%) spent up to 30 minutes over their meal. About half (53%) spent between 30 minutes to 1.5 hours over their meal while around a fifth (19%) spent more than 1.5 hours over their meal.

The majority of respondents (72%) stated they were already familiar with the menu before visiting the venue.

Furthermore, 69% of respondents claimed they had eaten in the same venue before and an additional 11% stated they had eaten in another venue of the same chain. Overall, this means that diners tend to be familiar with both the venue and the menu prior to having their meal out.

Eating out was most likely to happen in the company of one other person (48%) and often this was a partner, husband or wife. Almost half of respondents (49%) had eaten out with their partner, husband or wife and close to a third (32%) had eaten out *only* with their partner, husband or wife. Figure 3 illustrates the detail of who people eat out with.

Figure 3 | Eating in company (Base: 5,183)



When it came to rating their meal experience for quality (ingredients, cooking and presentation), taste, size of portions, quality of service and value for money, on average, approximately three quarters of diners felt their experience was positive. 82% rated their meal as good when it came to taste and 80% when it came to the size of portions. Respondents on the whole are pleased with their dining experience.

Diners at staff restaurants and leisure venues seemed slightly less satisfied with their meal as satisfaction levels drop to around half.

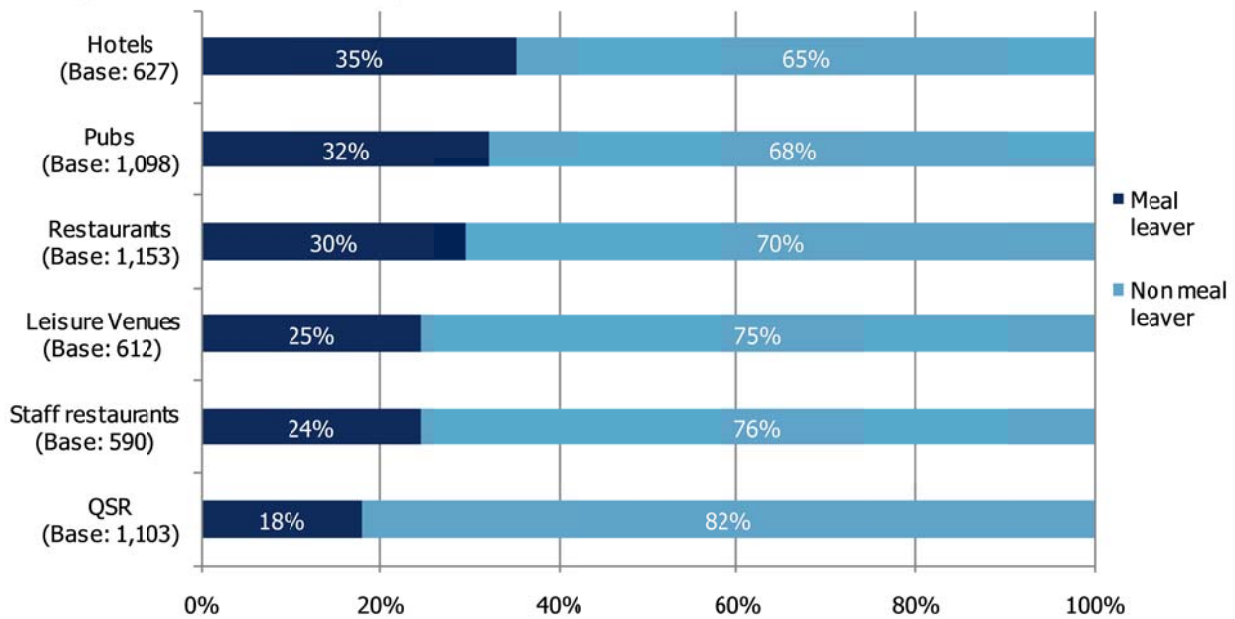
3.0 Leaving food after a meal out

3.1 Customers who leave food

The main purpose of the research was to unpick the reasons why diners leave food at the end of their meal. To this end respondents were classified into two categories: 'meal leavers' and 'non meal leavers'. Those that stated they left part of their meal/food at the end of their meal were classified as 'meal leavers' and those that claimed they did not leave food at the end of their meal were categorised as 'non meal leavers'¹⁵. Overall 27% of diners were classified as meal leavers. The graph in Figure 4 overleaf shows how meal leavers are distributed across venues.

¹⁵ It is worth clarifying that 'meal leavers' did not necessarily leave a meal but different types of food making up part of their meal.

Figure 4 | Meal leavers by venue (Base: 5,183)



Hotels, pubs and restaurants had bigger proportions of meal leavers than other venues. As explored in the following sections this pattern suggests that diners who are enjoying a meal out in a social setting are more likely to waste food than diners who are simply eating out to 're-fuel'. That a diner eating at a hotel is more likely to be a meal leaver may also be linked to the fact that food is often included in the room package and not paid for separately, thereby encouraging the mindset that a customer is not technically paying for it directly.

When eating out in QSR, staff restaurants and leisure venues, diners are more likely to be able to choose different portion sizes and presumably less likely to leave food.

A meal leaver can be anyone. At the UK level, meal leavers were more likely to be women (59%), more likely to be young (39% were 18-34 year olds) and more likely to be of socio-economic group ABC1 (62%). The profile of those who leave food is very dependent on the profile of diners in a particular venue. The table overleaf outlines the make-up of diners and meal leavers in particular venues.

Table 2 | Diner profile and meal leaver profile by venue¹⁶

	Gender		Age		
	Men	Women	18-34	35-54	55+
Restaurant diners (Base: 1,153)	48%	52%	28%	38%	34%
Restaurant meal leavers (Base: 341)	39%	61%	38%	23%	39%
Pub diners (Base: 1,098)	51%	49%	29%	36%	36%
Pub meal leavers (Base: 355)	46%	54%	42%	30%	27%
QSR diners (Base: 1,103)	48%	52%	33%	38%	28%
QSR meal leavers (Base: 197)	33%	67%	39%	32%	28%
Hotel diners (Base: 627)	54%	46%	30%	33%	38%
Hotel meal leavers (Base: 221)	47%	53%	40%	29%	30%
Leisure venue diners (Base: 612)	50%	50%	42%	36%	22%
Leisure venue meal leavers (Base: 150)	52%	49%	46%	45%	9%
Staff restaurant diners (Base: 590)	57%	43%	46%	42%	11%
Staff restaurant meal leavers (Base: 144)	63%	38%	58%	33%	9%

The overarching narrative at the UK level is supported by the detail behind each venue. Women are more likely to leave food at the end of their meal across most venue types (except at leisure venues and staff restaurants). Similarly, there is a stronger propensity for younger customers (18-34 year olds) to be meal leavers across all venues. Older customers are less likely to leave food at the end of their meal. Meal leavers in leisure venues and staff restaurants have a less distinct age profile and may come from all age brackets with the exception of those over 55 years of age, potentially because they are less likely to frequent these venues.

Those who left food at the end of the meal described in the questionnaire were more likely to snack or graze during the day generally. 58% of meal leavers claimed to snack or graze often compared to 50% of non meal leavers.

Furthermore, respondents who had left food on this occasion were also more likely than others to leave food generally. For example, 27% of meal leavers stated that they often left food when eating a meal cooked at home compared to 18% of non meal leavers – this difference is statistically significant. This continues to be true when eating out generally. Close to a fifth of meal leavers (18%) stated that they often left food when eating a meal

¹⁶ If row percentages do not add up to 100% this is due to rounding. Given the small base of meal leavers in some venues, some percentages may only represent a small number of respondents and should be used with caution. Cells highlighted in light blue equate to less than 100 respondents; cells highlighted in dark blue with a white font equate to less than 50 respondents.

out served at the table (not bought at a counter or self-service) compared to only 3% of non meal leavers.

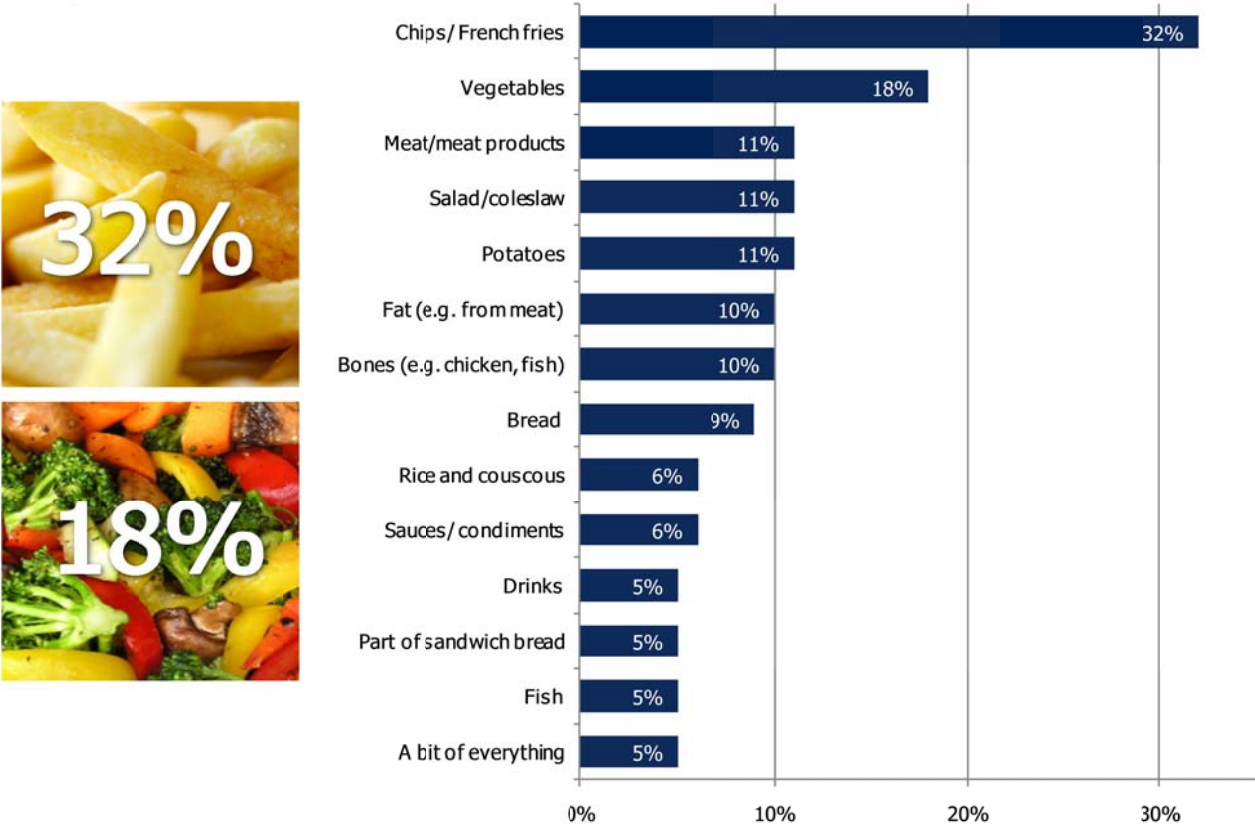
3.2 What food is left?

The main dish and the accompanying sides are the parts of the meal which get left. Customers seem to assess costs, value and what they actually ordered/want/paid for to decide whether and what part of their meal they want to leave. Mains appear to be sacrificed to leave space for dessert and for being too full from having eaten the starter. Almost two thirds of meal leavers (63%) said they left part of their main meal and nearly a fifth (17%) stated they left part of their side order.

Almost half (46%) of meal leavers ordered more than just the main course compared to less than a third of non meal leavers (29%). Those that left food at the end of their meal mainly stated leaving chips (32%) and vegetables (18%). Figure 5 below lists the different food types left at the end of the meal.

The story of what gets left is similar across the venues, though chips are even more likely to be left in QSRs (45%) and pubs (38%).

Figure 5 | Food left (Base all those who left food: 1,387)¹⁷



The quantitative findings are supported by the qualitative insights where participants stated that they tended to leave carbohydrates (mainly chips, potatoes, rice and bread), vegetables, salad and garnishes. These tended to be food types that were not directly ordered but came automatically with their meal; participants did not consider these food types to be the main part of their meal.

¹⁷ All food types that were mentioned by 5% of meal leavers or more have been included in the graph. Source of photos: www.istockphoto.com

"They're [chips] not the central; they're not the part of the dish that made you pick that dish generally. You don't think steak and chips, I'm having that because of the chips and that that comes along with it, that's extra."

Man, 18-34, Norwich

M: "I prefer to eat the meat and leave your veg and chips you know."

W: That's what I do too."

Dialogue, 34-54, Belfast

"I always leave the grass."

Man, 18-34, Norwich

Chips, vegetables and salad are seen by customers as 'plate fillers' rather than part of the meal they ordered. Some participants did not even consider these food types, especially salad garnishes, to be intended for consumption.

"In restaurants you order a meal and it's the chips or the rice or whatever is piled on to sort of fill the plate up and so you actually get a bit disappointed because you can't finish them."

Woman, 35-54, London

"I'd leave the salad if it looked, you know like when people they put like a main together and they'll put salad just for kind of decoration but it doesn't look too appealing, I wouldn't eat it just for the sake of the fact that it's on my plate."

Woman, 18-34, London

"The lettuce leaves some people see it as garnish as opposed to something you can actually eat."

Woman, 18-34, Norwich

Despite diners leaving sides of chips, vegetables and salad, when asked to what extent they agreed or disagreed with the statement 'I prefer side orders (e.g. portion of chips, side of salad) to be included in the price of my main meal' the majority agreed (69%).

In the majority of cases only small portions of the serving were left, with the exception of instances where the serving was deemed to be too large or if it was not liked. In some cases the bulk of a dessert or starter may be left. The findings from the qualitative research suggest that this may be due to not being able to forfeit the idea of having 'something sweet'. With regards to starters some mentioned leaving a large amount when they are planning to eat a large main.

"I would always order a dessert but I may only need that wee bit of something sweet."

Woman, 35-54, Belfast

"...Because I'm so full from a main meal but I can't resist that pudding."

Woman, 55+, York

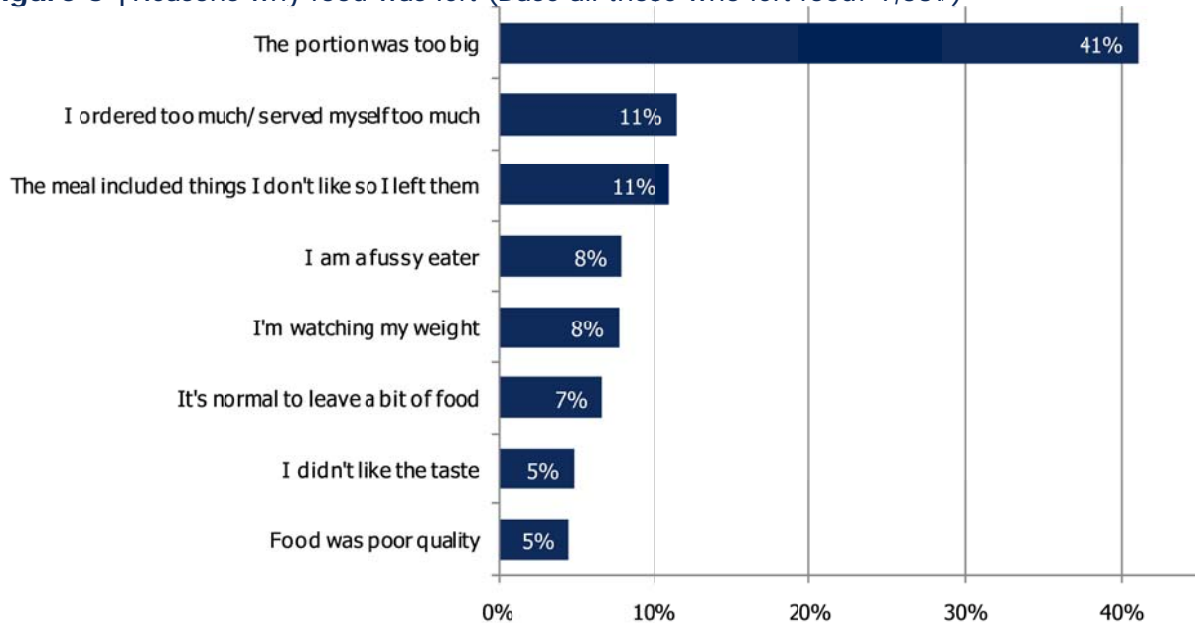
Chips, vegetables and salad tended to get left because they were not considered to be "proper food" or the main part of the meal; and also because they were the cheapest part of the meal. Participants tended to make a judgement about the value of the different meal components and stated that leaving chips, vegetables and salad did not make them feel too guilty, especially because these tended to be the least expensive part of the meal.

“But I think people tend to leave the veg and potatoes more than anything else because that’s [the] cheapest part of the meal and you don’t feel so guilty when you leave that. You tend to eat the main part, the fish, the meat or vegetarian and then if you’re full I tend to leave the veg and potato because that is the cheaper part.”
 Woman, 35-54, Cardigan

3.3 Why is food left?

The portion being too big was by far the main reason given directly for leaving food (41%). The graph in Figure 6 illustrates the reasons for leaving food.

Figure 6 | Reasons why food was left (Base all those who left food: 1,387)¹⁸



These reasons can be further grouped into responses relating to portion size, food quality and social norms (including health concerns).

Portion size

Over half of meal leavers (53%) linked leaving food to various aspects of portion sizes. Two-fifths (41%) of meal leavers stated that one of the reasons why they had left food was because the portion was too big and 11% stated they ordered/served themselves too much. Meal leavers who left food because of the portion size were more likely to be women and older.

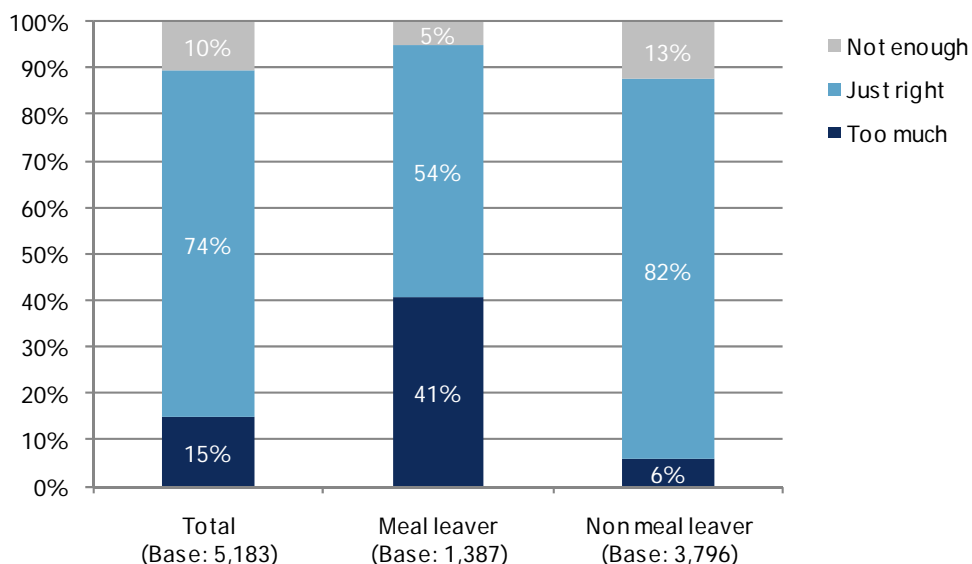
When comparing responses across venues the proportion of meal leavers stating they left food because of portion sizes is greater than the UK total (53%) in restaurants (59%), QSRs (58%) and pubs (55%).

Perhaps unsurprisingly, more meal leavers compared to non meal leavers found their meal to be too large (Figure 7 overleaf). 41% of meal leavers felt that the size of their meal overall was 'too much' compared to only 6% of non meal leavers. Non meal leavers were by and large (82%) likely to say that their meal was 'just right' compared to just over half of meal leavers (54%).

*M: “They give you too much.
 W: Or if you order too much.”*
 35-54, Belfast

¹⁸ Reasons have been grouped. The graph only shows all categories given by 5% or more of respondents.

Figure 7 | Perception of overall meal size¹⁹



The key UK headline that meal leavers felt that their meal size was too much (41%) when compared to non meal leavers (6%) is supported across the venues. This pattern is less pronounced in staff restaurants and leisure venues and slightly more pronounced when looking at restaurants and pubs.

This pattern is also supported when comparing how full meal leavers and non meal leavers felt at the end of the meal. Two-thirds (67%) of meal leavers stated they were full at the end of the meal compared to only one third (33%) of non meal leavers. Only 28% of meal leavers stated they felt neither full nor hungry at the end of their meal compared to 55% of non meal leavers.

Again this pattern of meal leavers feeling more satiated than non meal leavers is sustained across the venues. It is worth noting that it is particularly acute in pubs and restaurants where 74% of meal leavers felt full; compared to 41% and 37% of non meal leavers respectively.

Leaving food because the portions were perceived to be too big often came up in the discussion groups. Overly large portions were given as a reason for leaving food more often when eating in pubs or when eating what was considered low quality food. In addition, participants who stated that the reason they left food was because the portion was too big were often older.

Food quality

Food quality was given as a reason for leaving food. This encompasses both the personal 'I'm a selective eater' angle (where the responsibility is perceived to lie mainly with the customer) as well as the 'food did not meet my expectations' angle (where the responsibility is thought to lie with the venue).

About a fifth of meal leavers (21%) admitted some sort of responsibility for having left food; namely not liking certain things in the meal (11%) and being a fussy eater (8%). Younger respondents were more likely to have given these reasons.

Approximately one in ten meal leavers (11%) claimed that one of the reasons for leaving food was because it had not met their expectations. This included aspects like the food being of poor quality or being cold or having been badly cooked.

¹⁹ Those that stated 'don't know' have not been presented in the graph therefore percentages may not add up to 100%.

In staff restaurants and leisure venues more meal leavers felt that the food did not meet their expectations (27% for restaurants and 22% for leisure venues compared to 11% overall).

“With fast food in particular...food just doesn't taste nice after 15, 20 minutes or so the chips are cold, they're just a bit rubbery and it's dry, so the food quality isn't as nice which is why I think a lot of people leave it.”
Woman, 35-54, London

“In terms of the bun or the crust or something it's the bit that's filling but doesn't taste all that so you leave that to make sure you've got room for the stuff that tastes good.”
Man, 18-34, Norwich

Social norms

Health and other reasons were given as grounds for leaving food by 14% of meal leavers; this includes 8% stating that they are watching their weight. When asked directly only 11% gave reasons for leaving food that were related to social norms; namely, 7% thought it was normal to leave a bit of food and 3% did not want to appear greedy. Beneath the surface, however, social norms seem to have a bigger role to play in explaining why customers leave food.

Overall around a fifth (22%) of respondents said that other people in their party left food at the end of the meal. However, this increases to almost two-fifths (39%) when looking at meal leavers and decreases to three in twenty (15%) when looking at non meal leavers.

The qualitative insights support the finding that social norms can explain part of the reasons why customers leave food. Participants stated that whether you are dining with people you feel comfortable or not influences what you order and whether you leave food.

“If I'm with people I don't know I feel I've got to eat really sensibly. I will have room to fit it in but then I don't want to finish my plate completely because they'll think oh fatty.”
Woman, Norwich, 18-34

“I think if you're out with family, whether there's children or your parents or your brother or sister, whatever, I think you talk more about and you'll say don't order extra I couldn't eat it, but if you're out with colleagues or friends or something it's not really your place to tell them what they can or if it's maybe going to be too much for them.”
Woman, 35-54, Belfast

When respondents were asked to what extent they agreed or disagreed with the statement 'When eating out, how much I eat depends on who I'm with', nearly a quarter of all respondents agreed (23%). Interestingly, 28% of meal leavers compared to 21% of non meal leavers agreed - this difference is statistically significant.

Furthermore, when respondents were asked to what extent they agreed or disagreed with the statement 'When I eat out, I'd rather leave food than appear to be greedy', overall just over one in ten respondents agreed (13%). However, only 11% of non meal leavers agreed compared to 19% of meal leavers - this difference is statistically significant.

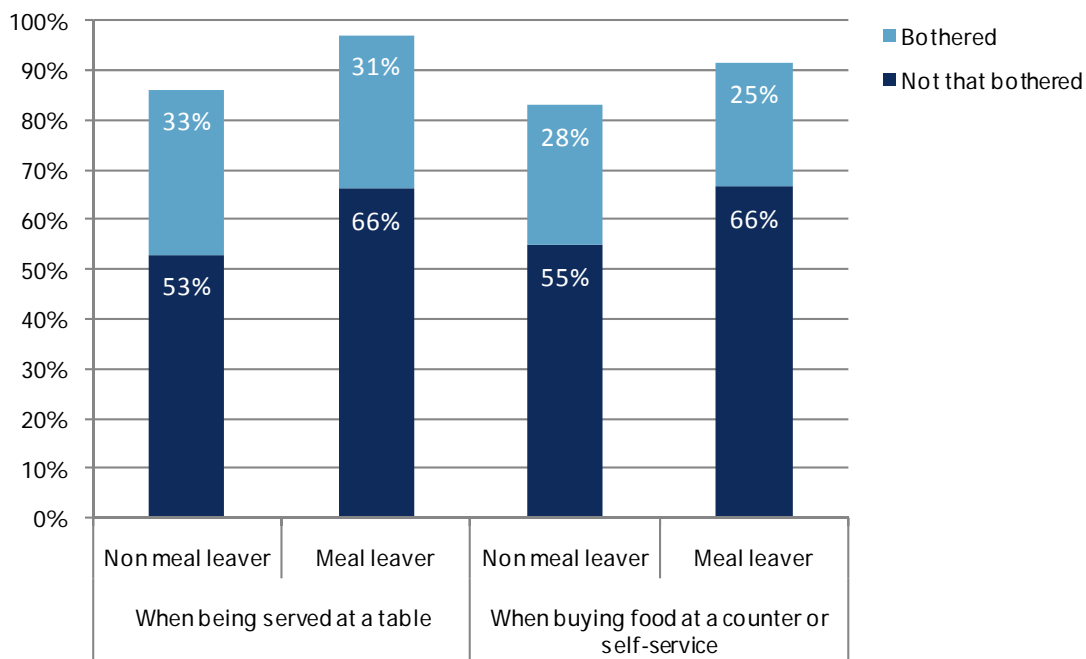
Meal leavers seemed to be more affected by what others do and how others perceive them when eating which appears to, in part, explain why they left food at the end of their meal.

3.4 Feelings and attitudes towards food waste

Overall, close to three-fifths of respondents are not concerned by leaving food at the end of their meal – 56% are not that concerned when being served at the table and 58% when buying food at a counter or self-service.

Figure 8 illustrates how meal leavers' and non meal leavers' perceptions on leaving food differ. The difference between the meal leavers and non meal leavers with regards to not being that concerned about leaving food is statistically significant in both eating situations (when being served at the table and when buying from a counter or self-service).

Figure 8 | Extent to which respondents are bothered by leaving food (Base: 5,183)²⁰



When asked why they were bothered²¹ respondents mainly stated that leaving food was 'a waste of good food' (72%) or 'a waste of money' (72%).

Meal leavers who stated they were bothered about leaving food were less bothered about these factors when compared to non meal leavers who stated they were concerned about food waste. Three quarters of 'bothered' non meal leavers (76%) stated 'It's a waste of good food' compared to three-fifths (62%) of 'bothered' meal leavers – this difference is statistically significant. The same pattern is true for 'It's a waste of money' where 76% of 'bothered' non meal leavers offered this reason compared to 63% of 'bothered' meal leavers again this difference is statistically significant.

Two-fifths of those that are not bothered²² stated that this was either because they 'would rather leave food than eat too much (feel ill/put on weight)' (39%) or because they 'paid for it so it's up to me if I want to leave some food' (38%). Meal leavers who were not bothered were slightly more likely to give these reasons than non meal leavers who were not bothered.

²⁰ Bothered in this instance is defined by respondents who selected that they were bothered 'a great deal' and 'a fair amount' by leaving food at the end of a meal. 'Not that bothered' in this instance is defined by respondents who selected that they were bothered 'a little', 'not very much' and 'not at all' by leaving food at the end of a meal. Percentages do not add up to 100% because respondents who selected 'never leave food' or 'not applicable' have been excluded from the graph.

²¹ Those routed to this question included all respondents who selected either 'a great deal', 'a fair amount' or 'a little' when asked 'how much, if at all, does it bother you if you leave food at the end of a meal'.

²² Those routed to this question included all respondents who selected that they were bothered 'not very much' or 'not at all' when asked 'how much, if at all, does it bother you if you leave food at the end of a meal'.

The qualitative insights support the survey results. When discussion group participants were asked about their feelings around food waste there was a lot of indifference and some elements of feeling guilty over leaving food. Some mentioned feeling 'bad' mainly because they thought leaving food was 'wasteful' - a 'waste of money' or a 'waste of effort' (e.g. in cooking or preparation).

W: " You think the restaurateur would notice wouldn't you [if a lot of food was being wasted].

W: He would say 'I'd rather people go from here full' but we go from here feeling guilty because there's always food being wasted."
Dialogue, 35-54, Cardigan

"Because someone has spent time cooking it and it's just wasted. It's just a waste."
Woman, 18-34, Norwich

Three-quarters of respondents (74%), in principle, agreed with the statement 'We should all try harder not to waste food when we eat out'. The bottom line, however, is that the majority of diners do not want to think about food waste when they are enjoying a meal out. When eating out the issue of food waste is not something which is front of mind and customers do not want to engage with it. Three-fifths of respondents (59%) agreed with the statement 'I don't want to have to think about leaving food when I eat out'.

"I think as long as I'm full or happy with what I've had, I've enjoyed it, if I leave some then I leave it."
Woman, 18-34, Norwich

Both the qualitative and quantitative research suggests that diners still remember being taught to clear their plate and believe it is part of their cultural upbringing. Overall, three-fifths (61%) of respondents agreed with the statement 'When I eat out I always like to clear my plate'. Unsurprisingly two-thirds of non meal leavers (66%) agreed with this statement compared to close to half (47%) of meal leavers – this difference is statistically significant.

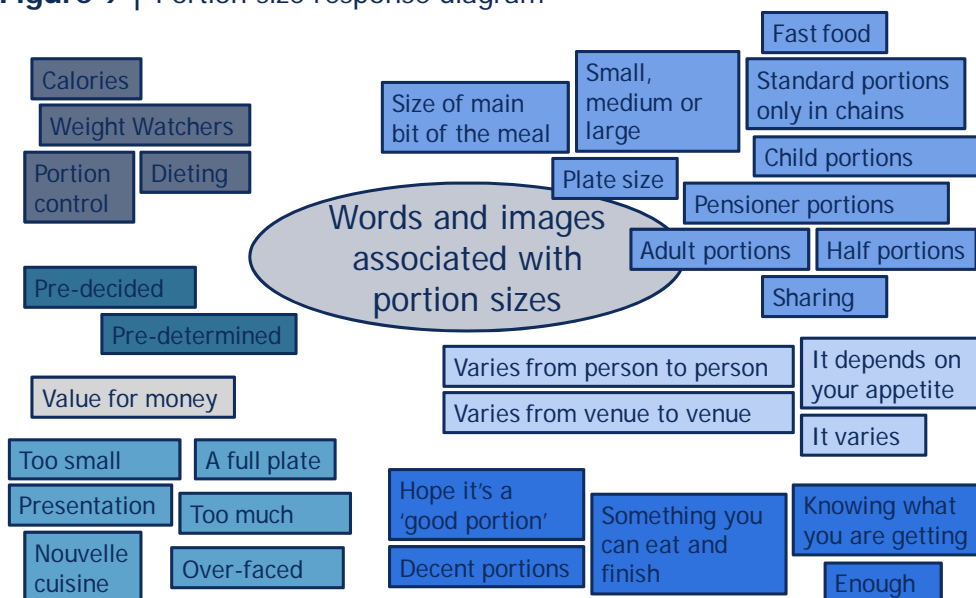
"I was always taught by my parents, you must eat it it's a waste if you don't eat your food they would say to me so that's probably where I get that from."
Man, 18-34, Norwich

4.0 Portion sizes

4.1 How is the term portion size understood?

As portion size featured so prominently in the quantitative research it was probed at length in the qualitative research in an attempt to better understand its importance. The image in Figure 9 overleaf represents the different words, language and images which discussion group participants used when asked what 'portion sizes' means to them.

Figure 9 | Portion size response diagram²³



Overall, portion size was understood as the physical size of the meal and the choice of different sized servings (e.g. small, regular and large at fast food outlets). There was a desire and appreciation for more choice of different sized portions across all venues (e.g. child portions or pensioner portions).

"...I think they should have like a small medium or large just like if I went out for a meal with you, you eat a lot of food whereas I don't, so obviously I'd order the small one and then you could order the large one and you're going to eat it all."
 Woman Norwich 18-34

Participants stated that in pubs, in particular, portions tended to be too big but that this often was seen as an indicator of a good meal or good value for money. Conversely there was a sense that at high end restaurants, serving nouvelle cuisine, the portions were often too small and did not represent good value for money.

Participants felt that portion sizes were often pre-determined for them and not something customers could exert control over (with the exception of staff restaurants or buffets where you serve yourself). Participants seemed frustrated that there was not more standardisation across venues when it came to the size of portions. There was, however, a sense that this was not an easy feat for venues as each customer will have a different sense of what constitutes the correct portion size.

Generally, the term 'portion size' made participants think of the size of the serving which would be 'right for them'. The term 'portion size' also made certain participants, often men, desire a 'decent sized' serving. Other participants, mainly women, associated the term with dieting.

4.2 Portions are too big

It is worth remembering that, as discussed in Section 3.3, the main reason for leaving food given by meal leavers was that the portion was too big (41%). Overall, 15% of respondents stated that the size of their meal overall was too much. When looking at meal leavers,

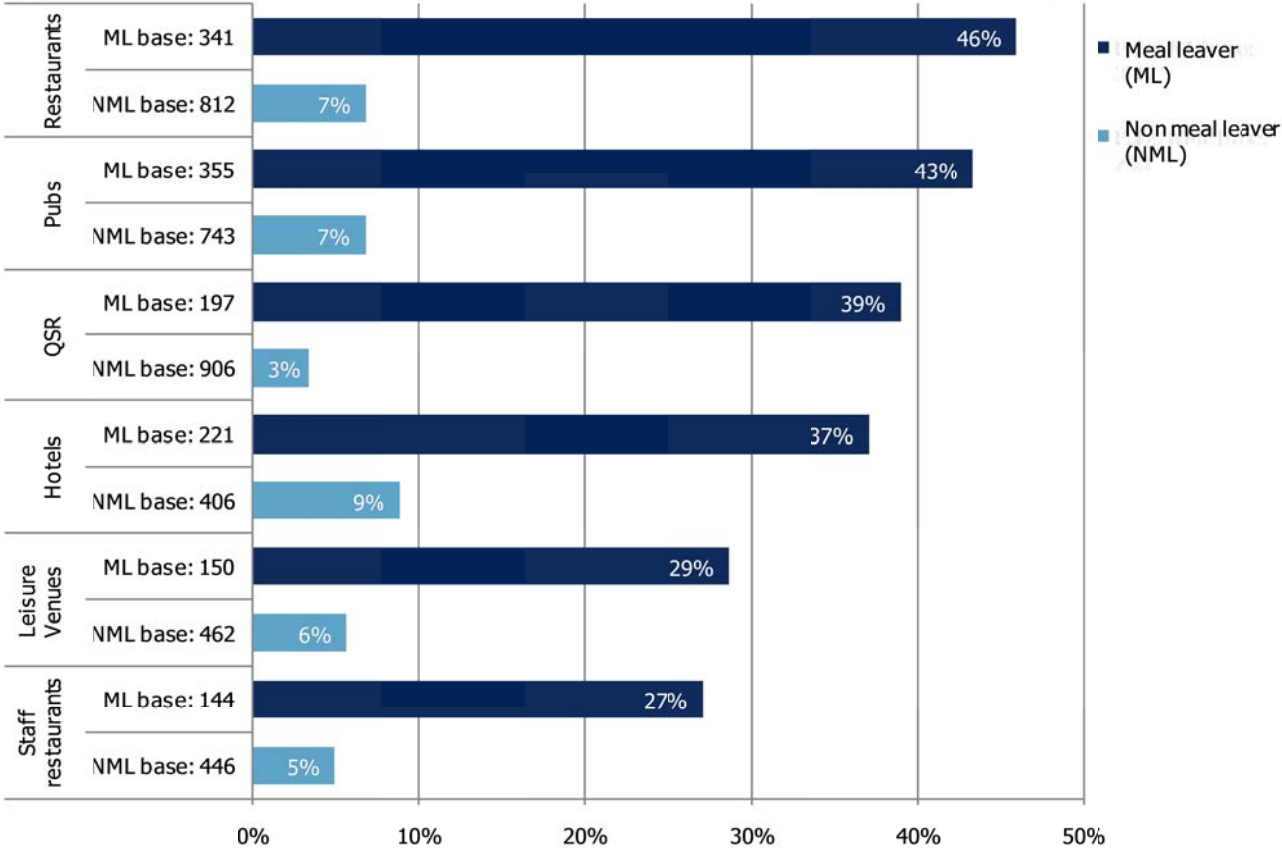
²³ The seven colours represent the different groupings of words used by participants from top left clockwise: (1) Health and diet words; (2) Desire/appreciation of different portion sizes; (3) Portion size variation and lack of standardisation; (4) Portion size should be just right and meet the customer's expectations; (5) Physical size can be too big and too small depends on venue; (6) Value for money; and (7) Portion sizes are not something that customers can control.

however, this increases to two in five respondents (41%) stating that their meal was too much compared to only one in twenty (6%) of non meal leavers. While 54% of meal leavers claimed that the size of their meal overall was 'just right' despite having left some of it.

This pattern holds true across the six different venues with meal leavers finding portion sizes too large particularly in restaurants and pubs. Figure 10 overleaf illustrates the proportion of meal leavers and non meal leavers that found the meal size overall too much across each venue.

Those that found the portions too big tended to be those that left food at the end of the meal. Diners, as described in Section 3.1, who left food at the end of the meal and found the size of the meal to be too much, tended to be women and of the younger age brackets. In venues where the share of meal leavers was larger (hotels, pubs and restaurants), older people (over 55) also claimed that the size of the meal overall was too much.

Figure 10 | Meal leavers and non meal leavers that found the meal too much by venue²⁴



In addition to finding the overall size of the meal to be too much, diners who ate in pubs (52%), restaurants (48%) and hotels (49%) were more likely to feel full at end of their meal compared to diners who ate in quick service restaurants (33%), leisure venues (32%), and staff restaurants (30%). Furthermore, three quarters of meal leavers in pubs (74%) and restaurants (74%) claimed to be full at the end of their meal.

It would be fair to conclude that portion sizes for meal leavers (who tend to be women and younger) eating particularly in pubs, restaurants and hotels are too large. Given that 69% of respondents (70% of non meal leavers, 65% of meal leavers) when ordering claimed to know the size of the portion, however, part of the explanation has to be a customer's inaccurate judgement or unwillingness to ask for something different.

²⁴ All percentages in this graph represent less than 100 respondents except for meal leavers in pubs and restaurants.

When asked whether respondents had ever done any of the following about a third of meal leavers (35%) stated they had asked for advice on portion size compared to less than three in ten (27%) of non meal leavers – this difference is statistically significant. When it came to asking for a smaller portion about two-fifths (42%) of meal leavers had asked for a smaller portion compared to less than three in ten (27%) of non meal leavers - this difference is statistically significant.

Meal leavers are also significantly more likely to have let someone else help them finish their food. 71% of meal leavers compared to 55% of non meal leavers – this difference is statistically significant.

Table 3 below illustrates what different meal components meal leavers consumed compared to non meal leavers. The figures suggest that non meal leavers are not particularly good at judging how many courses they are able eat or that they prioritise having the 'full eating out experience' over leaving some food at the end of the meal.

Table 3 | Courses ordered²⁵

Meal component	Total (Base: 4,867)	Meal leaver (Base: 1,306)	Non meal leaver (Base: 3,561)
Starter, main and dessert	11%	15%	9%
Starter and main	11%	15%	9%
Main and dessert	12%	15%	12%
Main only	66%	54%	71%



Almost three-quarters of non meal leavers (71%) just had a main course compared to just over half (54%) of meal leavers. This would suggest that meal leavers are also more likely to order more than a single course.

*W: "You're ordering a starter and then a main course and you can't eat your main course.
M: And then you always make room for a pudding."
18-34, London*

*"Yes, I never eat all my dessert."
Woman, 35-54, Belfast*

4.3 Knowledge and experience of portion size

Over two-thirds (69% in total: 70% of non meal leavers; 65% of meal leavers) of diners claim they already know the portion size of their meal when ordering. Despite this familiarity, 41% of meal leavers state that the reason they left the food was because the portion was too big.

Less than a third of diners (31%) stated that there was a choice of portion size when they ordered their meal.

Almost three-fifths (57%) of respondents eating at QSRs felt there was a choice of portion size. Conversely, in pubs, restaurants and hotels the proportion of respondents that felt that there was a choice of portion size is smaller.²⁶ Approximately one in five respondents eating

²⁵ Bases are all respondents excluding those that did not consume a main meal, i.e. they exclude respondents who only consumed a starter or sides or appetisers or drinks or snacks.
²⁶ This aligns well with tonnage estimates on the food waste disposed by the UK Hospitality sector where pubs and restaurants were found to be the venues which disposed of more food waste in absolute and per meal terms. See: WRAP (2011). *The Composition of Waste Disposed of by the UK Hospitality Industry.*

in restaurants (22%) and pubs (21%), and around one in ten respondents eating in hotels (13%) felt there was a choice of portion size.

Overall, very few respondents (5%) asked for information on portion size and even fewer respondents had been advised by staff on portion size (4%) on this meal occasion. In staff restaurants and leisure venues, where perhaps there is more personal familiarity between customer and staff, slightly more diners asked for information on portion size: 13% in staff restaurants and 8% in leisure venues.

Interestingly, though staff did not offer advice on portion size they did ask diners whether they wanted sides or extras (38%) and whether they were interested in the specials (16%).

Staff were more likely to have asked whether customers wanted sides or extras in those venues where portion sizes were too large. Around two-fifths of diners in restaurants (42%), pubs (42%) and hotels (41%) had been asked by staff if they wanted sides or extras compared to less than a third in staff restaurants (28%) and leisure venues (29%), and just over a third in QSRs (35%). In hotels, pubs and restaurants staff members were also more likely to have suggested specials than in other venues.

Front of house staff in certain venues may be required to offer sides and extras or suggest specials as part of their job description or receive premiums for doing so. Informing customers about portion sizes is unlikely to be part of staff's job description.

The majority of diners do not tend to ask for information on portion size. When respondents were asked about whether they had ever asked for advice on portion size 29% said they had. Meal leavers were slightly more likely to have asked for information on portion size at 35% compared to non meal leavers at 27% - this difference is statistically significant.

Less than a third (31%) of respondents claimed to have ever asked for a smaller portion. Meal leavers were more likely to have asked for a smaller portion at 42% compared to 27% of non meal leavers – this difference is statistically significant.

When it comes to portion sizes, respondents seem anxious to ask for fear of unduly troubling staff. Drawing from both the quantitative and qualitative data, the sensitivity of the topic (its link to dieting, eating too much and obesity) may further discourage customers to voice their questions on portion sizes. When eating out meal leavers may be more concerned with enjoying the experience of their meal than worrying about ordering/getting too much food.

On the few occasions where participants in the discussion groups had mentioned saying something about portion sizes, it tended to be at the end of the meal. This was often when staff, clearing the table and noticing some leftovers, had asked whether everything was ok. In these situations diners may delicately say that it was all fine but that it simply was too much.

"I don't think I'd ask for different portion sizes because that's just seems really picky"
Woman, 18-34, London

"We're often out in a restaurant and my wife will maybe shovel a few things over to me that she didn't eat and makes us look like we both left a little bit, not a lot, so we don't offend. I know it's a silly thing but we've enjoyed it, we just couldn't manage, so just do a wee bit of reshuffling when nobody's looking."
Man, 55+, Edinburgh

http://www.wrap.org.uk/sites/files/wrap/The_Compotion_of_Waste_Disposed_of_by_the_UK_Hospitality_Industry_FINAL_JUL_Y_2011_GP_EDIT.54efe0c9.11675.pdf

Large portions of food were thought to be off putting by 44% of diners. Three-fifths of meal leavers (57%) stated they found large portions of food off-putting compared to only two fifths of non meal leavers (39%) – this difference is statistically significant. Older respondents were more likely to agree with this statement compared to younger respondents. 31% of 18-24 year olds agree with this statement compared to 42% of 45-54 year olds; 52% of 55-64 year olds; and 58% of over 65 year olds – these differences are all statically significant.

Women, furthermore, were more likely to think that large portions were off putting than men – 54% compared to 33%. Men, in particular younger men, in discussion groups expressed a strong male bravado when it came to their relationship with food and not being defeated by its quantity. Several used military style language to describe their interaction with the food they ordered (e.g. plan of attack, to plough through, a battle, etc.).

"I don't know, you'd want to know beforehand so you could plan your attack."
Man, 35-54, Cardigan

"If the meal's a challenge I'll think I'll get through that come what may."
Man, 55+, York

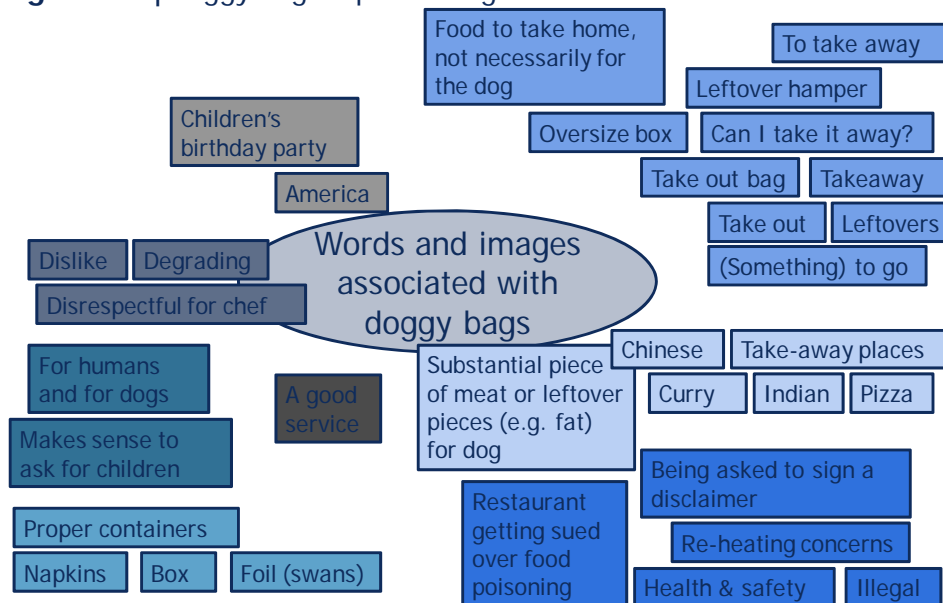
Overall, large portion sizes are a concern particularly for meal leavers. Diners on the meal out described in the survey did not ask for information on portion size and, generally, appear to feel uncomfortable doing so.

5.0 Doggy bags

5.1 How is the term doggy bag understood?

The image in Figure 11 overleaf represents the different words, language and images which discussion group participants used when asked what 'doggy bags' means to them.

Figure 11 | Doggy bag response diagram²⁷



By and large discussion group participants understood the term doggy bag to mean food that can be taken home which is not necessarily for the dog. However, some participants did understand the term to mean strictly food that was taken home for the dog. Participants disliked the term and found it slightly derogatory. When invited to propose alternatives suggestions included 'leftover hamper' and 'take out bag'.

*W: "No, I think that sounds dirty, to me, that's only me.
M: It doesn't sound very good really, doggy bag to go."
Dialogue, 18-34, Norwich*

Participants associated doggy bags with food which already had an established norm of being consumed as take away (e.g. Chinese cuisine, Indian cuisine and pizza). The only other food type considered to be worth taking home was substantial pieces of meat.

*"I don't know, you'd eat it or leave it. But if you are going to take it home, put it in a napkin, and you wouldn't ask to have a little bag or a box unless it was Pizza Hut and you'd have pizza left. You'd ask for a box."
Man, 18-34, Norwich*

Most discussion groups pointed out how in the United States doggy bags were the norm and staff members would ask customers, as a matter of course, whether they wanted to take their leftovers home.

Discussion group participants felt that they would only be willing to take food home which was substantial both in quantity and value. The food that tends to get left at the end of a meal (chips, vegetables and salad) would not fit into this category.

*"It would have to be something substantial. It couldn't be like I'm bringing the vegetables home, it would have to be like a steak or something."
Man, 35-54, Belfast*

²⁷ The eight colours represent the different groupings of words used by participants from top left clockwise: (1) Images conjured; (2) Understanding and suggestions for alternative terms; (3) Associated with foods that can already be ordered as take-away; (4) Health and safety and legality concerns; (5) Containers; (6) A good service; (7) Mainly for dogs but useful for children; and (8) Disliked term.

"If I'm going out and I've eaten really nice food I would ask to take it home, I wouldn't just leave it, if it is a sizeable amount because I think that's a waste, especially if I've paid like good money for it as well."

Woman, 18-34, London

In most groups a couple of participants had experienced issues when asking for a doggy bag where venues had refused due to health and safety reasons. A couple of participants in several groups were adamant that it was now illegal for a venue to provide doggy bags.²⁸

Overall, participants who had asked for a doggy bag recounted good experiences of the containers supplied (including foil swans for example). Participants, in the round, felt that the provision of doggy bags was an indicator of a good service.

"It's a good service though, if you're paying for an expensive meal and for some reason you don't want it all I think it is a good service, to be given the opportunity to either take it away and leave it, I don't want to see it again, or you can take it home for a wee sandwich tomorrow morning or something, or if you've got a dog."

Man, 55+, Edinburgh

5.2 Experience of doggy bags

Over half of respondents (52%), in the quantitative survey, claimed to have asked for a doggy bag in the past. Meal leavers were more likely to have asked for a doggy bag than non meal leavers, 59% compared to 50% - this difference is statistically significant. When asked about doggy bags, out of the 113 participants who took part in the discussion groups, 77 (68%) said they had **asked** for a doggy bag before while only 53 (47%) claimed to have been **offered** a doggy bag. It was suggested that staff could be more forthcoming in offering a doggy bag to customers who have left food at the end of their meal.

Women are more amenable to asking for doggy bags than men. 55% of women had asked for a doggy bag compared to 49% of men – this difference is statistically significant. This male discomfort around asking for a doggy bag was often vocalised, but left unexplained, in the discussion groups. Men simply felt less at ease asking for a doggy bag.

"My partner would never ask. He used to find it really embarrassing if I said oh could you just wrap that up please, I'd like to take that home, he 'd say oh don't keep doing that, he'd sort of cower in the corner like really embarrassing."

Woman, 55+, York

Some participants had enjoyed a very positive experience when asking to take home leftover food – especially with regards to venue staff offering to wrap up any leftovers and providing appropriate containers.

"That was one of the most beautiful experiences eating out I've ever had it was in a Thai restaurant years and years ago and it wasn't that you were asking, they had actually plastic bowls and they were offering that. So you didn't feel that you would be stingy, a stingy person you know and you could take it home and that's what they were offering and I love that because I hate wasting food."

Woman, 35-54, Cardigan

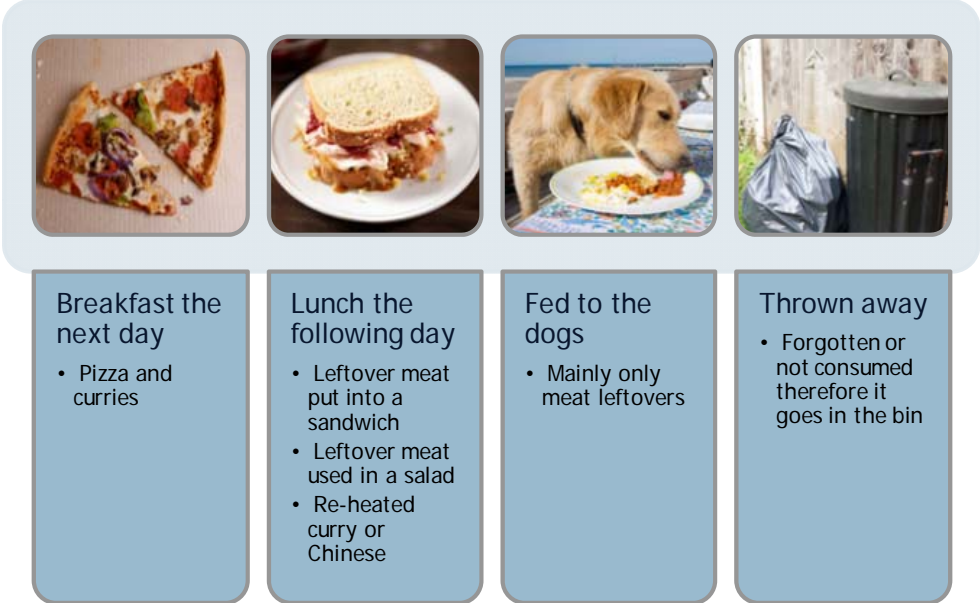
²⁸ Doggy bag guidance from the Food Standards Agency is available in the Resource pack for hospitality and food service at: www.wrap.org.uk/outofhome More information about food safety is available from the Food Standards Agency website www.food.gov.uk/

Others had had a negative experience with asking for a doggy bag which, in some cases, had influenced their willingness to ask in future. This often was related to either being refused a doggy bag due to health and safety concerns or not being sure whether something can be re-heated safely once it has been taken home (e.g. rice).

*M: "We finished our meal and there was something left and we asked for a doggy bag and the waiter said you can take it but you have to sign to say if there's anything wrong with it."
 W: Yes because you can sue them if you've got a bad tummy."*
 Dialogue, York, 55+

In the discussion groups participants were asked what happened to the food once it had been taken home, the diagram below shows the four main avenues for leftover food that had been taken home.

Figure 12 | What happens to leftover food taken home?²⁹



There was a strong sense amongst discussion group participants that the leftover food taken home needed to be consumed the following day.

"I generally don't even eat it but I take it home anyway. It sits in the fridge for a day or so and then I just end up chucking it away."
 Woman, 18-34, Norwich

"Well it's either eaten or thrown away but it's got to be by the next day."
 Woman, 55+, York

5.3 Attitudes towards doggy bags

Overall, approximately two-fifths (42%) of respondents agreed with the statement that 'asking for a container to take leftovers home is embarrassing'. Meal leavers were slightly more likely to agree with this statement than non meal leavers, 46% compared to 41%. The discussion group insights also suggest that there is still a stigma attached to asking for a doggy bag for leftover food.

²⁹ Source of photos: www.istockphoto.com

"Sometimes you don't know. You don't know if you're being a bit uncouth by asking if you're not sure and you really want to take it home but you don't want to seem like cheeky or something, you just keep quiet."
Man, 18-34, Cardiff

Participants stated that there was not a norm of asking for a doggy bag as they had experienced in other countries like the United States. Diners need to be reassured both socially and from a health and safety perspective. Customers need to know that it is socially acceptable to ask for a doggy bag and that it is safe to consume its contents at home at a later date.

"I think because it's not the normal here. If it was then I would do it, but if you're one of a minority actually doing it then I would feel quite uneasy doing it. So it's easy to just not bother."
Man, 18-34, Norwich

When asked spontaneously about what could be done to help reduce the amount of food left when eating out only 8% of respondents mentioned doggy bags. When asked directly whether they were in favour of 'being offered a doggy bag or container to take your leftovers home', however, three-quarters of respondents (74%) were in favour. Women were more likely to be in favour of doggy bags than men; 81% compared to 68% - this difference is statistically significant.

6.0 What can be done to help reduce plate waste?

6.1 Spontaneous ideas for leaving less food

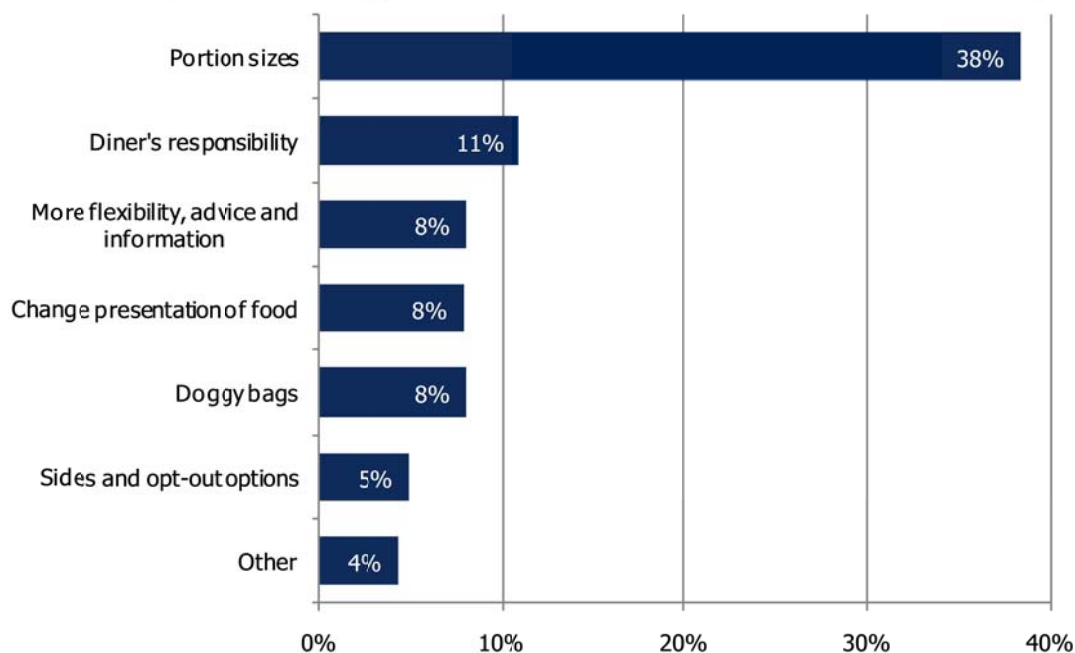
In both the quantitative and qualitative research participants were asked about their ideas on how customers could be encouraged to leave less food, whether or not they admitted to leaving food, their spontaneous reactions offered useful insights.

From the quantitative survey, when asked unprompted, 11% stated they did not leave food when eating out. A further 18% did not make a suggestion or stated that they didn't know. Of the other responses, suggestions can be grouped into six different categories:

- portion sizes;
- more flexibility, advice and information when ordering;
- changing the presentation of food;
- diner's responsibility;
- doggy bags; and
- side dish and opt-out options.

Figure 13 overleaf illustrates the different suggestions proposed spontaneously.

Figure 13 | Spontaneous suggestions for helping to leave less food (Base: 5,183)



The most popular suggestion was around provision of different portion sizes. Almost two-fifths of respondents (38%) stated that a potential solution to reducing plate waste was by addressing portion sizes in terms of choice, size and price. Of these respondents 17% stated that offering a choice of different portion sizes (including children's portions) would help address the issue of plate waste. A further 17% specifically suggested offering smaller portion sizes. When looking at meal leavers the proportion suggesting smaller portion sizes as a solution increases to 20% compared to 15% of non meal leavers.

The provision of different sized portions (small, medium and large) was suggested as a solution to help customers reduce the amount of food left on their plates. Discussion group participants appreciated when venues offered pensioner and children sized portions.

M: "Yes because there used to be that on the menu, whether you wanted a gents' portion or a ladies' portion."

M: These days you can't say ladies and gents because that would be discrimination but you could have large or small portions."
Dialogue, 55+, Edinburgh

"...You can do that at home the chicken nuggets, the fish fingers and when you go out for a meal because it's either a special occasion and you want something a bit different where there's a choice for the adults but for the children they're just stuck with the chicken nuggets and chips with beans or peas or something."
Woman, 35-54, Cardigan

A further one in ten respondents (11%) stated that it was effectively the responsibility of the individual diner to reduce the amount of food left on their plate at the end of the meal. Suggestions included making better choices, ordering less, eating less beforehand and sharing meals.

As discussed in Chapter 5, doggy bags proved a popular choice when prompted directly. However, they did not appear to be front of mind when respondents were asked spontaneously about potential solutions. Only 8% mentioned either making doggy bags available or actively/automatically offering doggy bags. Participants in discussion groups did

mention them has a potential solution but this may have been influenced by earlier discussions on doggy bags.

A further 5% of respondents stated having different side options and the possibility of opting out of certain items as a suggestion for tackling plate waste. In the discussion groups, the modular menu used in restaurants like Nando's was well liked especially for allowing customers to select side dishes.

"One thing I like in particular in Nando's you can choose your burger and then you can choose the sides to go with it so you can choose then exactly how much you are getting which I think is better rather than just getting a burger and chips."

Woman, 18-34, Cardiff

One suggestion mentioned spontaneously in some discussion groups was the need for more staff training and better interaction by staff with customers. Participants felt that staff could be better informed and more willing to offer information on aspects of their meal like ingredients, portion size and specials on offer. Furthermore, if staff members interacted with customers in a way that reassured customers and granted them permission to ask for clarifications or changes, it was thought that this may reduce the amount of plate waste.

"It's down to service again of somebody when you're placing your order to tell you what you're getting and you know they'll say one side will do the four of you, you know, they'll talk to you and they'll just say, they'll tell you exactly, and the better they are the less you leave."

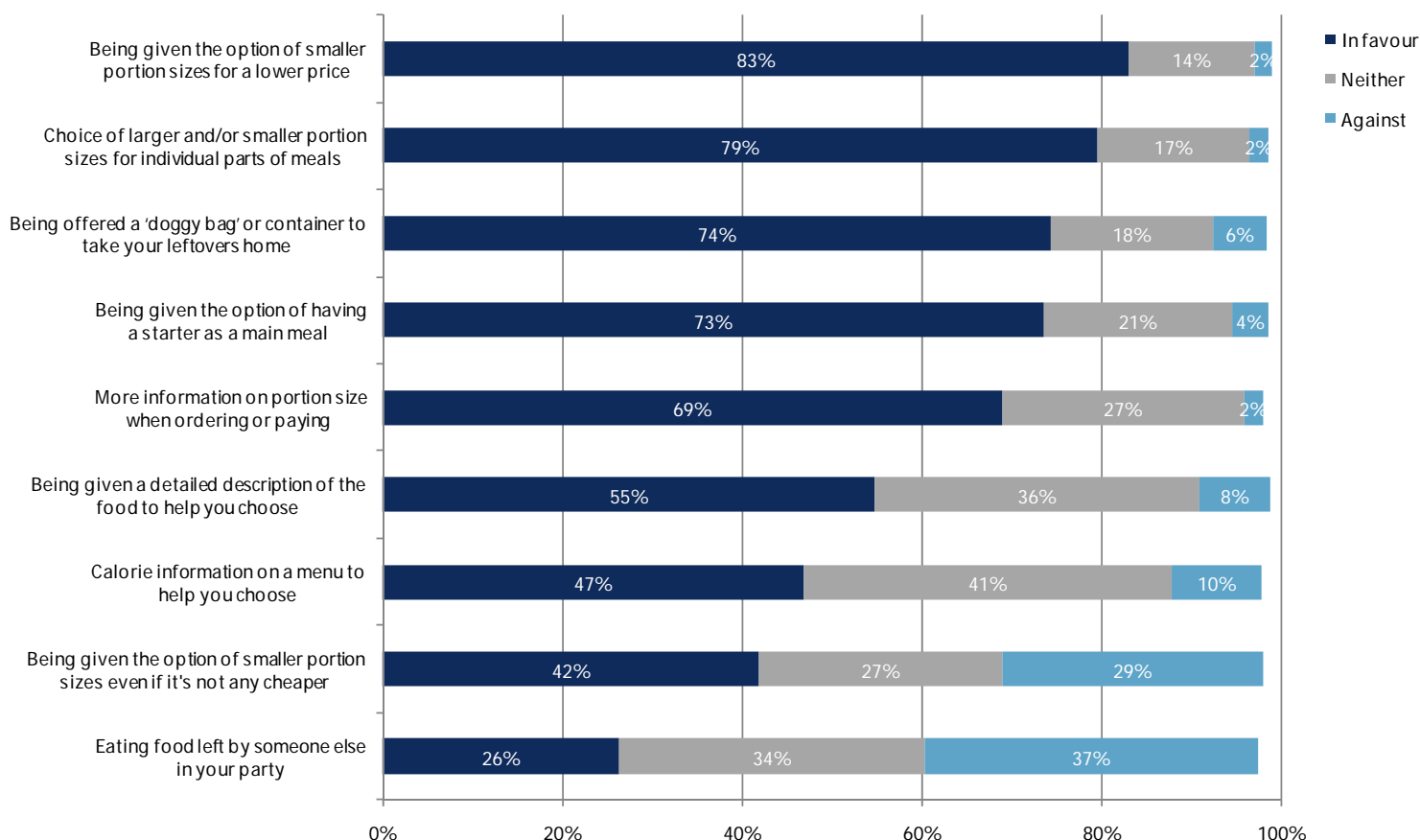
Man, 35-54, Belfast

6.2 Prompted feedback on ideas for reducing plate waste

In both the qualitative and quantitative research different ideas that could help reduce the amount of food left after a meal out were tested.

The graph in Figure 14 overleaf outlines the extent to which respondents agreed with different ideas proposed.

Figure 14 | Reactions to proposed options in quantitative survey (Base: 5,183)³⁰



The most popular option was 'being given the option of smaller portion sizes for a lower price' with over eight in ten (83%) respondents in favour of the idea. It is interesting to note that when the price differential is taken away from this option its popularity drops down to two in five respondents (42%).

Furthermore, this option is the only one that saw a difference of opinions when looking at meal leavers and non meal leavers. Across all the proposed options there were no major differences between the views of meal leaver and non meal leavers with this exception. While almost half (49%) of meal leavers were in favour of 'being given the option of smaller portion sizes even if it's not any cheaper', only two in five (39%) of non meal leavers were in favour of the option – this difference is statistically significant. This further emphasises the fact that meal leavers are very supportive of smaller portion sizes even when the price is not proportionally reduced.

The second most popular option was also linked to portion sizes. The focus, however, was on providing a 'choice of larger and/or smaller portion sizes for individual part of meals' so that customers could better build the meal that was right for them and, potentially, avoid leaving food.

When discussion group participants were asked to rank their top three options out of a proposed list of ten (see Figure 15), 'smaller meals, for a lower price, on the menu' came first. This was followed by providing 'more information about what will be on your plate' and 'smaller portions of sides, with free top-ups'.

³⁰ Bars in this graph do not add up to 100% because 'don't know' has been excluded from the answer categories.

Discussion group participants suggested that the communication of different portion sizes would need to be made visually understandable (for example by using images of three chillies, three bears, different sized plates, the number of scoops, etc.) but remain sensitive. The issues around sensitivity were mainly linked woman's fears of being perceived as fat or eating too much. In the discussion groups, suggestions of using calories or weights by some participants were strongly disliked by other participants. Providing 'calorie information on a menu to help you choose' in the quantitative survey was supported by 47% of respondents.

"Mummy bear, baby bear and daddy bear."
Woman, Over 55+, York

"You'll have a portion size to suit everybody."
Man, 35-54, Belfast

The importance of the lower price element of this option was deemed essential also in the discussion groups. Participants stated that the difference in price needed to be in the order of 20-30% cheaper to encourage customers to opt for the smaller portion. Otherwise it was suggested that diners would simply order the bigger portion because it is better value for money, irrespective of whether they thought they could finish it or not.

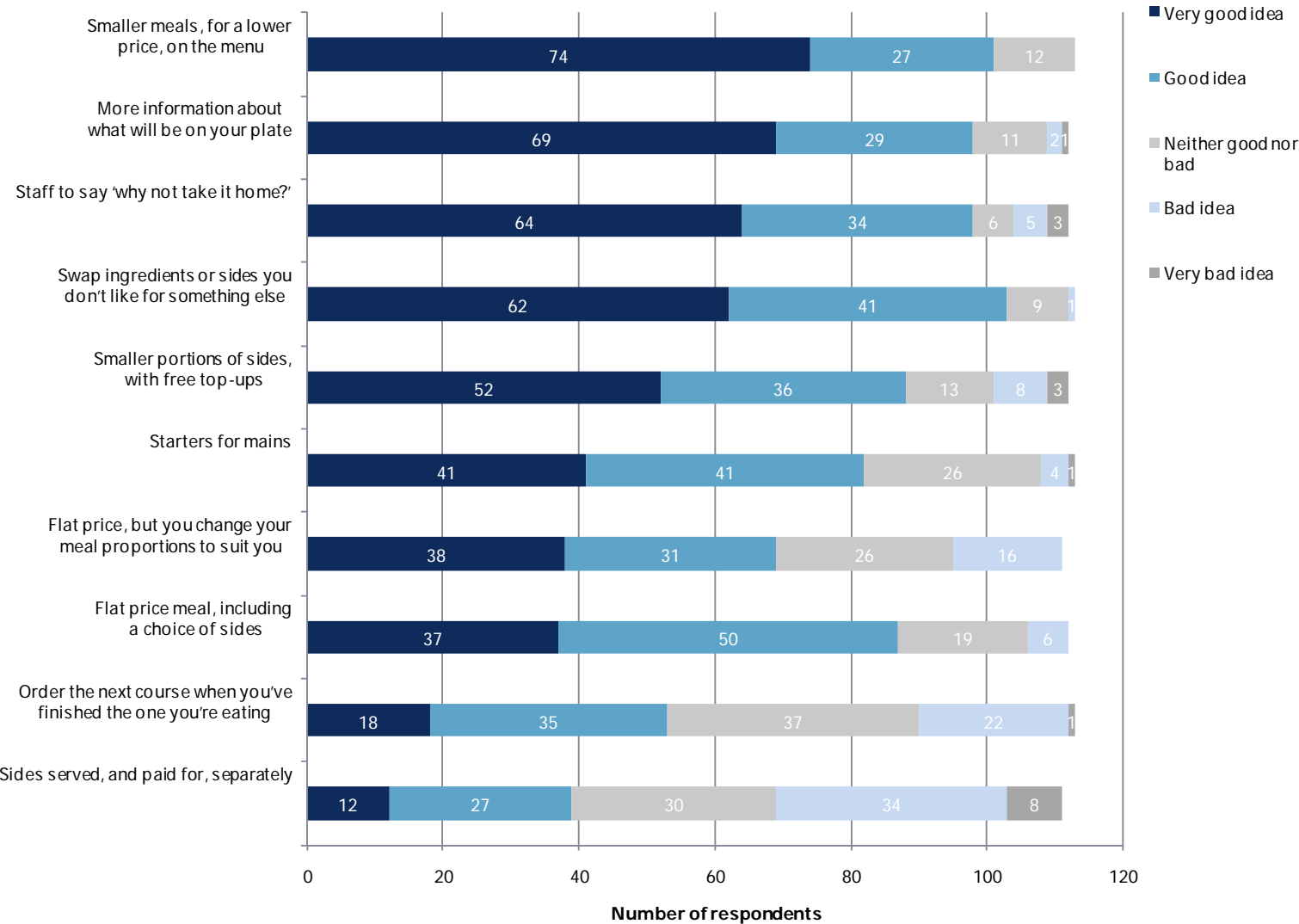
The least favourite options in the discussion groups were 'sides served, and paid for, separately' and 'ordering the next course when you've finished the one you're eating'.

"It's the monetary side of it, people are in a recession and it's the fact that they don't want to sit there and calculate can we afford to have peas and carrots tonight."
Woman, 35-54, Cardigan

*W: "It would just take forever.
W: And with kids and all, oh my God no.
M: No chance.
W: You'd never know when you were getting out."
35-54, Belfast*

The graph in Figure 15 overleaf illustrates the reactions of discussion group participants to the proposed options discussed above; the numbers are expressed in counts rather than percentages due to the small sample size (113 participants).

Figure 15 | Reactions to proposed options in discussion groups (Base: 113)³¹



Overall, it appears that the preferred options involve a supply side solution of providing different portion sizes along with more information about portion sizes when ordering or paying. Some participants in the discussion groups (a minority) wanted to know what happened to the food left as they believed this may then enable them to better understand why plate waste is an issue.

Nando's 'building block' style menu was often cited as a model that enabled customers to make better, more informed meal choices. Customers, ultimately, need to be made to feel that they can compose the meal they want. Furthermore, they need to feel like they have the 'permission' or 'right' to ask for clarifications/changes or that they are provided with enough information to be able to directly address their questions.

³¹ Some bars may not add up to 113 as one or two participants may not have answered that question in the exercise sheet.

7.0 Summary of findings and suggestions from research

7.1 Summary of findings

Close to three in ten respondents (27%) left food at the end of their meal. These meal leavers were more likely to be women and to be younger. Hotels, pubs and restaurants had bigger proportions of meal leavers than other venues.

The main dish and the accompanying sides were the courses most likely to be left; while appetisers, starters and desserts were less likely to be left. The staple foods that tend to get left at the end of the meal are chips, vegetables and salad. Chips, vegetables and salad are seen by some customers as plate fillers rather than part of the meal they ordered. Some do not even consider these food types, especially salad garnishes, to be intended for consumption.

Meal leavers tend to be more influenced by whether others leave food and care more about how they are perceived by others than non meal leavers.

Diners who are eating out for the experience rather than simply to 're-fuel' are more likely to leave food at the end of their meal. Eating out is often perceived to be a treat, an occasion for customers to indulge – a hedonistic experience where they do not want to have to worry about food waste. Meal leavers are more likely to want the full meal experience by ordering more courses (starter, main and dessert) but as this makes them too full they leave food rather than ordering less. This suggests that meal leavers either inaccurately judge the quantity they are able to eat or are after the 'full meal experience' and, therefore, are less concerned about leaving some food.

Respondents who had left food on this occasion were also more likely than others to leave food generally. Over a quarter (27%) of meal leavers stated that they often left food when eating a meal cooked at home compared to 18% of non meal leavers. This continues to be true when eating out generally. This suggests that meal leavers as a group of people seem to value food less compared to non meal leavers.

Meal leavers tended to be less concerned about leaving food at the end of the meal than non meal leavers. Amongst respondents who claimed to be 'bothered' about leaving food, non meal leavers were more likely to show a greater degree of concern than meal leavers. Three quarters of 'bothered' non meal leavers stated leaving food was a 'waste of good food' compared to three-fifths of 'bothered' meal leavers.

The main reason for leaving food was that the portion was too big – two-fifths of respondents (41%) gave this reason. Higher proportions gave this reason when respondents were describing a meal that took place in a restaurant, QSRs or pub.

When it comes to portion sizes, respondents seem anxious to ask for fear of unduly troubling staff. The sensitivity of the topic, its link to dieting, eating too much and obesity, further discourages customers to voice their questions on portion sizes. When in the moment meal leavers may be more concerned with enjoying the experience of their meal than worrying about ordering/getting too much food. Meal leavers would benefit from more choice of portion sizes.

Meal leavers tend to be more sensitive to large portions and are less willing to enquire about portion sizes. 41% stated that their meal was too much compared to only 6% of non meal leavers. The majority of meal leavers, interestingly, stated that they knew what the portion size was going to be when ordering but a small minority asked for information on portion size.

Meal leavers do not feel a sense of ownership or responsibility over the food left, the amount of food they get is considered out of their control, and a sizeable proportion will not ask for anything different.

Front of house staff could be doing more to inform customers on the size of the servings. Only 4% of respondents had been offered advice on portion size compared to 38% being asked whether they wanted sides or extras. Furthermore respondents were keen for venues to proactively offer doggy bags for leftover food.

The majority of diners do not want to think about whether they leave any food when they are enjoying a meal out. When eating out the issue of food waste is not something which is front of mind and customers do not want to engage with it. Three fifths of respondents (59%) agreed with the statement 'I don't want to have to think about leaving food when I eat out'.

When respondents were asked to suggest solutions to reducing plate waste both the quantitative and qualitative findings concur that the solution needs to be centred on offering different portion sizes.

7.2 Suggestions from the research

From both a technical and behavioural perspective, the key opportunities for reducing the amount of food left after a meal out are around portion sizes.

From a technical point of view, signatories to the H&FSA could better promote and offer more choice of portion sizes in their outlets especially restaurants, pubs and hotels. Venues could offer different sized main courses as well as different sized side dishes which would give customers more choice and empower them to order 'the right amount' thereby reducing plate waste.

Other technical solutions could include venues actively offering doggy bags for any food left by customers, venues explicitly allowing customers to have a starter as a main (or permitting customers not to order a main course) and staff offering more information about portions. All these industry-led solutions have their consumer-driven counterparts.

Eating venues could train their staff so that they are better able to talk about portion sizes with customers and provide more information on the meals (e.g. ingredients, cooking). As the research findings suggest, portion sizes can, at times, be a sensitive subject so discretion and skill need to be used when communicating relevant information to customers. It may be worth exploring how staff are incentivised (whether by performing against their job description or premiums) so as to better inform the type of training needed.

From a behavioural point of view, WRAP's continued work with signatories to develop suitable messages around portion sizes and empowering customers to ask for more information will further help. Tools like an online resource pack where different messages tailored to the specific venue are trialled and tested could offer additional insights into which types of message wording and on what channels (e.g. on menus with/without pictographic aids, on table cards, on special's boards, communicated by staff) work best.

Any messages or communication initiatives developed need to be subtle, as diners do not want to be told what to do when out enjoying themselves nor do they want to think about food waste while eating out.

Such behavioural initiatives would benefit also from a general raising of awareness on the need to value food similarly to what the Love Food Hate Waste campaign is doing for food

waste generated in the home. Any messages or general communication initiative, however, cannot be seen to 'interrupt' the eating out experience as the whole occasion is seen as a treat to be enjoyed by the customer.

In terms of assessing impacts of these messages, participating venues could be asked to weigh the plate waste prior and post any intervention. Marrying this monitoring with short interviews with staff and a sample of customers may offer additional insights into the best way forward.

Further investigation via qualitative research of when (e.g. in which occasions/venues) diners feel comfortable asking about portion sizes and why often they do not feel comfortable asking about portion sizes may shed more light into the complexities around the topic.

Customers need to feel empowered to enquire about portion sizes irrespective of whether a venue advertises different portion sizes or not. A social norm needs to be promoted that it is acceptable - or indeed - encouraged for customers to ask for different portion sizes. Messages in venues (e.g. on menus, table cards, posters) could help communicate the fact that certain requests are encouraged.

By addressing the provision and communication of different portion sizes, both technically with industry and behaviourally with staff and customers, a decline in the amount of plate waste can be expected.

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