DRAFT REGULATORY IMPACT ASSESSMENTS

FOOD (PROMOTION AND PLACEMENT) (WALES) REGULATIONS 2024: ALL PROPOSALS INCLUDED WITHIN DRAFT STATUTORY INSTRUMENT

CONTENTS

DRAFT REGULATORY IMPACT ASSESSMENT

PROPOSAL 1 – PRICE PROMOTIONS

Preferred option summary

The following table presents a summary of the costs and benefits for the preferred proposal as a whole. The table has been designed to present the information required under Standing Order 26.6 (viii) and (ix).

Restrict the 'volume' promotion of products in Wales which score 'less healthy' by NPM and are of most concern for childhood obesity, in the retail sector excluding small and micro businesses.		
Preferred option: Option 1 restricts volume offers for HFSS products which score less healthy by NPM and are of most concern for childhood obesity in medium and large retailers.		
Stage: Consultation	**Appraisal period:** 2024 - 2051/52	**Price base year:** 2024/25
Total Cost **Present value: £7.6m**	**Total Benefits** **Present value: £183.8m**	**Net Present Value (NPV): £176.2m**

Administrative cost

Costs: Trading Standards officers from 22 Local Authorities will need 6 hours of time to become familiar with the regulation and products to which it applies. We assume a small transitional cost and ongoing revenue costs to ensure regulations continue to be observed. It is assumed that Retail Outlets are visited every 2 years. 15 minutes of the visit is assumed to be spent reviewing adherence to these regulations.			
Transitional: £5k	**Recurrent: £12.3k**	**Total: £318k**	**PV: £199k**
Cost-savings: *NA*			
Transitional: £	**Recurrent: £**	**Total: £**	**PV: £**
Net administrative cost: PV £0.2m			

Compliance costs

Transitional compliance costs will be incurred by Retailers. We assume this will take place at corporate level and in some cases, manufacturers will provide the data. These costs will comprise the time to get familiar with the new regulations, time to make an assessment of which products will be in scope, distribution of knowledge throughout the business, updating IT systems and Online offering.
Familiarisation costs assume 1 Manager hr x Avg. Hourly Rate x No. of Outlets. Chain outlets assume an additional 15 hrs for communication to branches.
Product Assessment costs assume 30mins x Avg. Hourly Rate x No of products.

Transitional: £290k	**Recurrent: £0**	**Total: £290k**	**PV: £0.3m**

Other costs

Retailers are expected to plan promotions to maximise profits. Consequently, any restriction on their ability to do this is expected to reduce profits. DHSC have developed a methodology which concludes that a retailer is likely to see sales revenue reduce by 0.59% due to restrictions on volume promotions. Based on the English impact assessment, lost retailer profits are estimated at £186k per year while manufacturers who supply retailers will lose £246k of profit per year. There will also be a small gain for manufacturers of non-HFSS of £68k per year over the full appraisal period.

Transitional: £0	**Recurrent: £0.5m**	**Total: £9.1m**	**PV: £6.9m**

Unquantified costs and disbenefits

Non-monetised costs include reformulation costs to manufacturers, any impact on retailer and manufacturer relationships and the impact on wholesalers from reduction in sales of HFSS products.

As costs and benefits can be significantly influenced by a wide range of factors, consumers may adjust their consumption or purchasing behaviour in response to consuming fewer calories. The range of response can vary from zero compensation to 100% compensation. The central proposition is that there will be 40% behavioural compensation i.e., the measures will be 60% effective.

Benefits

The expected NHS Wales savings for Option 1 are estimated to be around £10.8m over the 25-year assessment period. Reduced morbidity would also result in reduced cost pressures to the NHS in Wales. Health benefits to the population are estimated to be worth around £143m. Social care savings would amount to £12.7m and reduced premature mortality would be expected to deliver an additional £17m economic output through additional labour force participation.

Total: £183m	**PV: £160m**

Key evidence, assumptions and uncertainties

The main underlying evidence is from work done by the Childhood Obesity Team from the Department of Health and Social Care (DHSC) in developing Impact Assessments 13011[1] and 9560[2]. The principal assumption is that the methodology and assumptions that this work is built upon for England are equally valid in Wales. It is assumed that the Welsh results can be extrapolated by applying a factor of 6%. This is based on the relative population and NHS budgets in England and Wales. One key difference in the previous consultation impact assessment for Wales is that it assumed that both volume and temporary price reduction promotions would be restricted. Measures are now aligned between England and Wales. This means the net impact of the restriction of volume promotions is assumed to be 0.59% of sales instead of 1.24% reduction to cover both volume and temporary price promotion restrictions. The analysis is also based on the assumption that micro and small businesses as well as speciality businesses e.g. Chocolatiers are excluded from scope. The analysis assumes that a micro business has less than 10 FTE employees and a small business has 11-49 FTE employees.

1 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770705/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf

2 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf

Options

The aim is to reduce overconsumption of HFSS products and also to encourage businesses to promote healthier products and to further incentivise reformulation.

The restriction of volume promotions on HFSS food and drinks is intended to:

- Reduce overconsumption of HFSS products likely to lead to excess calorie intake and, over time, weight gain, while minimising the impact on food purchases that do not contribute to childhood obesity;
- Shift the balance of promotions towards healthier options and maximise the availability of healthier products that are offered on promotion, to make it easier for parents to make healthier choices when shopping for their families;
- Create a level playing field in which stores that make voluntary progress are no longer penalised;
- Assist the wider Healthy Weight: Healthy Wales strategy to reduce circumstances currently contributing to the obesogenic environment.

Types of promotions

Promotions fall into two main categories[3], volume offers and temporary price reductions, both of which are outlined below.

Volume offers include:

- Multi-buy offers - where the discount is obtained by purchasing more than one unit, such as in buy-one-get-one-free and 3 for 2 offers.
- Linked offers - where the consumer is offered a free or discounted product when they purchase another product, such as a half price drink when they buy a sandwich.
- Extra for the same price - when the consumer is given more for the same price, such as 50% extra free.

The second category of promotion is temporary price reduction, i.e. pricing that demonstrates good value by referring to another price, typically of higher value. This category includes:

- Was/now prices - which compare an advertised price to a price the retailer has previously charged,

[3] Guidance for Traders on Pricing Practices, Chartered Trading Standards Institute, 2016. https://www.businesscompanion.info/sites/default/files/Guidance-for-Traders-on-Pricing-Practices-Apr-2018.pdf

- After promotion or introductory prices - which compare the current price to a price that the retailer intends to charge in the future,
- Recommended retail prices (RRP) - which compare the advertised price to one recommended by the manufacturer or supplier and,
- External reference prices - which compare an advertised price to a price charged by another retailer for the same product.

For the purposes of this IA, only volume promotions will be restricted. This differs from the previous consultation and is in response to consultees requesting that measures in Wales are aligned with those in England.

Option 0 – Business as usual

This is the business-as-usual scenario against which all other options are compared. This assumes no changes in age-specific rates of overweight and obesity, but does assume that the average BMI of cohorts of individuals increases over time as the cohorts age. This increase in average BMI has been based on current trends. Under the business-as-usual scenario, a limited number of supermarkets would continue to voluntarily limit the promotion of certain HFSS products and those not currently restricting promotions would be expected to continue doing so.

Other policies like the SDIL will continue to incentivise businesses to reformulate their products to reduce sugar intake.

Due to the considerable number of uncertainties which would need to be considered, the 'business as usual' scenario in this Impact Assessment does not attempt to quantify the future impact of the policies already announced or any other possible future actions by government. Furthermore, the interactions of implementing multiple policies at once are also not assessed under our estimates.

Option 1 – Restrict the 'volume' promotion of products in Wales which score 'less healthy' by NPM and are of most concern for childhood obesity, in the retail sector excluding small and micro businesses.

Under Option 1, medium and large retailers would be prevented from using volume offers to promote HFSS products which contribute the most sugar and calories to children's diets and are of most concern for childhood obesity. A list of the product categories included in this option can be found in Option 1 in Annex I.

Including these products means the regulations are targeting the products that contribute the most sugar and calories to children's diets, while also reducing costs to business, and therefore represents a balanced and proportionate approach.

Option 2 – Restrict volume and temporary price reduction promotions on products which score 'less healthy' by the Nutrient Profiling Model (NPM) and which are included within Public Health England's Sugar Reduction Programme, Calorie Reduction Programme and Soft Drink Industry Levy (SDIL).

Under Option 2, retailers would be prevented from using promotion offers for any HFSS products included within Public Health England's Sugar Reduction Programme, Calorie Reduction Programme and Soft Drink Industry Levy (SDIL), in all retailers who sell food and drink in the retail sector excluding small and micro businesses. The full list of food and drinks included in this option are disclosed in Annex F and I.

HFSS products within the above categories in scope would be defined using the 2004/5 Nutrient Profiling Model (NPM), which differentiates foods based on their nutritional composition (see Annex H – HFSS Definition for more details). To assist retailers, the Welsh Government would provide guidance to help identify which products can or cannot be part of a volume promotion.

'Non-pre-packaged products' would be excluded from the policy. The regulation excludes these items since it may be impractical for businesses to assess the NPM score of these products when nutritional information is not available on pack. This is because businesses are not currently required to provide nutritional information for certain products which are sold loose.

Micro and small businesses are excluded from the restrictions, under options 1 and 2 unless they are part of a symbol group. A symbol group is seen as a large business with small and micro independent and multiple retailers trading under the symbol group who provide support to the retailers. Stakeholder engagement highlights that support could include having central standards and a shared marketing proposition, but independent and multiple retailers operating under a symbol group can still make their own buying and operational decisions. According to the Association of Convenience Stores (ACS), there are around 800 stores in Wales that are part of symbol groups and they make up 38% of total sales in the convenience sector.

Stores that exclusively sell HFSS goods, such as chocolatiers would be also be excluded.

We have defined micro businesses as those with 10 or less full-time equivalent employees and small businesses are those with 11-49 full time equivalent employees.

These businesses are excluded because it is likely that the burden of complying with these regulations will be disproportionately high for these businesses.

There are likely to be various complexities in defining and implementing restrictions on price promotions. Our considerations in the following assume that these are successfully overcome.

Costs and benefits

The benefits of restricting promotions for HFSS products are expected to accrue through:

- A reduction in excess purchases and calorie consumption, with a consequent reduction in obesity prevalence;
- A reduction in obesity related morbidity and mortality, resulting in reduced costs for the NHS, Social Care savings and an increase in economic output;
- A potential increase in consumption of healthier items, leading to further health benefits.

The main categories of costs to be considered are:

- Transition costs associated with assessing products, understanding the regulation and distributing information to stores;
- Transition costs for online business in familiarisation and making changes to websites
- Ongoing costs associated with assessing new or reformulated products
- Loss in profit to retailers because of reduced sales of HFSS food and drinks;
- Loss in profit to manufacturers of HFSS food and drinks because of reduced sales.
- Profit offset to retailers and manufacturers due to consumers compensatory behaviour and businesses using alternative marketing techniques.

The magnitude of the costs and benefits could be significantly influenced by wider factors. It is possible, for example, that consumers might adjust their consumption or purchasing behaviour in response to consuming fewer calories. This type of behaviour change is a significant source of uncertainty in our analysis and could have a significant impact on the estimated net present value.

The figures presented are taken from a central estimate, which assumes that compensating behaviour by consumers and industry means that 40% of the calories removed from people's diets are replaced.

The net present values of the options are assessed over a period of 25 years. This is much longer than the typical 10-year assessment period used in impact assessments. Ill health related to being overweight or obese tends to develop later in life. Therefore, a longer period than usual has been chosen to ensure the benefits of these regulations are captured in our analysis.

In Option 2, the central estimates of the total net present value of costs to government and industry are around £15.3m. This is compared to total benefits of around £386m. Over 25 years, expected costs to retailers include total transition costs of £0.28m and lost profit of approximately £6.3m. Over this period, manufacturers of HFSS products would also experience total lost profits of around £10.6m while manufacturers of Non-HFSS products would gain profit of £2.4m.

Impact Assessments

Option 1 – Restrict the 'volume' promotion of products in Wales which score 'less healthy' by NPM and are of most concern for childhood obesity in the retail sector excluding small and micro businesses.

Table 2: Summary of costs and benefits – Option 1 (£m)

Group affected	**Impact**	**Central Estimate (40% Compensation)**
Retailers	Transition - Familiarisation	-0.01
	Transition - HFSS Product Assessment	-0.06
	Transition - Knowledge Sharing	-0.09
	Transition - Changes to IT Systems	-0.12
	Transition - Sharing Information with staff (online businesses)	0.00
	On-going HFSS assessment	-0.38
	Lost Profit	-2.99
Total retailer Impact		**-3.65**
HFSS Manufacturers	Lost Profit - Retail Sales	-5.0456
Total HFSS manufacturer Impact		-5.0456
Non-HFSS Manufacturers	Lost Profit - Retail Sales	1.12336
Total Non-HFSS manufacturer Impact		1.12336
Government	NHS Savings	10.8052
	Social Care Savings	12.7092
	Familiarisation	-0.002
	Enforcement	-0.07
Total Government Impact		**23.4424**
Wider Society	Health Benefits	143.34264
	Economic Output	16.97416
Total Wider Society Impact		**160.3168**
NPV		**176.18**

Option 2 – Restrict volume and temporary price reduction promotions on products which score 'less healthy' by NPM and which are included within Public Health England's Sugar Reduction Programme, Calorie Reduction Programme and Soft Drink Industry Levy (SDIL), in the retail sector excluding small and micro businesses.

Table 1: Summary of costs and benefits – Option 2 (£m)

Group affected	Impact	Central Estimate (40% Compensation)
Retailers	Transition - Familiarisation	-0.01
	Transition - HFSS Product Assessment	-0.06
	Transition - Knowledge Sharing	-0.09
	Transition - Changes to IT Systems	-0.12
	Transition - Sharing Information with staff (online businesses)	0.00
	On-going HFSS assessment	-0.38
	Lost Profit	-6.99
Total retailer Impact		-7.6
HFSS Manufacturers	Lost Profit - Retail Sales	-13.75
Total HFSS manufacturer Impact		-13.7
Non-HFSS Manufacturers	Lost Profit - Retail Sales	2.63
Total Non-HFSS manufacturer Impact		2.6
Government	NHS Savings	25.00
	Social Care Savings	29.30
	Familiarisation	-0.002
	Enforcement	-0.07
Total Government Impact		54.2
Wider Society	Health Benefits	330.20
	Economic Output	39.00
Total Wider Society Impact		369.2
NPV		405

Post implementation review

A post implementation review should take place in 2026.

DRAFT REGULATORY IMPACT ASSESSMENT

PROPOSAL 2 - SUGARY SOFT DRINKS

Preferred option summary

The following table presents a summary of the costs and benefits for the preferred proposal as a whole. The table has been designed to present the information required under Standing Order 26.6 (viii) and (ix).

Restriction on the price promotion of certain drinks		
Preferred option: Option 1: Restricting Free Refills in the Out of Home (OOH) sector		
Stage: Draft - Consultation	**Appraisal period:** 2024 - 2051/52	**Price base year:** 2024/25
Total Cost **Present value: £532k**	**Total Benefits** **Present value: £4,259k**	**Net Present Value (NPV):** **£3,727k**

Administrative cost

Costs: We assume it will take the 22 Local Authorities approximately 3 hours to become familiar with the regulation and update their policies. We assume Trading Standards officers will visit premises every two years and 15 minutes of their time will be spent on ensuring compliance with the regulations.			
Transitional: £3k	**Recurrent: £26k pa**	**Total: £29k**	**PV: £433k**
Cost-savings: *NA*			
Transitional: £	**Recurrent: £**	**Total: £**	**PV: £**
Net administrative cost: PV £433k			

Compliance costs

- We assume a manager in each business will take 3 hours to read the Regulation at a cost of £27.30/hr
- We assume the manager will take an hour to brief 2 members of staff at each outlet with outlet staff costing £13.94/hr

Transitional: £99k	**Recurrent: £0**	**Total: £99k**	**PV: £99k**

Other costs

Reduction in Sales and Profits for OOH Businesses:

OOH Businesses that already offer free refills of low/zero sugar drinks will be able to continue under this proposal. These restrictions apply only to sugary soft drinks as defined by SDIL (Soft Drinks Industry Levy).

We would expect this policy to shift some customer's choices towards low/zero sugar drinks to take advantage of the free refills offer. For those that still wish to consume a sugary soft drink, they will be able to purchase these in single portions. Both changes in behaviour can be reasonably expected to reduce calories consumed from beverages[4] but without any impact on overall sales and profits.

Reduction in Sales and Profits for Manufacturers / Suppliers:

It is difficult to quantify any potential reduction in sales for manufacturers due to the unknown changes to consumption of no/low sugar drinks in replacement of the sugary drinks affected by this policy. It is likely that many consumers will switch to no/low sugar drinks to take advantage of the free refill promotions available, therefore resulting in a higher demand of no/low sugar drinks production. This should compensate for any reduction in sales of sugary drinks. Manufacturers will potentially face reformulation costs for their drinks but these are expected to be low as most have already reformulated due to SDIL.

Transitional: £	**Recurrent: £**	**Total: £**	**PV: £**

[4] England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf (page 55)

Unquantified costs and disbenefits

Effective interventions will also need to consider industry attempts to circumvent the policy. For example, the agreement of confectionery manufacturers to phase out king size chocolate bars in 2005 led to the introduction of bars containing multiple portions, ostensibly for sharing or consuming at different times[5]. The industry may look for ways to circumvent the policy, which could potentially become a significant disbenefit to the predicted calorie drop of this policy.

Benefits

The calculation of the benefits of each policy option is based on estimating the reduction in calories consumed per person in the OOH sector via sugary soft drinks. This policy is expected to cut the calorie consumption of visitors to full service and quick service restaurants where free refills are on offer for SSDs. To produce a figure for the estimated savings to the NHS of this policy, a calorie drop per person in the Welsh population is calculated, which came to 0.12kcal per day. The expected health benefits, increases in Economic output, NHS & social care savings for this are estimated using the DHSC Calorie Model to total around £8.5m. This is based on a 25-year estimate of long-term savings in the care needed for morbid obesity and other subsequent diseases that often follow. More detail on the DHSC Calorie model can be found in Annex E.	
Total: £5,430k	**PV: £4,259k**

[5] 'Downsizing: policy options to reduce portion sizes to help tackle obesity' (BMJ, 2015), https://www.bmj.com/content/bmj/351/bmj.h5863.full.pdf (page 2)

Key evidence, assumptions and uncertainties

The size and structure of the OOH sector in Wales has been calculated using Kantar data.

It is unknown what level of free refills are being offered. 97 major outlets are identified in Wales and these are likely to have very high turnover that will exceed the sector average. The 15% estimate of restaurants does not have a strong evidence base.

It is estimated that the market value of sugar sweetened drinks, within the businesses in discussion, is £4.4m. These would be displaced with zero or low sugar drinks.

It is estimated that around 9.8m litres of sugar sweetened drinks were consumed in the OOH sector, and around 1.5m litres within the businesses under discussion. It can therefore be estimated that this number may reduce by 20.1% if the full policy is introduced, saving 0.3m litres of sugar sweetened beverages being consumed per year.

Options

The calculation of the benefits of each policy option is based on estimating the reduction in calories consumed per person in the OOH sector via sugary soft drinks. This is the target number to reduce, which in turn results in cost savings to the NHS, as well as healthier population which has many further benefits to society.

Option 0: Business as usual

This is the do-nothing scenario against which all other options are compared. Option 0 assumes no changes in policy.

Option 1: Restricting Free Refills Only

This option would restrict businesses' ability to offer free refills of sugary drinks based on the Soft Drinks Industry Levy (SDIL) definition. Businesses are already familiar with what drinks fall into the SDIL and therefore complying with this new policy would be straightforward.

Free refills are only offered by a portion of the OOH market. Full-service and quick-service restaurants make up 33.6% of the OOH sector in Wales, and it is assumed that it is only businesses in these categories that are offering free refills.

It is unknown what proportion of businesses are offering refills so we have estimated that 15% of the 33.6% are actively using free refill promotions,

which is 8.4% of the whole OOH sector. This is on the basis that the known businesses offering free refills tend to be larger.

Overall analysis in a study found when participants were offered free refills of all drink sizes, they consumed 20.1% more calories compared with the no refill groups[6]. Therefore, an assumption is made that this policy option would expect to deliver a 20.1% cut in calorie consumption of sugary soft drinks in the out of home sector estimated at 0.61kcal per person (See Annex B). Therefore, a 20.1% cut results in a 0.12kcal reduction per person, per day, bringing the average number of sugary soft drinks calories consumed in the OOH sector down to 12.02kcal. It is important to note, however, that by only introducing a restriction on free refills, businesses may circumvent the policy by increasing portion sizes to maintain the incentives for their customers, negating the effectiveness of this stand-alone policy. On this basis, we assume that the policy is only 50% effective and that the overall drop in calories is reduced to 0.06kcal per person per day.

Option 2: Restricting Portion Sizes Only (to a Pint)

Research into the soft drinks market has suggested that the average portion size served is 455ml (see Annex C). Portions above a pint are extremely uncommon and therefore this policy option is not expected to reduce calorie consumption by any measurable amount.

Option 3: Restricting Free Refills and Portion Sizes Simultaneously

The literature notes the importance of restricting portion sizes in conjunction with the free refill restriction. If only one of the two proposals is implemented, it can be assumed that businesses will capitalise on the freedom to incentivise customers in other ways. Firstly, if unlimited refills only are restricted, businesses will offer larger portions at seemingly better value to the customer, whilst also being more profitable for the business due to economies of scale. Secondly, if larger portions are restricted, businesses will advertise unlimited refills of smaller portion sizes to attract the customer into a good value for money purchase[7]. Therefore, restricting portion sizes alongside restricting free refills will be required to achieve greater effectiveness.

This option combines the benefits of the two previous options. The no refills restriction was estimated to save 0.12kcal per person, per day. However, this would only be the case if portion sizes are restricted too, stopping businesses from swapping their free refill incentives to significantly higher portion sized

---

[6] The State University of New Jersey, 'Evaluating a Public Health Policy: The Effect of a Sugar-Sweetened Beverage Portion Cap on Food and Beverages Purchased, Calories Consumed and Consumer Perception', https://rucore.libraries.rutgers.edu/rutgers-lib/64657/PDF/1/play/ (page 211)

[7] PLoS One, 'Regulating the Way to Obesity: Unintended Consequences of Limiting Sugary Drink Sizes', https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3622664/pdf/pone.0061081.pdf

drinks. With both policies introduced, we estimate it would save an estimated 0.12kcal per person, per day, in the Welsh population. This would see the current 12.14kcal reduce to 12.02kcal.

The DHSC calorie model is used to calculate the monetised benefits of reduced calories on health based on findings in the English impact assessments.

Costs and benefits

Administrative Costs

It is assumed that assessing compliance with this policy will require local authorities to visit qualifying businesses alongside food hygiene inspections, to check their free refill offers and whether any of the SDIL drinks are available.

Assuming outlets are visited every 2 years, we estimate there will be 2,608 visits per year based on the number of outlets in Wales of 5,215. We estimate the additional time required at each outlet for paperwork-based checks is 15 minutes per inspection. By multiplying visits by time required and the uprated hourly wage of £40.01 for Trading Standards Office (TSO), we estimate that total staff costs for enforcement in outlets are around £26k per annum[8].

Assuming familiarisation and dissemination of information to other TSOs will take a total of three hours per Local Authority[9], we estimate that familiarisation costs for all 22 Local Authorities would be around £3k.

Compliance Costs

The OOH businesses affected by the restrictions would not face any additional product assessment costs. The drinks subject to the free refill restrictions are proposed to be only the drinks in scope of the SDIL. Therefore, businesses that currently offer free refills would already understand if the sugar sweetened drinks sold are in scope of the SDIL[10].

All the figures below were derived from two sources: English Impact Assessment 9560[11] and Annex A.

A cost to businesses that offer free refills will be the time to familiarise themselves with the regulations and distribute the information to outlets. We assume that each business will have one manager who is responsible for understanding the regulations and making their outlets aware of the changes. We assume this will take 3 hours on average, due to the varying size of businesses. Using the median hourly wage rate for a manager, uplifted by

---

[8] England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)', Section 303 + 304 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf (page 57)

[9] England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)', Section 304 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf (page 57)

[10] England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf (page 55)

[11] England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)', Section 293 - 300 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf (page 56)

30% to account for non-wage labour costs, the rate is £27.30. We identify large chains offering refills and estimate 97 outlets in Wales. Examples include Five Guys, Toby Carvery, and some Subways. We allow an estimate of 15% of businesses within the classification SIC 5610 offering free refills. Therefore, this brings the total familiarisation costs to £56,081 for the 685 businesses under discussion in Wales.

It is also be assumed that every outlet will also have 2 employees in addition to the manager responsible for understanding the regulations. We assume the employees will be briefed by the store manager, taking an hour of each employee's and manager's time. It is estimated that the uplifted hourly rate for the employees is £13.94. This totals at £77,252 (27.30+13.94+13.94x782 outlets).

The total estimated compliance costs for the OOH businesses that offer free refills is £99,239.

Other Costs

Reduction in Sales and Profits for OOH Businesses:

Businesses that currently offer free refills already include low/zero sugar drinks, as shown clearly in section 2.1.4. OOH businesses will still be able to offer free refills of these drinks. We would expect this policy to shift some customer's choices towards low/zero sugar drinks to take advantage of the free refills offer. For those that still wish to consume a sugary soft drink, they will be able to purchase these in single portions. Both changes in behaviour can be reasonably expected to reduce calories consumed from beverages[12] but without any impact on overall sales and profits.

Reduction in Sales and Profits for Manufacturers / Suppliers:

It is difficult to quantify any potential reduction in sales for manufacturers due to the unknown changes to consumption of no/low sugar drinks in replacement of the sugary drinks affected by this policy. It is likely that many consumers will switch to no/low sugar drinks to take advantage of the free refill promotions available, therefore resulting in a higher demand of no/low sugar drinks production. This should compensate for any reduction in sales of sugary drinks. Manufacturers will potentially face reformulation costs for their drinks but these are expected to be low as most have already reformulated in anticipation of the SDIL.

[12] England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf (page 55)

Impact Assessments

Option 1 – Restrict the offer of free refills on Sugar Sweetened drinks in the Out of Home sector.

Table 1: Summary of costs and benefits – Option 1 (£'000's)

Group affected	Impact	£'000's
Out of Home Businesses: Full Service & Quick Service Restaurants	Transition - Familiarisation	-56
	Transition - Knowledge Sharing	-43
	Lost Profit	0
Total Business Impact		**-99**
Government	NHS Savings	251
	Social Care Savings	295
	Familiarisation	-3
	Enforcement	-430
Total Government Impact		**113**
Wider Society	Health Benefits	3320
	Economic Output	393
Total Wider Society Impact		**3,713**
NPV		**3,727**

Option 3 - Restrict the offer of free refills and larger portion sizes on Sugar Sweetened drinks in the Out of Home sector.

Table 2: Summary of costs and benefits – Option 3 (£'000's)

Group affected	Impact	£'000's
Out of Home Businesses: Full Service & Quick Service Restaurants	Transition - Familiarisation	-56
	Transition - Knowledge Sharing	-43
	Lost Profit	0
Total Business Impact		**-99**
Government	NHS Savings	502
	Social Care Savings	590
	Familiarisation	-3
	Enforcement	-430
Total Government Impact		**659**
Wider Society	Health Benefits	6640
	Economic Output	785
Total Wider Society Impact		**7,425**
NPV		**7,985**

Post implementation review

A post implementation review should take place in 2026.

DRAFT REGULATORY IMPACT ASSESSMENT

PROPOSAL 3 – PRODUCT PLACEMENT PROMOTIONS

Preferred option summary

The following table presents a summary of the costs and benefits for the preferred proposal as a whole. The table has been designed to present the information required under Standing Order 26.6 (viii) and (ix).

<table>
<tr><td colspan="3">Restrict the placement of products which score ‘less healthy’ by NPM and are of most concern for childhood obesity at key locations such as store entrances in the retail sector excluding small and micro businesses.</td></tr>
<tr><td colspan="3">Preferred option: Option 2: End placement of products which score ‘less healthy’ by NPM at key locations such as store entrances, checkouts and end-of-aisles in the retail sector and, are of most concern for childhood obesity (streamlined list).</td></tr>
<tr><td>Stage: Draft - Consultation</td><td>Appraisal period: 2024 – 2051/52</td><td>Price base year: 2024/25</td></tr>
<tr><td>Total Cost
Total: £667m
Present value: £433m</td><td>Total Benefits
Total: £5,683m
Present value: £4,506m</td><td>Net Present Value (NPV):
£4,073m</td></tr>
</table>

Administrative cost

<table>
<tr><td colspan="4">Costs: Trading Standards officers from 22 Local Authorities will need 3 hours of time to become familiar with the regulation and products to which it applies. We assume a small transitional cost and ongoing revenue costs to ensure regulations continue to be observed. It is assumed that Retail Outlets are visited every 2 years. 15 minutes of the visit is assumed to be spent reviewing adherence to these regulations.</td></tr>
<tr><td>Transitional: £3k</td><td>Recurrent: £12k</td><td>Total: £0.3m</td><td>PV: £0.2m</td></tr>
<tr><td colspan="4">Cost-savings: N/A</td></tr>
<tr><td>Transitional: £</td><td>Recurrent: £</td><td>Total: £</td><td>PV: £</td></tr>
<tr><td colspan="4">Net administrative cost: PV £0.2m</td></tr>
</table>

Compliance costs

Transitional compliance costs will be incurred by Retailers. These costs will comprise the time to get familiar with the new regulations, make assessments of which products will be in scope and communicating this information with staff. There will also be more significant costs associated with store planning as well as changes to IT systems.

Familiarisation costs assume 3 Manager hr x Avg Hourly Rate x No. of Outlets for micro & small businesses. Large & Medium business take 15 hrs at HQ for familiarisation and 1 Manager Hr to communicate to each outlet.

Product Assessment costs assume 30mins x Avg Hourly Rate x No of products. Large & Medium Business – 4950 products, Small & Micro - 300

Distributing information to stores 1hr x Avg Hourly Rate x No of stores

Reorganisation of stores to replace HFSS items located in restricted locations is split between Planning and Re-Arranging. Planning costs are £0.75k for medium sized store and £4.5k for large sized stores (>3000sq. ft.). Re-arranging costs are assumed to be £275 per store.

IT Costs for making changes to Online Offerings assume 25 days x Avg Hourly rate x No of businesses.

Going forward there will be ongoing costs associated with assessing new or reformulated products.

Product Assessment costs assume products will be assessed every 2 years and results will be shared with the business. It will take 1h.

Transitional: £5.6m	**Recurrent: £56k**	**Total: £7.5m**	**PV: £6.7m**

Other costs

Retailers are expected to place products at locations which will maximise profits. Consequently, any restriction on their ability to do this is expected to reduce profit. DHSC have developed a methodology to assess the impact on retail sales & profits at checkout, end-of-aisle and store entrances. The impact is partially offset by increased sales of other products in these premium locations and increased sales of HFSS products from the aisles. Overall, retailers are likely to see sales revenues reduce by a net 3%. This will result in an annual net loss of £13m in profit in Wales. HFSS Manufacturers who supply the Retailers will lose sales and therefore profits. This will be partially offset by gains for Non-HFSS Manufacturers. It assumes a net annual loss in profits of £5m for the manufacturers.			
Transitional: £0	**Recurrent: £21m**	**Total: £504m**	**PV:£326m**

Reformulation: Manufacturers may reformulate products in order to promote them in restricted locations. The costs of reformulation could vary substantially from one product to another and have not been captured here. Retailer/Manufacturer relationships: Commercial relationships between retailers and manufacturers can be complex and are beyond the scope of the calculations here. Ingredient Suppliers: Lost profit for ingredient suppliers has not been monetised as it is a second order effect and it is possible that the impact could be caused by other factors.

Benefits

The expected NHS savings for Option 2 are estimated to be around £262m over the 25-year assessment period. Reduced morbidity would also result in reduced cost pressures to the NHS. There would be additional health benefits to the population from reinvesting these savings back into the NHS, these are estimated to be worth around £3,456m. Social care savings would amount to £294m and reduced premature mortality would be expected to deliver an additional £407m economic output through additional labour force participation.	
Total: £5,549m	**PV: £4,419m**

Key evidence, assumptions and uncertainties

The main underlying evidence is from work done by the Childhood Obesity Team from the Department of Health and Social Care (DHSC) in developing Impact Assessments 13012[13] and 9561[2]. The principal assumption is that the methodology and assumptions that this work is built upon for England are equally valid in Wales. It is assumed that the Welsh results can be extrapolated by applying a factor of 6%. This is based on the relative population and NHS budgets in England and Wales. The analysis is also based on the assumption that speciality businesses e.g. Chocolatiers are excluded from scope. As costs and benefits can be significantly influenced by a wide range of factors, consumers may adjust their consumption or purchasing behaviour in response to consuming fewer calories. The analysis is based on three scenarios that capture the range of response from zero compensation to 100% compensation. The central proposition is 40% compensation.

13 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770706/impact-assessment-restricting-checkout-end-of-aisle-and-store-entrance-sales-of-HFSS.pdf

2 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003920/impact-assessment-restricting-checkout-end-of-aisle-and-store-entrance-sales-of-HFSS.pdf

Market Share and sales

The ‘top ten’ retailers account for 85% of Welsh grocery sales in the year ending 20/03/22. These market shares include the sales of some non-food and drink items such as health and beauty products. However, these are expected to be a reasonable reflection of shares within the food only market. In 2021, the Welsh food retail market is worth an estimated £6bn. This includes products bought both in store and online. The Pandemic has accelerated transformation of the food and grocery market with growth coming from discount stores and online offerings.[14]

Table 1: Wales Grocery Market Shares: 52 wks/e 20th March 2022[15]

Tesco	29.0%
Asda	15.2%
Morrisons	9.7%
Aldi	6.7%
Lidl	6.5%
Sainsbury's	6.2%
Bargain Stores	6.1%
Coop	4.4%
Iceland	3.1%
Waitrose	1.8%
M&S	2.6%
Independents & Symbols	1.6%
Internet	0.9%
Other outlets	6.2%
	100.0%

In order to calculate the number of stores in scope of the regulations, the sector has been split by the size of the businesses and size of store based on floor space. Table 2 & 3 shows the grocery retail sector split by size; micro (0-9 employees), small (10-49 employees), medium (50-249 employees) and large (over 250 employees), and by store size.

[14] https://www.igd.com/articles/article-viewer/t/uk-food-and-grocery-market-to-grow-10-by-2022/i/26531
[15] Kantar Total Wales Grocery | Retailer Share and Growth | 52 w/e 20th March 2022

Table 2: Estimated number of Grocery Businesses in Wales by size and floor space[16]

	1-999 sq ft	1000-1999 sq ft	2000-3000 sq ft	>3000 sq ft	
Micro	1,011	667	360	-	2,039
Small	100	66	35	-	201
Medium	-	-	14	-	14
Large	-	-	-	8	8
Total	1,111	733	410	8	2,261

Table 3: Estimated number of Grocery Outlets in Wales by size and floor space

6%	1-999 sq ft	1000-1999 sq ft	2000-3000 sq ft	>3000 sq ft	
Micro	1,150	590	223	-	1,963
Small	444	316	248	-	1,008
Medium	-	-	72	-	72
Large	360	329	94	515	1,298
Total	1,954	1,235	636	515	4,341

Introduction

The aim is to reduce overconsumption of HFSS products and also to encourage businesses to promote healthier products and to further incentivise reformulation.

Restricting the placement of HFSS food and drink products at key selling locations such as store entrances, checkouts and aisle ends in Wales is intended to:

- Reduce overconsumption of HFSS products likely to lead to excess calorie intake and, over time, weight gain while minimising the impact on food purchases that do not contribute to childhood obesity;
- Reduce pester power for parents and impulse purchases of HFSS products resulting from placement at prominent locations;
- Shift the balance of promotions towards healthier options and maximise the availability of healthier products that are offered on promotion, to make it easier for parents to make healthier choices when shopping for their families;
- Assist the wider childhood obesity strategy to reduce circumstances currently contributing to the obesogenic environment;
- Create a level playing field in which businesses that have voluntarily made progress are no longer penalised.

[16] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1008423/impact-assessment-restricting-checkout-end-of-aisle-and-store-entrance-sales-of-HFSS.pdf

Options

Option 0 – Business as Usual (BAU)

This is the business-as-usual scenario against which all other options are compared. Option 0 assumes no changes in age-specific rates of overweight and obesity but does assume that the average BMI of cohorts of individuals increases over time as they age. This increase in average BMI has been based on modelled estimates of current experiences. Under the do-nothing scenario, several supermarkets would continue to voluntarily limit the sales of certain HFSS products at checkouts, and those not currently restricting sales would be expected to continue doing so.

Other policies already in place like the voluntary sugar reduction programme and the SDIL will continue to incentivise businesses to reformulate their products to reduce sugar.

Due to the considerable number of uncertainties which would need to be considered, the do-nothing scenario in this IA does not attempt to quantify the future impact of the policies already announced or any other possible future actions by government.

Option 1 – End placement of products which score 'less healthy' by NPM at key locations such as store entrances, checkouts and end-of-aisles in the retail sector.

Under Option 1, retailers would be prevented from placing HFSS food and drink products at key locations such as store entrances, checkouts and end-of-aisles.

HFSS foods within the above categories in scope would be defined using the 2004/05 Nutrient Profiling Model (NPM).[17]

A list of the product categories included in this option can be found in Option 2 in Annex I.

Specialist retailers who only sell a specific type of HFSS product that is within the categories in scope (e.g. sweets) would be excluded from the location restrictions, as it would be impractical for them to implement this policy and would likely lead to unmanageable disruption to their business.

Product placement in the out of home sector would be excluded. There are a number of practical barriers to this being applied in out of home food outlets. Firstly, as food in the out of home sector tends to be unpackaged, there would be practical challenges with calculating the NPM score of products, due to the lack of nutritional information on pack. Also, out of home food outlets do not have multiple aisles where they could move the items to, as food retailers do. For these reasons out of home food outlets were excluded.

[17] See https://www.gov.uk/government/publications/the-nutrient-profiling-model

Option 2 – End placement of products which score 'less healthy' by NPM at key locations such as store entrances, checkouts and end-of-aisles in the retail sector and, are of most concern for childhood obesity (streamlined list)

The same exclusions discussed above for Option 1 would also apply to Option 2.

Under Option 2, retailers would be prevented from placing HFSS food and drink products which contribute significant sugar and calories to children's diets and are of most concern for childhood obesity, at key locations such as store entrances, checkouts and end-of-aisles. A list of the product categories included in this option can be found in Option 1 in Annex I .

Using a streamlined list of products means the regulations are targeting the products that contribute significant sugar and calories to children's diets, which reduces costs to business, and therefore represents a more proportionate approach.

Costs and benefits

The benefits of restricting promotions for HFSS products are expected to accrue through:

- A reduction in excess purchases and calorie consumption, with a consequent reduction in obesity prevalence;
- A reduction in obesity related morbidity and mortality, resulting in reduced costs for the NHS and an increase in economic output;
- A potential increase in consumption of healthier items, leading to further health benefits.

The main categories of costs to be considered are:

- Transition costs associated with assessing products and understanding the regulation;
- Loss in profit to retailers because of reduced sales of HFSS food and drinks;
- Loss in profit to manufacturers of HFSS food and drinks because of reduced sales.

The magnitude of the costs and benefits could be significantly influenced by wider factors. It is possible, for example, that consumers might adjust their consumption or purchasing behaviour in response to consuming fewer calories. This type of behaviour change is a significant source of uncertainty in the analysis and could have a significant impact on the estimated net present value. As a result, we first estimate the costs and benefits of each option based on no compensation and then adjust these figures to create a central scenario based on an assumption of 40% compensation.

The figures presented are taken from the central estimates, which assume that compensating behaviour by consumers and industry means that 40% of the calories removed from people's diets are replaced.

The net present values of the options are assessed over a period of 25 years. This is much longer than the typical 10-year assessment period used in impact assessments. Ill

health related to being overweight or obese tends to develop later in life. Therefore, a longer period than usual has been chosen to ensure the benefits of these regulations are captured in our analysis.

In Option 2, the central estimates of the total net present value of costs to government and industry are around £433m. This is compared to total benefits of around £4,506m. Over 25 years, expected costs to retailers include total transition costs of £5.7m and lost profit of approximately £254m. Over this period, manufacturers of HFSS products would also experience total lost profits of around £179m while manufacturers of non-HFSS products would see a gain in profit of £87m.

Impact Assessments

Option 1 – End placement of products which score 'less healthy' by NPM at key locations such as store entrances, checkouts and end-of-aisles in the retail sector.

Table 2: Summary of costs and benefits – Option 1 (£m)

Group affected	**Impact**	**Central Estimate (40% Compensatio**
Retailers	Transition - Familiarisation	-0.12
	Transition - Product Assessment	-1.2
	Transition - Distributing Information	-0.13
	Transition - Sharing Information with staff	-0.10
	Transition - Store Planning & Adjustment	-4
	Transition - Changes to IT systems	-0.5
	Transition - Sharing Information with staff (online businesses)	0.0
	Ongoing - Product Assessment	-1
	Net lost profit	-285
Total retailer Impact		**-292**
HFSS Manufacturers	Net lost profit	-241
Total HFSS Manufacturer Impact		**-241**
Other Manufacturers	Gained Profit	81
Total Non HFSS Manufacturer Impact		**81**
Government	NHS Savings	262
	Social Care Savings	294
	Trading Standards - Enforcement	-0.05
Total Government Impact		**557**
Wider Society	Health Benefits	3464
	Economic Output	408
Total Wider Society Impact		**3872**
NPV		**3977**

The competition filter test	
Question	**Answer** **yes or no**
Q1: In the market(s) affected by the new regulation, does any firm have more than 10% market share?	No
Q2: In the market(s) affected by the new regulation, does any firm have more than 20% market share?	No
Q3: In the market(s) affected by the new regulation, do the largest three firms together have at least 50% market share?	No
Q4: Would the costs of the regulation affect some firms substantially more than others?	No
Q5: Is the regulation likely to affect the market structure, changing the number or size of firms?	No
Q6: Would the regulation lead to higher set-up costs for new or potential suppliers that existing suppliers do not have to meet?	No
Q7: Would the regulation lead to higher ongoing costs for new or potential suppliers that existing suppliers do not have to meet?	No
Q8: Is the sector characterised by rapid technological change?	No
Q9: Would the regulation restrict the ability of suppliers to choose the price, quality, range or location of their products?	Yes

The competition filter test conducted for this option indications potential detrimental effects on suppliers in relation to the location available for their products. Further consideration will be paid to this and a full competitive assessment conducted if deemed necessary following the initial consultation.

Option 2 – End placement of products which score 'less healthy' by NPM at key locations such as store entrances, checkouts and end-of-aisles in the retail sector and, are of most concern for childhood obesity (streamlined list)

Table 3: Summary of costs and benefits – Option 2 (£m)

Group affected	**Impact**	**Central Estimate (40% Compensation)**
Retailers	Transition - Familiarisation	-0.12
	Transition - Product Assessment	-1.2
	Transition - Distributing Information	-0.13
	Transition - Sharing Information with staff	-0.10
	Transition - Store Planning & Adjustment	-3.7
	Transition - Changes to IT systems	-0.5
	Transition - Sharing Information with staff (online businesses)	0.00
	Ongoing - Product Assessment	-1.04
	Net lost profit	-247
Total retailer Impact		**-254**
HFSS Manufacturers	Net lost profit	-179
Total HFSS Manufacturer Impact		**-179**
Other Manufacturers	Gained Profit	87
Total Non HFSS Manufacturer Impact		**87**
Government	NHS Savings	262
	Social Care Savings	294
	Trading Standards - Enforcement	-0.03
Total Government Impact		**556**
Wider Society	Health Benefits	3456
	Economic Output	407
Total Wider Society Impact		**3863**

NPV	**4073**

The competition filter test	
Question	**Answer** **yes or no**
Q1: In the market(s) affected by the new regulation, does any firm have more than 10% market share?	No
Q2: In the market(s) affected by the new regulation, does any firm have more than 20% market share?	No
Q3: In the market(s) affected by the new regulation, do the largest three firms together have at least 50% market share?	No
Q4: Would the costs of the regulation affect some firms substantially more than others?	No
Q5: Is the regulation likely to affect the market structure, changing the number or size of firms?	No
Q6: Would the regulation lead to higher set-up costs for new or potential suppliers that existing suppliers do not have to meet?	No
Q7: Would the regulation lead to higher ongoing costs for new or potential suppliers that existing suppliers do not have to meet?	No
Q8: Is the sector characterised by rapid technological change?	No
Q9: Would the regulation restrict the ability of suppliers to choose the price, quality, range or location of their products?	Yes

The competition filter test conducted for this option indications potential detrimental effects on suppliers in relation to the location available for their products. Further consideration will be paid to this and a full competitive assessment conducted if deemed necessary following the initial consultation.

Post implementation review

A post implementation review should take place in 2026.

PROPOSAL 4 – ONLINE PRODUCT PLACEMENT

It is assumed that the impacts of online product placement are covered by the impact assessment for Proposal 3 which covers placement in store. Online is around 10% of total market.

Annex A: Number of OOH Businesses in Wales[18]

It is thought that free refills are only being offered within some restaurants, be that full-service and quick service. This falls under SIC 5610 with 4,565 businesses recorded by ONS. Desk-based research showed no hotels, pubs, or bars offering free refills, although it must be considered that there may be some around the country who are actively offering free refills. Desk research also showed seven large restaurant chains offering free refills and the total number of outlets for these is calculated at 97. Given the uncertainties, and the large size of some of those offering free refills, we allow an estimate that around 15% of outlets may offer free refills (782).

Table 2: Enterprises

- Restaurants and Mobile Food (SIC 5610)
- 4,565

Total Businesses in OOH: 4,565

Table 17: Local Units

- Restaurants and Mobile Food (SIC 5610)
- 5,215

Total Outlets in OOH: 5,215

Chains Offering Free Refills:

- Five Guys: 3 outlets in Wales[19]
- Harvester: 14 outlets in Wales[20]
- Nando's: 13 outlets in Wales[21]
- Pizza Hut Restaurants: 9 outlets in Wales[22]
- Taco Bell: 4 outlets in Wales[23]
- Toby Carvery: 8 outlets in Wales[24]
- Subway: 46 outlets in Wales[25]

Total Chain Outlets Offering Free Refills: 97 (2% of Total Outlets)

15% of Outlets Estimated to Offer Free Refills in Wales: 782 to allow for the large size of many of the 97 units identified.

[18] Office for National Statistics, 'UK Business: Activity, Size and Location (2021) – Table 2 & 17', https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/ukbusinessactivitysizeandlocation
[19] Five Guys, 'Store Locations', https://restaurants.fiveguys.co.uk/wales
[20] Harvester, 'Store Locations', https://www.harvester.co.uk/restaurants
[21] Nando's, 'Store Locations', https://www.nandos.co.uk/restaurants/all
[22] Pizza Hut, 'Store Locations', https://www.pizzahut.co.uk/restaurants/find-a-hut/wales/
[23] Taco Bell, 'Store Locations', https://locations.tacobell.co.uk/
[24] Toby Carvery, 'Store Locations', https://www.tobycarvery.co.uk/restaurants#
[25] Subway 'Store Locations', https://www.subway.com/en-gb/findastore

Annex B: Calculation of Calories in Sugar Sweetened Drinks

Sugar Sweetened Drinks (SSD): Account for 2% of Total Calories[26]

Out of Home (OOH): Account for 25% of Total Calories[27]

SSD in OOH: Account for 0.5% of Total Calories

SSD in OOH: Account for 12.14kcal per person, per day

33.6% of the OOH Sector potentially affected by Refill Policy = 4.08kcal per person, per day

25% of the 33.6% estimated to actively offer free refills = 1.02kcal per person, per day

2,375kcal per person, per annum

Average Calories Consumed by Age and Gender[28]:

- Boys 4-10) 1,710kcal
- Boys 11-15) 2667kcal
- Boys 16-18) 3232kcal
- Girls 4-10) 1609kcal
- Girls 11-15) 2365kcal
- Girls 16-18) 2499kcal
- Men 19-30) 2919kcal
- Men 31-60) 2911kcal
- Men >60) 2638kcal
- Women 19-30) 2296kcal
- Women 31-60) 2239kcal
- Women >60) 2056kcal

Average = 2,428 Daily Kcal

0.5% = 12.14 Daily Kcal

[26] Public Health England: 'Calorie Reduction: The scope and ambition for action', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800675/Calories_Evidence_Document.pdf, (page 16 + 32)

[27] Department of Health & Social Care (England) Consultation Outcome, https://www.gov.uk/government/consultations/restricting-promotions-of-products-high-in-fat-sugar-and-salt-enforcement/outcome/restricting-promotions-of-products-high-in-fat-sugar-and-salt-consultation-response-on-policy-enforcement#policy-summary

[28] Public Health England, 'Calorie Reduction: The scope and ambition for action', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800675/Calories_Evidence_Document.pdf, (page 21+22)

Annex C: Total Consumption of Sugar Sweetened Drinks in the OOH Sector and in Businesses Offering Free Refills

Total UK Soft Drinks Market (2020): 13,521m Litres[29]

7.7% On Premise: 1,041m Litres OOH

24.5% Regular Calories (31kcal+ per 100ml)

6.9% Mid-Calories (21-30kcal per 100ml)

31.4% Sugary Drinks = 327m Litres

Wales 5% (Population Share) = 16.4m Litres of Sugary Drinks Consumed Annually OOH (in 2020)

33.6% (SIC 5610): 5,510,400 Litres Consumed Annually

25% Offering Free Refills: **1,377,600 Litres Consumed Annually in Businesses Offering Free Refills**

Total Soft Drinks Market (2019): 13,659m Litres[30]

13.5% On Premise: 1,844m Litres OOH

25.1% Regular Calories (31kcal+ per 100ml)

6.7% Mid-Calories (21-30kcal per 100ml)

31.8% Sugary Drinks = 586m Litres

Wales 5% (Population Share) = 29.3m Litres of Sugary Drinks Consumed Annually OOH (in 2019)

33.6% (SIC 5610): 9,844,800 Litres Consumed Annually

25% Offering Free Refills: **2,461,200 Litres Consumed Annually in Businesses Offering Free Refills**

The market statistics from 2019 are used as they reflect a more accurate representation of the 'On-Premises' market than 2020, as much of that year was heavily impacted by Covid-19 restrictions.

[29] British Soft Drinks Association, '2021 Annual Report', https://www.britishsoftdrinks.com/write/MediaUploads/BSDA_Annual_Report_2021_FINAL.pdf (page 9+10)
[30] British Soft Drinks Association, '2020 Annual Report', https://www.britishsoftdrinks.com/write/MediaUploads/BSDA_Annual_Report_2020.pdf (page 5+6)

Annex D: Products included in the Soft Drinks Industry Levy

All products subject to the restriction on free refills and larger portion sizes are included within the SDIL Programme. The levy is paid by producers, packagers, brand owners and importers. OOH businesses do not pay the levy directly, but indirectly in the sugar sweetened drinks they purchase.

Soft Drinks Industry Levy

1. In 2016, the UK Government announced the introduction of the Soft Drinks Industry Levy to help reduce children's sugar intakes by encouraging manufacturers to reformulate their drinks. The levy came into effect on the 6th of April 2018.
2. A drink is liable for the Soft Drinks Industry Levy if it meets all of the following conditions:
    - It has had sugar added during production, or anything (other than fruit juice, vegetable juice and milk) that contains sugar, such as honey
    - It contains at least 5 grams (g) of sugar per 100 millilitres (ml) in its ready to drink or diluted form
    - It is either ready to drink, or to be drunk it must be diluted with water, mixed with crushed ice or processed to make crushed ice, mixed with carbon dioxide, or a combination of these
    - It is bottled, canned or otherwise packaged so it is ready to drink or be diluted
    - It has a content of 1.2% alcohol by volume (ABV) or less
3. A detailed list of what is classed as sugar for the purposes of the levy can be found in the guidance published by HM Revenue & Customs[31].
4. The levy doesn't apply to drinks that are:
    - At least 75% milk
    - A milk replacement, like soya or almond milk
    - An alcohol replacement, like de-alcoholised beer or wine
    - Made with fruit juice or vegetable juice and don't have any other added sugar
    - Liquid drink flavouring that's added to food or drinks like coffee or cocktails
    - Infant formula, follow on formula or baby foods
    - Formulated food intended as a total diet replacement, or dietary food used for special medical purposes
5. Again, a more detailed explanation of the products excluded from the levy can be found in the guidance published by HM Revenue & Customs.

[31] https://www.gov.uk/guidance/check-if-your-drink-is-liable-for-the-soft-drinks-industry-levy

Annex E: The DHSC Calorie Model

1. This document explains what the Calorie Model is, how it works and how it supports policy development. It also provides a brief history of how the model has developed over time.

What is the Calorie Model?

2. The Calorie Model is a simulation model, written in R, developed by analysts within the Department of Health & Social Care (DHSC). It draws on earlier modelling work developed by Public Health England (PHE).
3. Its purpose is to model the long-term impacts of policies that affect calorie intake at a population level. It uses estimates of change in calorie intake, along with other assumptions, to estimate the effect on health outcomes, NHS treatment costs, social care costs and changes in economic output.
4. Typically, the model is used to quantify the benefits associated with reductions in calories, but it can also model increases.
5. The model is calibrated for the population in England[32] using 2016 data as the baseline[33].

How does the model work (in overview)?

6. The Calorie Model is a cohort-based Markov model[34]. That means that the population is divided into annual cohorts based on their year of birth, and the health of each cohort is modelled over time based on their expected body mass index (BMI) and the associated chances of acquiring an obesity-related condition. A change in calorie intake will affect BMI, which in turn affects the likelihood of ill health.
7. To track health over time, the members of each cohort are divided into one of several states: healthy, diagnosed with an obesity-related disease, or deceased. Each year, transitional probabilities are used to estimate how many people will change state, and new births are added in. The expected prevalence of obesity-related conditions, and associated impacts, can be estimated accordingly.
8. The effects of a policy intervention are modelled using a control and treatment approach, with a control scenario assuming no policy implementation, and a treatment scenario(s) assuming a change in calorie intake. The effects of the policy are measured by comparing the two scenarios over time.

What outputs does the model produce?

9. The main outputs for any given scenario are:

- total net benefit (or cost) in net present value terms, likely to result from a calorie change, comprising:
    - monetised value of any net change in health (measured in QALYs)[35];

[32] Model results can be applied to the rest of the UK by applying a pro-rata adjustment based on population size. This may not take full account of demographic and health-related differences but should suffice on an indicative basis.

[33] WeuseHealthSurveyforEngland(HSE)andOfficeforNationalStatistics(ONS)populationdataandprojections.

[34] Furtherbackgroundinformationaboutthistypeofmodelisavailableathttps://arxiv.org/abs/1702.03252.

[35] Quality-adjusted life years (QALYs) are the standard currency used in health evaluations to measure the duration and quality of life combined. A value of 1.00 represents a year of life in perfect health. Someone living with an obesity-related condition is assumed on average to have a lower quality of life and/or a lower life expectancy than someone of similar age

- net change in NHS treatment costs;
- net change in social care costs; and
- net change in (some) economic productivity impacts.

- a timeline, showing when these effects are expected to occur.

- the number of premature (under age 75) deaths expected in the scenario and compared with the control.

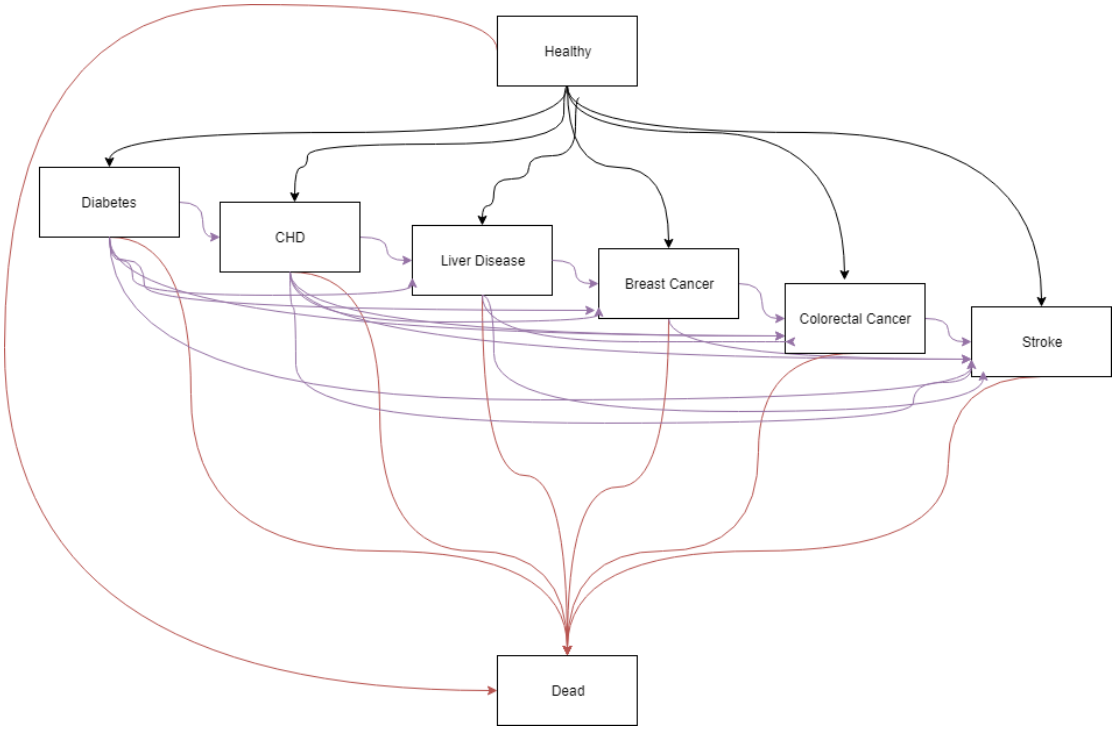
10. The model also allows more detailed interrogation of (for example) different age groups or BMI changes, and it can also provide sensitivity analysis around input parameters.

How does the model work (in detail) and what assumptions are used?

11. The main input parameter is the expected **change in calorie intake** per person per day[36].
12. This value (or range of values) must be created outside the model, using whatever research, analysis or estimation techniques are available. The calorie model can explore the effect of a calorie change and perform sensitivity analysis around any assumed figure. But it cannot identify the correct calorie value to use.
13. The calorie change can be varied according to the **age and gender of the population affected**. This allows (for example) policies that focus on children only to be assessed.
14. Changes in weight and BMI caused by the reduction in daily calories are calculated (see para 17 and footnote 6 for the methodology) and are used as a starting point for the remainder of the analysis within the model.
15. The model then considers the implications of the calorie imbalance reduction on six diseases associated with obesity: **type 2 diabetes, coronary heart disease, stroke, colorectal cancer, breast cancer and liver disease**. This is done by considering changes in prevalence and mortality rates for each disease caused by changes in BMI to calculate the number of deaths avoided in the treatment scenario.
16. The model makes some allowance for comorbidities. In previous versions, the only transition an individual in a disease state could make was to move to the dead state or else stay in the relevant disease state, the possibility of disease to disease transition has since been added to model comorbidities. However, the model has no state memory and so when an individual undergoes a disease to disease transition, they no longer incur the costs associated with their first disease. To reduce the impact of this lack of state memory disease to disease transitions are only allowed from less severe to more severe diseases. The order of severity is shown here, with severity increasing from left to right:

without that condition. The social value of QALYs (i.e. the value placed on them by the public) is £60,000 each. Further detail on how and why QALYs are used is provided in the Treasury Green Book (page 72) at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

[36] Equivalent inputs (such as an expected change in weight or BMI status) can also be used with appropriate conversion upfront.



Text-only description: The order of severity in the model is: type 2 diabetes, coronary heart disease, liver disease, breast cancer, colorectal cancer, stroke.

BMI analysis

17. Individual weights are modelled using the differential equations from Hall et al[37]. This approach assumes an individual's weight to consist of body fat, and fat-free mass (summed together to give the total body weight). The BMI projection through life is done by considering the imbalance between energy in and energy out, and by assuming that an individual will remain on the same BMI percentile through life. The model also draws on research from Ara et al[38] to model how the BMI of the control group would change over time. This evidence was based on an overweight and obese population but is assumed in the absence of anything superior to provide a reasonable approximation for those with a healthy BMI.
18. Differential equations were implemented in the model using the deSolve[39] package in R. The original model predicted the same weight loss per kcal reduction regardless of original body weight, which was noted at the time as being a necessary simplification. This limitation has been removed and the use of the differential equations in the new model forecasts a greater reduction in body weight per kcal reduction in diet in individuals with more excess weight.
19. These updates allow us to model changes in weight that occur in childhood. The equations include a growth term which tends to zero at age 18, meaning the model naturally transitions from childhood into adulthood.

[37] Hall KD, Butte NF, Swinburn BA, Chow CC. Dynamics of childhood growth and obesity: development and validation of a quantitative mathematical model. The lancet Diabetes & endocrinology. 2013 Oct 1;1(2):97-105.

[38] Ara, R., L. Blake, L. Gray, M. Hernández, M. Crowther, A. Dunkley, F. Warren et al. "What is the clinical effectiveness and cost-effectiveness of using drugs in treating obese patients in primary care? A systematic review." Health technology assessment (Winchester, England) 16, no. 5 (2012)

[39] "deSolve: Solvers for Initial Value Problems of Differential Equations". [Online]. Available: https://cran.rproject.org/web/packages/deSolve/index.html

20. There is no evidence available to link excess weight to the modelled conditions during childhood and hence no health benefits have been modelled during childhood. If any undiscovered associations exist, this would imply our calculations underestimate the benefits.

Groups of people considered within the model

21. The model splits the population by age, sex, and 5 BMI categories: underweight, healthy weight, overweight, obese, and very obese. Age can be modelled in individual years or in grouped categories as desired. Age-specific parameters (such as mortality rate, or incidence of a condition) are applied at the correct time as required.
22. Some weight loss health benefits occur in adults that are not overweight but have a BMI greater than 22 kg/m^2. The risk of the six health conditions modelled increases linearly with a BMI level of 22 upwards, and so including a healthy weight group in the model allows the extra benefits to be modelled. Underweight is modelled as a separate group to avoid any bias.
23. The starting population is defined by the user, meaning a policy can be considered that only applies a calorie reduction to children, to children and adults, or only applies to adults.
24. The new model utilises Markov modelling to calculate the transitions of the population between states, where states are defined as healthy, having a condition (where each condition is a separate state), or deceased. The Markov modelling was handled by the heemod[95] package in R. The probabilities of being in a state are used as inputs into the heemod package, which can then simulate how the states will develop over time, starting the model with 100% of the population in the healthy state.
25. For every cycle of the Markov model (equivalent to one year), the model calculates what proportion of the population will be in each state using the predicted probabilities (which as in the original model, are BMI-dependent). This gives a trajectory of the proportion of the total population in each state every year.
26. The previous model considered the possibility of people living with one condition but dying of another. This version of the model has made the simplification that people have no more than one condition given there is currently a lack of evidence on the health effects of having several of these conditions.

Calculating results

27. **Savings to the NHS** are calculated from the reduced treatment requirements for each disease.

28. **Economic productivity effects** are assessed in two categories. First, reductions in mortality are used to calculate the impact of mortality on economic output from an increased workforce. This is done by considering everyone within a cohort to earn the median wage of a person of that age and gender, with a larger workforce present in the treatment scenario.

29. Secondly, the model calculates the impact of morbidity on economic output using an employment rate that varies with disease state. This change has been made to reflect the lower productivity and rates of employment seen for individuals with one of the six modelled diseases.

30. **Costs of social care** savings are calculated due to a reduced proportion of overweight, obese, and morbidly obese individuals and hence fewer people needing social care in the

treatment scenario. This assumes that the probability of requiring social care increases with BMI.

31. **Changes in QALYs** are calculated from the reduced number of deaths and the reduction of people living with the diseases. These are then converted into monetised QALY using a conversion of how much society values a QALY.

32. People who fall ill with an obesity-related illness in later life may already be in less than perfect health. Accordingly, the model does not assume a QALY value of one for individuals in the "healthy" state (which in model terms means they are free of obesity-related illness). Instead, an age detriment is applied to all QALY values. This is done to allow for the increased prevalence of diseases not explicitly included in the model at older ages.
33. The model uses a QALY disease detriment to calculate the QALY value for an individual in the disease state.

34. **Discount rates** are applied to monetary values to account for changes in the treatment of costs and benefits that arise over different periods of time. This allows future values to be considered at present value in line with Treasury Green Book principles.

35. Results can be modelled over a **user-defined timeframe**. For most analysis, a longer timescale is considered appropriate, as many of the health benefits do not arise until middle age or older. Equally, uncertainty increases as the forecast period widens. Typically, a timescale of between 20 and 50 years is considered reasonable.
36. The model can be run for a longer time-period and (based on ONS population projections) will add new children each year who will be born into the model. This means a policy that runs for multiple years can be modelled on children who will be born during the duration of the policy.
37. Once a policy has finished running, the model will stop adding new children to the population. However, it will continue to model benefits on the existing population for as long as the user defines. This allows the benefits that do not occur until much later in life to be modelled over the lifetime of the population.

How robust and reliable is the model?

38. The model has been developed and enhanced over several years, reflecting both changes in evidence and improvements in modelling capabilities. The model has been independently assured and the results have been used to support economic analysis in published Impact Assessments on a regular basis. The analysis is best available.
39. However, the model does have several significant limitations.
    - It predicts the effect of a given change in calorie intake. It cannot predict the effect of policy on calorie intake, and so is reliant on the external analysis used to produce such estimates.
    - The model, of necessity is a simplified representation of real-world events. It does not consider all potential health conditions, all types of individual circumstances and all types of economic impact.
    - The model assumes that past performance (in terms of treatment costs, transition probabilities, population profiles and many other parameters) are a reasonable basis from which to predict the future.
    - Results will vary according to the evaluation period chosen.
40. Work continues over time to refine and improve the model and mitigate any limitations. Sensitivity analysis and optimism bias are both regularly used to ensure any model results are interpreted and used appropriately.

Developmental history of the model

41. PHE first developed a weight management economic assessment tool in 2014.

42. This was used to support analysis on sugar reduction and later calorie reduction, and through a series of changes eventually became Version 1 of the Calorie Model, developed by DHSC and PHE working together.
43. The model and its assumptions were the subject of a Technical Consultation Document[97] which DHSC published in 2018.
44. The original model was developed in Microsoft Excel, but an upgraded version was developed in the "R" programming language, by DHSC analysts following the consultation. This "Version 2" of the model was more flexible and it allowed more accurate modelling of weight loss or gain, a longer evaluation period (if desired) and greater ability to model different groups of people. It became possible to model adults and children separately.
45. These "Version 2" changes were published in 'Further advertising restrictions for products high in fat, salt and sugar: impact assessment': Annex E[98].
46. Version 3 (the current model) was developed by DHSC analysts in late 2019 and is now in use. This version added liver disease to the model, added a limited capability for measuring comorbidities, extended the scope of the economic productivity analysis, and improved the accuracy of the QALY calculations, by reflecting the deterioration in health that naturally occurs as the population ages.
47. Quality assurance (QA) was carried out in line with the principles set out in the Government Aqua book. PHE provided independent assurance to complement the work within DHSC.

Further details on the history and development of the model can be found in the published documents mentioned (see footnotes).

Annex F: Calorie and Sugar Reduction Programmes

Soft Drinks Industry Levy

1. In 2016, the UK Government announced the introduction of the Soft Drinks Industry Levy to help reduce children's sugar intakes by encouraging manufacturers to reformulate their drinks. The levy came into effect on the 6th of April 2018.
2. A drink is liable for the Soft Drinks Industry Levy if it meets all of the following conditions:
    - It has had sugar added during production, or anything (other than fruit juice, vegetable juice and milk) that contains sugar, such as honey
    - It contains at least 5 grams (g) of sugar per 100 millilitres (ml) in its ready to drink or diluted form
    - It is either ready to drink, or to be drunk it must be diluted with water, mixed with crushed ice or processed to make crushed ice, mixed with carbon dioxide, or a combination of these
    - It is bottled, canned or otherwise packaged so it is ready to drink or be diluted
    - It has a content of 1.2% alcohol by volume (ABV) or less
3. A detailed list of what is classed as sugar for the purposes of the levy can be found in the guidance published by HM Revenue & Customs[40].
4. The levy doesn't apply to drinks that are:
    - At least 75% milk
    - A milk replacement, like soya or almond milk
    - An alcohol replacement, like de-alcoholised beer or wine
    - Made with fruit juice or vegetable juice and don't have any other added sugar
    - Liquid drink flavouring that's added to food or drinks like coffee or cocktails
    - Infant formula, follow on formula or baby foods
    - Formulated food intended as a total diet replacement, or dietary food used for special medical purposes
5. Again, a more detailed explanation of the products excluded from the levy can be found in the guidance published by HM Revenue & Customs.

Calorie Reduction Programme

[40] https://www.gov.uk/guidance/check-if-your-drink-is-liable-for-the-soft-drinks-industry-levy

6. On average, both children and adults are consuming too many calories on a regular basis. Amongst the government's commitments in the *Childhood obesity: a plan for action* was for Public Health England to lead a structured and closely monitored programme to improve every day food and drink. As part of this Public Health England developed the calorie Reduction Programme to encourage manufacturers to revise and reformulate their products to lower the number of calories they contain.

7. The list of product categories to be included within the calorie reduction programme will be confirmed after engagement with stakeholders. However, Public Health England have indicated that the following product categories will be included in the programme:

    - Bread with additions (e.g. olives, cheese etc.)
    - Crisps and savoury snacks
    - Savoury biscuits, crackers and crispbreads
    - Potato Products (e.g. chips, croquettes, mashed potato etc.)
    - Sausages (raw and cooked) and sausage meat products, frankfurters, hotdogs and burgers
    - Meat, fish and vegetarian pastry pies and other pastry products
    - Cooking sauces and pastes
    - Table sauces and dressings
    - Pasta/ rice/ noodles with added ingredients and flavours
    - Ready meals with carbohydrate accompaniment (potato, rice, noodles, pasta, etc.) – fish, meat and meat alternatives
    - Meal centres without carbohydrate accompaniment (potato, rice, noodles, pasta, etc.) – fish, meat and meat alternatives
    - Prepared dips and composite salads as meal accompaniments (e.g. coleslaw, potato salad, guacamole, salsa etc.)
    - Pizza
    - Egg products/ dishes (e.g. quiche)
    - Food to go e.g. sandwiches boxed main meal salads etc.

These products have been included because they contribute significantly to children's calorie intakes and there is scope for substantial reformulation and/ or portion size reduction. A more detailed list of products and the reformulation targets can be found in the guidance published by Public Health England[41].

[41] https://www.gov.uk/government/publications/calorie-reduction-the-scope-and-ambition-for-action

Sugar Reduction Programme

9. A further commitment in the *Childhood obesity: a plan for action* was to launch a broad structured sugar reduction programme to remove sugar from everyday products. All groups of the population, particularly children, are consuming far too much sugar. This increases the risk of excess calorie consumption and weight gain, which, over time, can lead to obesity.

10. The sugar reduction programme challenges manufacturers to revise and reformulate their products to reduce the amount of sugar they contain. A list of product categories included in the programme is below:

    - Breakfast cereals
    - Yoghurt and fromage frais
    - Biscuits
    - Cakes
    - Morning goods
    - Puddings
    - Ice cream
    - Sweet confectionary
    - Chocolate confectionary
    - Sweet spreads
    - Milk based drinks and fruit juices

These products have been included because they contribute significantly to children's sugar intakes. Again, a more detailed list of the products included in the scheme and the reformulation targets can be found in the guidance published by Public Health England[42].

[42] https://www.gov.uk/government/collections/sugar-reduction

ANNEX G: Impact of promotions on sales and profits Impact of price cuts and multi-buy promotions on sales

1. Public Health England commissioned Kantar Worldpanel to investigate the role that price promotions play in stimulating changes in purchasing levels, specifically for foods and drink containing high levels of sugar[43]. This study examined Kantar Worldpanel's representative sample of 30,000 British households over 2 years up to the 30th December 2018.

2. It should be noted that only price promotions occurring in the 'Big Four' supermarkets – Tesco, Asda, Sainsbury and Morrison's were included in this analysis. As a result, this assessment refers only to a subset of the overall retail market. Together, these four supermarkets comprise approximately 68% of the grocery market[44].

3. The Kantar Worldpanel data splits price promotions into temporary price reductions (TPR), multi- buy and extra free. Regarding the types of promotions discussed earlier, multi-buy in the Kantar Worldpanel data covers multi-buys, combination offers and linked offers, which are all forms of volume offers. Temporary price restrictions cover was/now prices and after promotion or introductory price offers. Extra free is a promotion that occurs when an enlarged pack size is created by the manufacturer, and where the label states that a proportion of the product is free. These promotions are far less common and account for less than 1% of total grocery spend and is therefore not separated out into individual promotional mechanisms.

4. Analysis from the Kantar Worldpanel data suggests that the impact of price promotions is inherently short term. Promotions generate short term uplifts in sales by encouraging promotionally motivated shoppers to participate. In effect, promotions are a means of buying market share amongst promotionally sensitive shoppers. These effects are always short term, in the sense that the sales uplift falls away as soon as the promotion ends, leaving a brand selling at the same levels seen prior to the promotion. In the Fast-Moving Consumer Good (FMCG) marketing environment this fact is not always well understood and there are plenty of myths about the desired role of promotions in convincing shoppers to switch brands permanently after a discounted trial. Numerous promotional studies undertaken by

---

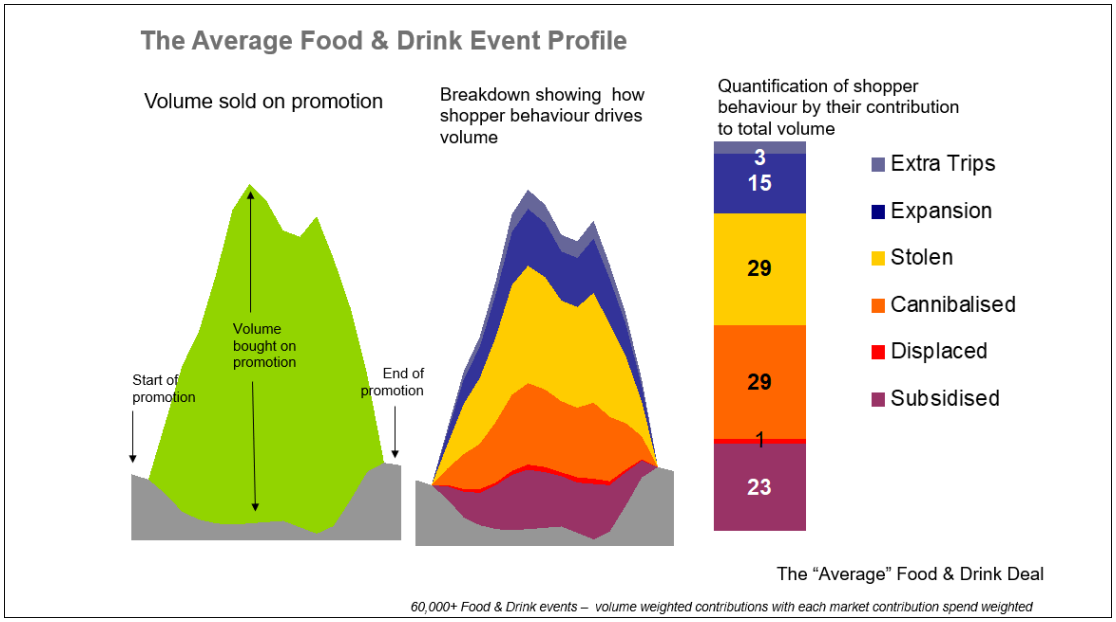
[43] An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, a research project for Public Health England conducted by Kantar Worldpanel UK, 2020. Availble here: https://www.gov.uk/government/publications/sugar-reduction-from-evidence- into-action
It is an update of Sugar Reduction: The evidence for action - Annexe 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, Public Health England, 2015. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470175/Annexe_4._Analysis_of_price_promo tions.pdf

[44] Grocery Market Share, Kantar Worldpanel, 2019. https://www.kantarworldpanel.com/en/grocery-market-share/great-britain

Kantar Worldpanel in a wide range of categories have provided no reliable evidence to support this view.

5. As it does not appear that price promotions have any long-term effects on price, it is important to assess the impact that promotions have on short terms sales uplifts. Figure 2 below displays the estimated breakdown in uplifted sales volumes during a price promotion, as estimated by Kantar Worldpanel.

Figure 2 The volume decomposition of deals[45]



6. The constituent classifications are defined as:

- *Subsidised* – represents the volume of the promoted product that shoppers would have been expected to buy at the time of the promotion, in the same store, irrespective of whether there was a promotion or not.
- *Displaced* - is the volume of the product that would have been purchased in subsequent weeks in the same store. These purchases have been brought forward.
- *Cannibalised* - is the volume that would have come from sister products within the promoting manufacturers' portfolio e.g. swapping between flavours within the same brand.

[45] An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, a research project for Public Health England conducted by Kantar Worldpanel UK, 2020. Availble here: https://www.gov.uk/government/publications/sugar-reduction-from-evidence- into-action
It is an update of Sugar Reduction: The evidence for action - Annexe 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, Public Health England, 2015. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470175/Annexe_4._Analysis_of_price_promo tions.pdf

- *Stolen* – represents the volume that is taken from competitor products e.g. Pepsi stealing sales from Coca Cola.
- *Expansion* - represents growth from faster than expected return times to the category after a shopper participates in a promotion. This expansion effect is caused by shoppers purchasing above average quantities of the category that is then not fully offset by delayed repurchase.
- *Extra Trips* - are unexpected purchases that appear to have been motivated by the promotion.

7. The resulting volume breakdown shows that most of the volume under the sales spike is a result of shoppers shifting purchasing from competing products whether owned by the promoting manufacturer or otherwise. This data shows that 58% (Adding Cannabilised and stolen classifications) of the volume bought on promotion is accounted for by product switching, with a further 24% either being subsidised or brought forward consumption. The remaining 18% of sales volume represent the net growth in sales from volume that would not have been purchased if not for the promotion.

8. It is important to consider that this data is unable to directly establish if this incremental volume is being consumed but in the case of food and drink, we assume that a significant proportion of this will be. Increased amounts of product kept in stock in the home and higher food wastage (especially on short shelf life items) are also further explanations to consider.

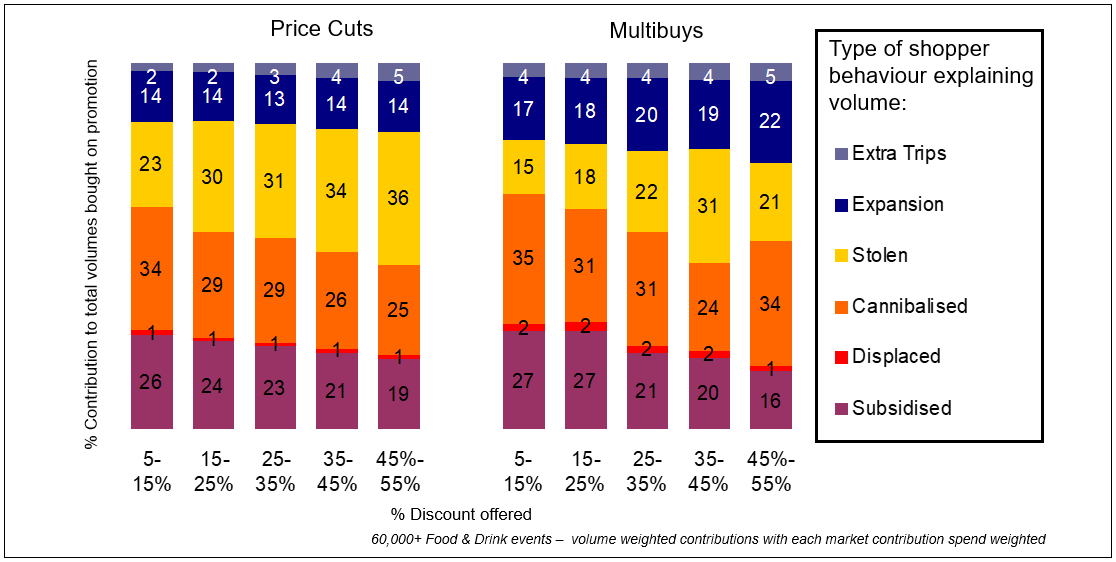
9. While this clearly displays uplifted sales within product categories, it is possible that consumers respond by reducing consumption of goods from other categories. To examine this, Kantar assessed the correlation between sales volumes of competing and complementary product categories. Overall, positive correlations were found between different categories of high sugar products, for example chocolate confectionary and sugar confectionary. In contrast, negative correlations were more often found between 'unhealthier' products such as chocolate and those with healthier characteristics such as fruit and salad.

10. Based on this analysis, it appears unlikely that, for products with high sugar content, the uplift in sales generated by price promotions would be offset by a reduction in sales of other products with high sugar content.

11. Figure 3 displays the estimated breakdown in uplifted sales volume during price cuts and multi- buys, split by the size of discount offered.

Figure 3 Promotional volume percentage decomposition by type of price promotion and size of discount[46]

[46] An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, a research project for Public Health England conducted by Kantar Worldpanel UK, 2020. Availble here: https://www.gov.uk/government/publications/sugar-reduction-from-evidence- into-action
It is an update of Sugar Reduction: The evidence for action - Annexe 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, Public Health England, 2015.



12. The data indicates that for both types of promotion, as the size of the discount increases, so does the proportion of sales that are extra trips or expansion (i.e. additional sales to the product category). Furthermore, multi-buys result in a greater proportion of additional sales than temporary price cuts. This is expected, as consumers are required to purchase additional quantities of the product to benefit from the discount.

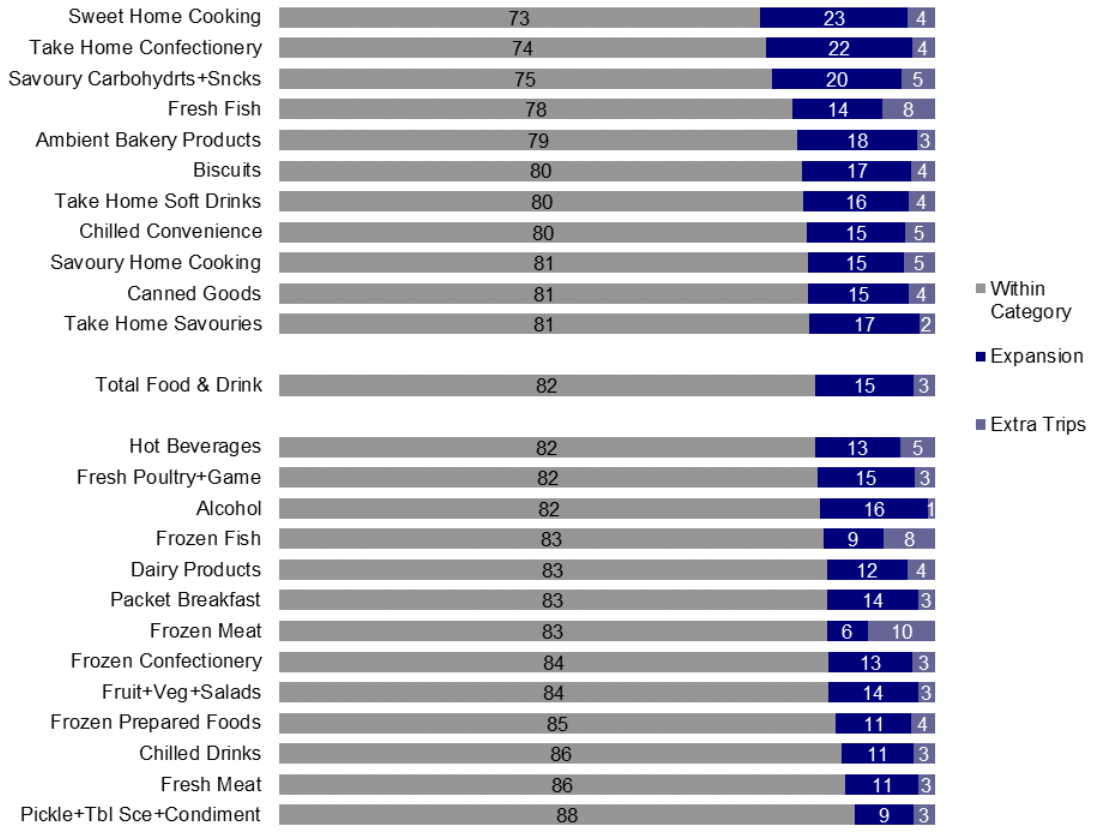
13. Figure 4 shows how incremental volumes amongst higher sugar categories tend to be proportionally greater where products are more discretionary or more treat and special occasion oriented. Notable categories are confectionery, soft drinks and bakery. This is supported by evidence from Scotland, which found that "discretionary, less healthy food and drink categories are more frequently purchased on promotion compared to the staple, healthier categories"[47].

Figure 4 Category incremental proportions for promotions on higher sugar categories[48]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470175/Annexe_4._Analysis_of__price_promo tions.pdf

[47] Foods and drinks purchased into the home in Scotland using data from Kantar Worldpanel, Food Standards Scotland, 2016.
http://www.foodstandards.gov.scot/downloads/Food_and_Drinks_Purchased_into_The_Home_in_Scotland_report.pdf

[48] An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, a research project for Public Health England conducted by Kantar Worldpanel UK, 2020. Availble here: https://www.gov.uk/government/publications/sugar-reduction-from-evidence- into-action
It is an update of Sugar Reduction: The evidence for action - Annexe 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, Public Health England, 2015.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470175/Annexe_4._Analysis_of__price_promo tions.pdf



14. Such categories tend to have run promotions that have been more incremental as drivers of extra volume and overall more impulsive and discretionary categories appear to hold more potential for shoppers to increase typical take home volumes and use up this volume faster.

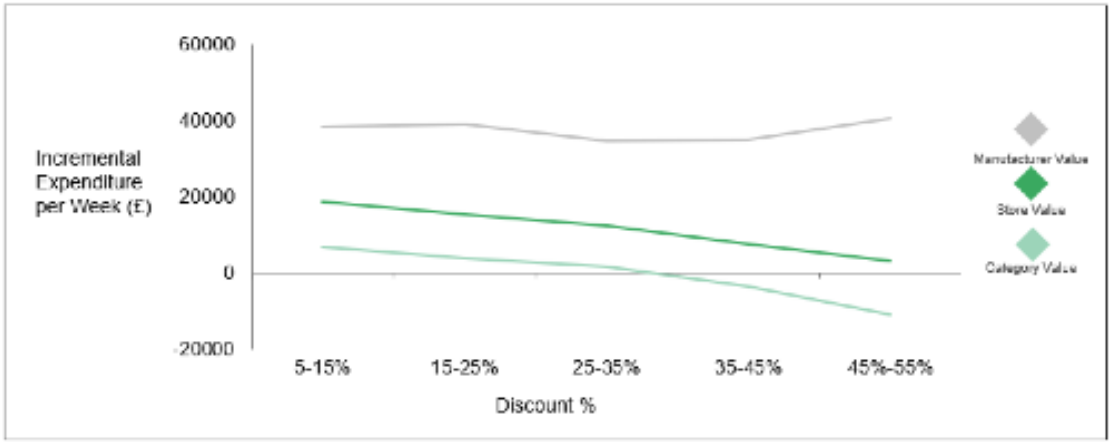
Impact of promotions on manufacturer and retailer profits

15. Individual promotions deliver clear increases in product sales for manufacturers and retailers. However, promotions for a specific brand do not occur in isolation – they form part of a product category in which other brands can be expected to discount in a similar fashion.

16. We have engaged extensively with businesses and trade bodies in the retail and manufacturing sectors to better understand the relationship between manufacturers and retailers with regard to promotional strategies. Although businesses have generally been reluctant to share detailed information about how promotional strategies are determined and how the relationship between manufacturers and retailers works, it was commonly acknowledged by businesses that promotions are agreed between the manufacturer and the retailer through negotiation. The details of a promotional strategy are dependent on many factors such as the type of product, seasonality, estimated sales, and they are often decided months in advance and agreed in contracts between the manufacturer and retailer.

17. Kantar assessed the impact of how differing levels of discount affect manufacturer, store and category revenue. These results are summarised in Figure 5 below.

Figure 5 Average impacts on shopper expenditure by discount[49]



18. Regardless of the level of discount offered, manufacturers and stores typically see increased revenue from implementing a discount. However, once discounts reach above 45%, the expenditure return from promotions for the product category decreases. Kantar estimate that this occurs for approximately 4 out of every 10 promotions.

19. With 4 out of 10 promotions reducing category expenditure (but greatly increasing the quantity sold), there are clear pressures on retailer and manufacturer profit margins because of promotions. Losses on individual promotions might be accepted as part of wider pricing decisions and strategy. The idea of 'Loss leaders' is a well-known pricing strategy used to draw customers into stores and stimulate other sales on more profitable items. Promotions may also be necessary to ensure brand prominence within stores, with the existence of competitor promotions encouraging subsequent promotions.

20. However, if we look at it from a broader category perspective (encompassing all retailers and manufacturers operating in that food or drink market), the benefit that any one manufacturer enjoys by stealing from competitor brands is unlikely to hold much benefit. Movements from one brand to another (i.e. from full priced to discounted alternatives) will tend to generate reductions in total category expenditure unless these gains are offset by increased volume sales.

21. For retailers, the competition between different manufacturers within product categories is less important, as stores stocking a range of brands will generate profit from sales across all products. They do however benefit from some transferred

[49] An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, a research project for Public Health England conducted by Kantar Worldpanel UK, 2020. Available here:https://www.gov.uk/government/publications/sugar-reduction-from-evidence- into-action
It is an update of Sugar Reduction: The evidence for action - Annexe 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, Public Health England, 2015.

spending from their retail competitors. Most shoppers now shop in a range of different stores, so being tempted to spend on a promotion tends to prevent a degree of purchasing in competitor outlets. Promotions do not often cause a loss in sales value for manufacturers, but in a quarter of cases the promotion causes a loss for the retailer[50].

[50] An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, a research project for Public Health England conducted by Kantar Worldpanel UK, 2020. Availble here: https://www.gov.uk/government/publications/sugar-reduction-from-evidence- into-action
It is an update of Sugar Reduction: The evidence for action - Annexe 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar, Public Health England, 2015. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470175/Annexe_4._Analysis_of_price_promotions.pdf

Annex H: HFSS Definition

1. There are several possible ways of assessing the nutritional content of food. For the purposes of this IA, it has been assumed that the healthiness of products will be defined using the Food Standards Agency's 2004/5 Nutrient Profiling Model (NPM)[51].

2. The NPM was developed by the FSA to provide Ofcom, the broadcast regulator, with a tool to differentiate foods on the basis of their nutritional composition. Ofcom uses the outputs from the model to regulate the television advertising of foods to children.

3. It scores foods based on their nutritional content. The nutrients considered are split into two categories – A and C. The score for 'C' nutrients is subtracted from the score for 'A' nutrients to give the final score. A higher score indicates a more HFSS product.

4. 'A' nutrients consist of energy, saturated fat, total sugar and sodium. 'C' nutrients consist of fruit, vegetables and nut content, fibre and protein. Therefore, a food scoring highly on 'A' nutrients is not automatically classified as HFSS, only if it additionally scores little on 'C' nutrients.

5. Foods scoring 4 or more points, or drinks scoring 1 or more points, are classified as "less healthy". These 'less healthy' products provide the definition for HFSS products used here.

6. All food and drink are scored, there are no exemptions.

Calculations

7. There are three steps to working out the score: calculating 'A' points, calculating 'C' points and combining these into an overall score.

Calculating 'A' points

8. Total 'A' points are calculated by the following formula: (points for energy) + (points for saturated fat) + (points for sugars) + (points for sodium). The points for each nutrient are determined based on the amount of each per 100g of the food or drink, according to Table B.1 below.

Table B.1 Points scored by 'A' category nutrients per 100g

Points	Energy (kJ)	Sat Fat (g)	Total Sugar (g)	Sodium (mg)
0	≤335	≤1	≤4.5	≤90
1	>335	>1	>4.5	>90

[51] https://www.gov.uk/government/publications/the-nutrient-profiling-model

2	>670	>2	>9.0	>180
3	>1005	>3	>13.5	>270
4	>1340	>4	>18.0	>360
5	>1675	>5	>22.5	>450
6	>2010	>6	>27.0	>540
7	>2345	>7	>31.0	>630
8	>2680	>8	>36.0	>720
9	>3015	>9	>40.0	>810
10	>3350	>10	>45.0	>900

9. A maximum of ten points can be awarded for each nutrient. Calculating ‘C’ points

10. Total ‘C’ points are calculated by the formula: (points for %fruit, veg and nut content) + (points for fibre [either NSP or AOAC]) + (points for protein). The points for each nutrient are determined based on the amount of each nutrient per 100g/percentage nutrient component of the food or drink, according to Table B.2 below.

Table B.2 Points scored by ‘C’ category nutrients per 100g

Points	Fruit, Veg and Nuts (%)	NSP Fibrea (g)	or AOAC Fibrea (g)	Proteinb (g)
0	≤40	≤0.7	≤0.9	≤1.6
1	>40	>0.7	>0.9	>1.6
2	>60	>1.4	>1.9	>3.2
3	-	>2.1	>2.8	>4.8
4	-	>2.8	>3.7	>6.4
5	>80	>3.5	>4.7	>8.0

a NSP fibre information should be used if possible. However, if this is not available then AOAC fibre information should be used.
b If a food or drink scores 11 or more points for ‘A’ nutrients then it cannot score points for protein unless it also scores 5 points for fruit, vegetables and nuts.

11. A maximum of five points can be awarded for each nutrient/food component. Note the restrictions on points for protein.

Combining points into an overall score

12. Overall score for a food is dependent on how many ‘A’ points it scores and how many points for fruit, vegetables, and nuts it scores. There are three possible situations.

Less than 11 ‘A’ points
13. If a food satisfies this criterion then the overall score is calculated as follows:

14. Total ‘A’ points minus total ‘C’ points = (energy + sat fat + sugars + sodium) – (fruit, vegetables, and nuts + fibre + protein)

11 or more ‘A’ points and 5 points for fruit, vegetables and nuts

15. If a food satisfies this criterion then the overall score is calculated as the above case.

11 or more ‘A’ points and less than 5 points for fruit, vegetables and nuts

16. If a food satisfies this criterion then the overall score is calculated as follows:

17. Total ‘A’ points minus points for fruit, vegetables and nuts and points for fibre = (energy + sat fat + sugars + sodium) – (fruit, veg and nuts + fibre)

18. Note that in this case foods are not allowed to score for protein.

Annex I: Product Categories in Scope

Option 1	**Option 2**
Soft drinks	Soft drinks
Chocolate confectionery	Chocolate confectionery
Sugar confectionery	Sugar confectionery
Cakes	Cakes
Ice cream	Ice cream
Morning goods (pastries)	Morning goods (pastries)
Puddings and dairy desserts	Puddings and dairy desserts
Sweet biscuits	Sweet biscuits
Breakfast cereals	Breakfast cereals
Yogurts	Yogurts
Milk based drinks with added sugar	Milk based drinks with added sugar
Juice based drinks with added sugar	Juice based drinks with added sugar
Pizza	Pizza
Crisps and savoury snacks	Crisps and savoury snacks
Ready meals and meal centres (e.g. burgers, chicken nuggets, breaded chicken/fish)	Ready meals and meal centres (e.g. burgers, chicken nuggets, breaded chicken/fish)
Chips and potato products	Chips and potato products
	Garlic bread
	Pies and quiches
	Savoury biscuits crackers and crispbreads
	Cooking sauces and pastes
	Table sauces and dressings
	Processed meat products
	Sweet spreads
	Starters, smaller dishes, sides etc

Annex J: Literature Review on Sugar Drink restrictions

There is substantial support from medical institutions and other parties for restricting portion sizes and free refills of sugary drinks in order to bring about significant health benefits to the population.

While the research is broadly supportive of such proposals, they need to be well thought through in order to maximise the effectiveness of implementation, as there is potential for businesses to circumvent restrictions; with evidence of this in previous similar policies.

The literature review, together with data on market size in Wales and England provides a basis for assumptions to be developed for the impact assessment.

1.1.1 Examples of Similar Policies Elsewhere

- **Department of Health & Social Care (England): 'Promotions of unhealthy foods restricted from April 2022'**
- "Free refills of sugary soft drinks will also be prohibited in the eating-out sector"
- https://www.gov.uk/government/news/promotions-of-unhealthy-foods-restricted-from-april-2022

- **Department of Health & Social Care (England): 'Restricting promotions of products high in fat, sugar and salt by location and by price: enforcement'**
- "A qualifying business must not offer a free refill promotion on drinks to which this regulation applies"
- "Free refill promotion means a promotion that offers the consumer the same drink, or another drink to which this regulation applies, for free (including free top-ups of any part of a drink"
- https://www.gov.uk/government/consultations/restricting-promotions-of-products-high-in-fat-sugar-and-salt-enforcement/restricting-promotions-of-products-high-in-fat-sugar-and-salt-by-location-and-by-price-enforcement#free-refills

- **LégiFrance (January 2017)**
- Prohibition of the provision of unlimited drinks, free or for a fixed price, with the addition of sugars or synthetic sweeteners
- https://www.legifrance.gouv.fr/loda/id/JORFTEXT000033922943/

- **Royal Society Publishing: 'Towards environmentally sustainable human behaviour: targeting non-conscious and conscious processes for effective and acceptable policies' (2017)**
- New York City attempted to introduce a 16-ounce (454 ml) limit on the size of sugar sweetened beverages in food outlets. This was met with resistance and was ultimately unsuccessful. A newspaper survey of New York residents reported 60% opposed the proposal. (page 8)

- https://royalsocietypublishing.org/doi/pdf/10.1098/rsta.2016.0371

1.1.2 Organisations in Favour of Proposal

- **Public Health England: 'Calorie Reduction: The scope and ambition for action'**

- The eating out of home sector (e.g. cafes, restaurants, pubs etc), provides 20-25% of an adult's energy intake (page 10)
- 2% of calories coming from sugary soft drinks, included in the sugar levy (page 32)
- Analysis found people consistently consume more food and drink when offered larger-sized portions, than when offered smaller-sized versions. Increasing portion sizes results in more calories being consumed and the study estimated that eliminating larger-sized portions from the diet completely, could reduce energy intake by up to 16% among UK adults. (page 25)
- The main sources of energy in the UK diet are similar for both children and adults (page 16)
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800675/Calories_Evidence_Document.pdf

- **Action on Sugar (pre-soft drinks industry levy)**

- Sugar-sweetened fizzy drinks are a large contributor to sugars in diets, especially for children, and a hidden source of calories. On average, 16% of adults' daily added sugar intake comes from soft drinks. For teenagers, it makes up nearly a third (29%) of their daily added sugar intake and contributes to 4.8% of their total energy intake. Over half of the sugary drinks surveyed would contain more sugar per can than is recommended for a child, teenager and adult for a whole day based on the new WHO draft guidelines for sugar
- A typical can of cola contains as much sugar as three and half Krispy Kreme Donuts
- 79% of sugary fizzy drinks contain 6 or more teaspoons of sugar per can (330ml) – WHO's recommended daily maximum for sugar
- http://www.actiononsugar.org/surveys/2014/sugar-sweetened-beverages/

- **Department of Health & Social Care (England): 'Consultation on restricting promotions of products high in fat, sugar and salt by location and by price'**

- "We propose that the price restrictions should also apply to free refills of sugar-sweetened beverages in the out-of-home sector, if they are in scope of the SDIL, as soft drinks are the biggest source of sugar in children's diets. We propose that free refills of drinks should only be allowed for non HFSS drinks." (Page 13)

- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770704/consultation-on-restricting-price-promotions-of-HFSS-products.pdf

1.1.3 Research Findings in More Detail

- **BMJ: 'Downsizing: policy options to reduce portion sizes to help tackle obesity' (2015)**
- 'The compelling evidence that larger portion sizes of food and non-alcoholic drinks increase consumption is currently unmatched by similarly strong evidence on how to reduce this effect. This requires independent and rigorous evaluation of interventions that aim to reduce the size, availability, and appeal of larger portions. Successful interventions, if implemented at sufficient scale, have the potential to help prevent obesity as part of a wider obesity strategy' (page 3)
- **'**Effective interventions will also need to take into account industry innovations that may circumvent the intended effects of policy approaches. For example, the agreement of confectionery manufacturers to phase out king size chocolate bars in 2005 led to the introduction of bars containing multiple portions, ostensibly for sharing or consuming at different times.' (Page 2)
- https://www.bmj.com/content/bmj/351/bmj.h5863.full.pdf

- **HM Government (England): 'Childhood Obesity – A Plan for Action'**
- "In doing so, we aim to stop promotions that encourage bulk buying and over consumption of unhealthy products." (Page 22)
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718903/childhood-obesity-a-plan-for-action-chapter-2.pdf

- **Department of Health & Social Care (England) Consultation Outcome:**
- The restrictions will also apply to free refills of sugar-sweetened beverages in the out-of-home sector. Data shows that children consume up to 3 times more sugar than the daily recommended level and there is strong evidence that this overconsumption contributes to weight gain and, over time, obesity. In addition, we know that eating outside the home contributes around a quarter of adult's daily calories, therefore it can play a significant role in excess calorie intake.
- https://www.gov.uk/government/consultations/restricting-promotions-of-products-high-in-fat-sugar-and-salt-enforcement/outcome/restricting-promotions-of-products-high-in-fat-sugar-and-salt-consultation-response-on-policy-enforcement#policy-summary

- **England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (13011)' (Consultation Stage, 16/11/2018)**

- English Impact Assessment on volume promotions of HFSS products, including the restriction of free refills of sugar-sweetened drinks
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770705/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf

- **England Government Impact Assessment: 'Restricting volume promotions for high fat, sugar, and salt (HFSS) products (9560)' (Final Stage, 11/11/2020)**
- English Impact Assessment on volume promotions of HFSS products, including the restriction of free refills of sugar-sweetened drinks
- Lack of evidence and data in the industry to calculate cost to business and benefits
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003921/impact-assessment-for-restricting-volume-promotions-for-HFSS-products.pdf

- **Public Health England: 'Attitudes to Obesity'**
- 49% of respondents were in favour of reducing the standard size of unhealthy snacks or drinks, with 23% being neither, and 28% against
- 54% of women were in favour, but only 44% of men
- 56% of people with a degree qualification or higher were in favour, compared to 44% with no qualification
- 46% of 18-34's were in favour, and 48% of over 55s (page 17)
- https://www.bsa.natcen.ac.uk/media/39132/attitudes-to-obesity.pdf

- **Cochrane Library: 'Portion, package or tableware size for changing selection and consumption of food, alcohol and tobacco (2015)**
- This review found that people consistently consume more food and drink when offered larger-sized portions, packages, or tableware than when offered smaller-sized versions. This suggests that policies and practices that successfully reduce the size, availability and appeal of larger-sized portions, packages, individual units, and tableware can contribute to meaningful reductions in the quantities of food (including non-alcoholic beverages) people select and consume in the immediate and short term. (Page 2)
- https://www.cochrane.org/CD011045/PUBHLTH_portion-package-or-tableware-size-changing-selection-and-consumption-food-alcohol-and-tobacco

- **PLoS One: 'Regulating the Way to Obesity: Unintended Consequences of Limiting Sugary Drink Sizes' (2013)**
- Behavioural Simulation: One menu offered 16 oz, 24 oz, or 32 oz drinks for sale. A second menu offered 16 oz drinks, a bundle of two 12 oz drinks, or a bundle of two 16 oz drinks. A third menu offered only 16 oz drinks for sale.

- Participants bought significantly more ounces of soda with bundles than with varying-sized drinks. Total business revenue was also higher with bundles rather than when only small-sized drinks were sold.
- The research suggested that businesses have a strong incentive to offer bundles of soda when drink size is limited. Restricting larger-sized drinks may have the unintended consequence of increasing soda consumption rather than decreasing it.
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3622664/pdf/pone.0061081.pdf

- **Public Health England: 'Sugar reduction: Report on progress between 2015 and 2018' (2019)**
- Sales (in litres) of soft drinks within the classification of the sugar levy have increased by 10.2%, from 3,559,309 thousand in 2015, to 3,967,748 thousand in 2018 (page 52)
- However, total sugar content within the soft drinks sold decreased by 21.6% from 139,718 tonnes in 2015, to 109,585 tonnes in 2018 (page 52)
- This means that on average, sugar content of drinks subject to the levy has decreased
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/839756/Sugar_reduction_yr2_progress_report.pdf

- **British Soft Drinks Association: 'Annual Report 2021'**
- https://www.britishsoftdrinks.com/write/MediaUploads/BSDA_Annual_Report_2021_FINAL.pdf

- **Soft Drinks Industry Levy**
- Over 50% of manufacturers reduced the sugar content of drinks hit by the levy within the first two years of the policy being announced
- Revenue generated from the levy will be invested into school sports programmes and facilities, as well as healthy breakfast clubs
- https://www.gov.uk/government/news/soft-drinks-industry-levy-comes-into-effect
- 43.7% reduction in the total sugar content per 100ml between 2015 and 2019 for the drinks subject to the levy (page 10)
- Overall sales (in litres) of drinks subject to the levy have increased by 14.9%, but the total sugar sales from the soft drinks decreased by 35.4% (page 10)
- The number of calories likely to be consumed on a single occasion fell by 35.2% between 2015 and 2019 (page 10)
- In the Out of Home Sector, there was a reduction of 38.5% in the simple average total sugar content for drinks subject to the SDIL and a reduction of 37.7% in the calories for drinks likely to be consumed on a single occasion (page 10)

- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984282/Sugar_reduction_progress_report_2015_to_2019-1.pdf
- The requirements are a minimum of 5 grams of sugar per 100ml
- https://www.gov.uk/guidance/check-if-your-drink-is-liable-for-the-soft-drinks-industry-levy

- **Psychological Science, 'Psychologically Informed Implementations of Sugary-Drink Portion Limits'**
- Participants were split into three groups: Typical Portion (TP), Waiter-Served Refills (WSR), Self-Service Refills (SSR)'
- Participants in the WSR group consumed 83% more calories than those in the TP group
- Participants in the SSR group consumed 30.7% more calories than those in the TP group
- Participants in the WSR group consumed 40% more calories than those in the SSR group
- Conclusion: Refills result in higher calorie consumption, but the difference is significantly less in self-service, even if the distance to service is trivial.

- **Public Health Nutrition, 'Package size and manufacturer-recommended serving size of sweet beverages: a cross-sectional study across four high-income studies' (2015)**
- According to the Canadian Food Inspection Agency, the prescribed reference amount for soft drinks is 355 ml, with an acceptable range between 250 and 375 ml.
- https://www.cambridge.org/core/services/aop-cambridge-core/content/view/821C5DD21951B689649854B0AB8AF04A/S1368980015001974a.pdf/package-size-and-manufacturer-recommended-serving-size-of-sweet-beverages-a-cross-sectional-study-across-four-high-income-countries.pdf (page 1009)

1.1.4 Examples of machines in operation for free refills

Coca Cola Freestyle Machine as found in Burger King, Five Guys and Vue Cinemas including both sweetened and unsweetened free refills. Desk research found seven of these machines operating in Wales: in Cardiff, Swansea and Wrexham. These machines offer over 30 different drinks with around half being sugar free.

Pepsi Max machine offering sugar free drinks refills on seven out of eight options found at Costco.


pepsi
MAX
MAXIMUM TASTE
no sugar
cherry
pepsi
7up free
Tango
pepsi
cherry