Appendix A

TV advertising of food and drink

This is an appendix to the briefing note: https://www.ifs.org.uk/uploads/BN238.pdf. The briefing note summarises the findings of a report produced for the Department of Health and Social Care. Full text of the report is below.

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TV advertising of food and drink

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January 15, 2018

1 Introduction

This report describes the timing and nature of the TV advertising for food and drink in the UK.

Data. We use data from AC Nielsen on all adverts for food and drink products broadcast on television during 2015. The data include details of all adverts shown between January and December 2015, including information on what product was advertised, the channel on which the advert was shown and what programmes ran either side of the advert. The data also contain information on viewing figures for the advert, provided by the Broadcasters' Audience Research Board (BARB).

Impacts. In the main report we describe 'impacts', which are a widely-used industry measure of viewing figures. In the appendix we provide equivalent description by number of adverts and in the spreadsheet appendix we also provide information by expenditure. The number of impacts is equal to the number of pairs of eyes who view the advert, e.g. 1 person watching an advert 5 times is equivalent to 5 people watching an advert once. We focus on child impacts. Children are defined as aged 4-15.

Children's programming. We define children's programming using either the channel on which the advert was aired (e.g. all adverts shown on children's cable TV are classified as children's programming) or the genre of the programme provided by AC Nielsen. See Appendix D for more details.

Sponsorship. Nielsen also collects data on TV 'sponsorship' (e.g. The Big Bang Theory is sponsored by Hungry House) for 20 channels. Impacts are not recorded for sponsorship slots. Sections 2 – 4 describe adverts only (we exclude sponsorship). In Section 5 we list all brands that carry out sponsorship, the number of slots that they run and spending on sponsorship.

Outline. The rest of this document is structured as follows:

- Section 2 outlines how child impacts for all food and drink varies by hour of the day and during four timeslots: (i) prior to the watershed (all TV between 5.30 21.00), (ii) after the watershed (all TV between 21.00 5.30), (iii) between 19.00 21.00, and (iv) during children's programming.
- Section 3 describes the breakdown of the number of child impacts by product category and how this varies across time of day.
- Section 4 describes how the number of child impacts varies across the top brands.
- Section 5 describes TV sponsorship.

Appendix. The appendix to this report contains additional information on the data used, and also reproduces the analysis in Sections 2-4 in terms of number of adverts. A spreadsheet appendix contains all the data used to produce the tables and figures in the report, as well as details by expenditure.

2 Child impacts by time of day

Figure 2.1 shows the total number of child impacts recorded in each hour of the day (over all food and drink products, excluding sponsorship, summed over the entire year). The most child impacts occur between 17.00 and 22.00. The figure also shows the breakdown into impacts during children's and non-children's programming. Table 2.1 summarises this information. The bulk of children's impacts occur during non-children's programming, with 12.8% occurring during children's programming.

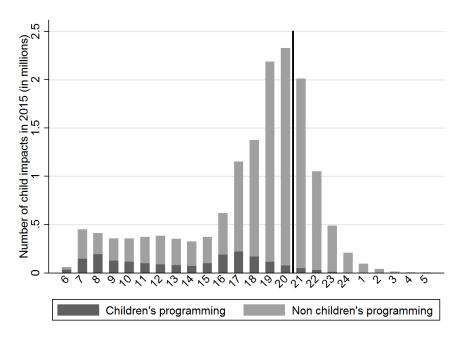


Figure 2.1: Child impacts by hour of day

Notes: Each bar shows the total child impacts for each hour of the day across 2015 and for all food and drink products. The dark portion of the bar shows impacts on children's programming, and the light portion of the bar shows impacts on non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming.

(1)	(2)	(3)
	Number of	% of total
Time slot	child impacts	child impacts
Pre watershed	11,112,168	73.93
Between 19.00 and 21.00	4,515,354	30.04
Post watershed	3,918,294	26.07
Children's programming	1,924,194	12.80

Table 2.1: Child impacts by time slot

Notes: Column (2) shows the total number of child impacts in 2015 that fall within each time slot, column (3) shows the percentage of all child impacts across 2015 that this constitutes. Pre-watershed is defined as between 5.30 and 21.00 and post watershed as after 21.00 and prior to 5.30. See Appendix D for definition of children's programming.

3 Child impacts by product category

Table 3.1 shows how the number of child impacts varies with product category and product subcategory. 10% of children's impacts are for restaurants & bars, with fast food restaurants making up almost all of the adverts for this category. Adverts for the food apps 'Hungry House' and 'Just Eat' constitute around 1 percent of the total child impacts in 2015. Food brand building (e.g. advertising of entire product ranges) is responsible for almost 12% of children's impacts. Advertising of confectionery, snacks and drinks together contribute 27% of children's impacts. The remaining child impacts are for adverts in other product categories, with dairy, cereal, and frozen food being the largest other product subcategories.

Table 3.1: Child impacts by product category

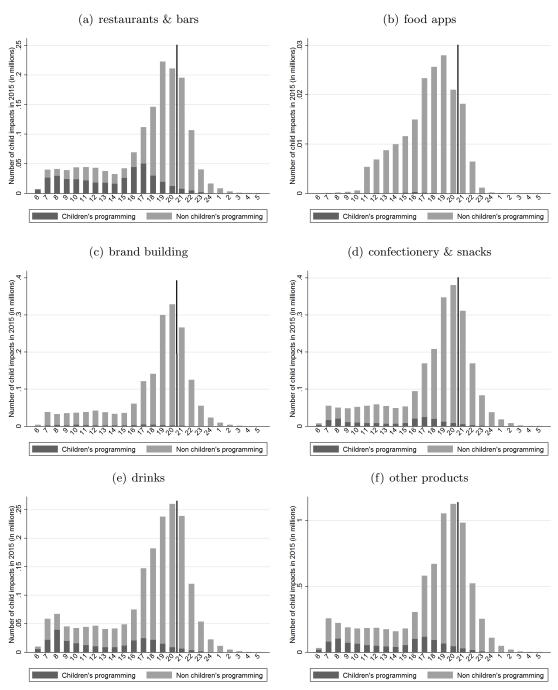
(1)	(2) % of total	(3)	(4) % of total	(5) Number of
Product category	child impacts	Product subcategory	child impacts	Child impacts
Restaurants & Bars	10.01	Fast Food Restaurants	8.99	1,351,456
		Independent Restaurant	0.86	129,592
		Chain Restaurants	0.14	20,494
		Pubs & Bars	0.02	3,546
Food Apps	1.22	Hungry House	0.84	126,333
		Just Eat	0.38	56,413
Brand Building	11.80	Food Brand Building	11.62	1,746,059
		Drink - Brand Building	0.19	28,080
Confectionery & Snacks	15.43	Chocolate	6.51	978,710
		Crisps	3.43	514,847
		Sweets	2.84	427,006
		Other Confectionery & Snacks	2.65	398,684
Drinks	11.99	Hot Beverages	3.76	564,930
		Sports/energy/health Drinks	2.53	380,916
		Soft Drinks	2.41	361,798
		Fruit Juice & Smoothies	1.00	$150,\!273$
		Water	0.88	131,941
		Squash	0.74	111,500
		Milk Drinks	0.36	54,210
		Drink - Multi Product	0.18	26,326
		Childrens Drinks	0.13	19,821
		Iced Tea/iced Coffee	0.00	38
Other	49.55	Dairy	13.30	1,999,324
		Cereal	7.10	1,067,307
		Frozen Food	6.72	1,009,400
		Other Food Cupboard	5.71	857,647
		Alcohol	4.84	728,139
		Bakery	2.43	365,404
		Cooking Sauces	2.18	$327,\!274$
		Meat/poultry	1.96	293,868
		Baby & Toddler Food	1.94	292,050
		Delicatessen / Chilled Food	1.05	157,088
		Salad/vegetables	0.77	115,077
		Ready / Prepared Meals	0.72	108,448
		Fish	0.45	67,638
		Free From	0.21	32,221
		Fruit	0.18	26,606

Notes: Column (2) shows the % of all child impacts in 2015 for each product category, listed in column (1). Column (4) shows the % of all child impacts in 2015 for each product subcategory, listed in column (3). Column (5) shows the number of child impacts for adverts on products in each each product subcategory, listed in column (3). See Appendix C for explanation of product category and product subcategory variables.

3.1 Child impacts by product category throughout the day

Figure 3.1 shows the total number of child impacts by product category and hour of the day (summed over the entire year). Each subfigure shows a breakdown of the total number of child impacts for one of the product categories into those that occur during children's television and those that occur during non children's television. Note that the vertical scale of the subfigures varies by category.

Figure 3.1: Child impacts by product category and time of day



Notes: Each bar shows the total child impacts for each hour of the day across 2015 for restaurant & bars. The dark portion of the bar shows impacts on children's programming, and the light portion of the bar shows impacts on non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming. See Appendix C for details of how we have categorised products into product categories.

Table 3.2 shows the number of child impacts and percentage of total child impacts for each product category by broad time slot.

The majority of child impacts for all product categories falls between 17.00 and 22.00. There is almost no advertising for food apps before 11.00. Food apps and brand building are not advertised during children's programming at any time of the day. For the other product categories, at least some advertising is shown during children's programming. For example, 25% of child impacts for restaurants & bars are shown during children's programming

Table 3.2: Child impacts by product category and timeslot

(1)	(2)	(3) Number of	(4) % of total product
Time slot	Product Category	child impacts	category impacts
Pre Watershed	Restaurants & Bars	1,132,570	75.25
	Food Apps	156,661	85.73
	Brand Building	1,287,388	72.56
	Confectionery & Snacks	1,686,933	72.74
	Drinks	1,348,113	74.82
	Other	5,500,746	73.86
Between 19.00 and 21.00	Restaurants & Bars	433,796	28.82
	Food Apps	48,961	26.79
	Brand Building	628,753	35.44
	Confectionery & Snacks	727,816	31.38
	Drinks	497,805	27.63
	Other	2,178,222	29.25
Post Watershed	Restaurants & Bars	372,518	24.75
	Food Apps	26,085	14.27
	Brand Building	486,751	27.44
	Confectionery & Snacks	632,315	27.26
	Drinks	453,640	25.18
	Other	1,946,743	26.14
Children's Programming	Restaurants & Bars	379,976	25.25
3	Food Apps	783	0.43
	Brand Building	44,909	2.53
	Confectionery & Snacks	195,899	8.45
	Drinks	255,703	14.19
	Other	1,046,924	14.06

Notes: Column (3) shows the number of child impacts that occur during the timeslot listed in column (1) for each product category, listed in column (2). Column (4) shows the share of total child impacts for each product category (listed in column (2)) during each time slot.

4 Child impacts by brand

Table 4.1 shows the number of child impacts for each of the top 20 brands (brands are ranked in order of the number of child impacts). Brand is defined using the Nielsen 'brand' variable. The top 20 brands account for 22% of all children's impacts in 2015.

The brand with the highest number of child impacts is McDonald's, which accounts for 5.8% of all child impacts. Kelloggs Coco Pops Mini Crocs is second, accounting for 1.7%. KFC is the third highest, account for 1.5%. The supermarkets Aldi, Asda and Iceland all have over 100,000 child impacts in 2015 for their product ranges alone.

Table 4.1: Child impacts by brand

(1)	(2)	(3)	(4)
(1)	Number of	% of total	(4)
Brand	child impacts	child impacts	Rank
Diand	cinia impacts	cinia impacts	Itank
McDonalds - Restaurant Chain	878,091	5.80	1
Kelloggs - Coco Pops Mini Crocs	258,996	1.71	2
KFC Kentucky Fried Chicken - Restaurant	234,333	1.55	3
Aldi - Food & Drink Range	153,020	1.01	4
Asda - Prod Range	147,418	0.97	5
Wrigley - Extra Peppermint Sugarfree	132,744	0.88	6
Subway - Restaurant Chain	128,937	0.85	7
Hungry House - Website	126,333	0.83	8
PG Tips - Tea Range	123,668	0.82	9
Danone - Activia Fibre Yogurt Range	116,782	0.77	10
Aldi - Prod Range	113,120	0.75	11
Iceland - Frozen Food Range	111,385	0.74	12
Galaxy - Chocolate	111,050	0.73	13
Weetabix - Cereal	110,316	0.73	14
Kerry Foods - Yollies	104,671	0.69	15
Danone - Actimel For Kids	102,909	0.68	16
Cravendale - Milk	94,291	0.62	17
Kelloggs - Coco Pops Super Smooth Porridge	93,288	0.62	18
Asda - Food Range	93,170	0.62	19
Snickers - Bar	92,332	0.61	20
Other	11,815,575	78.03	
Of which: Just Eat - Food Delivery	56,413	0.37	54

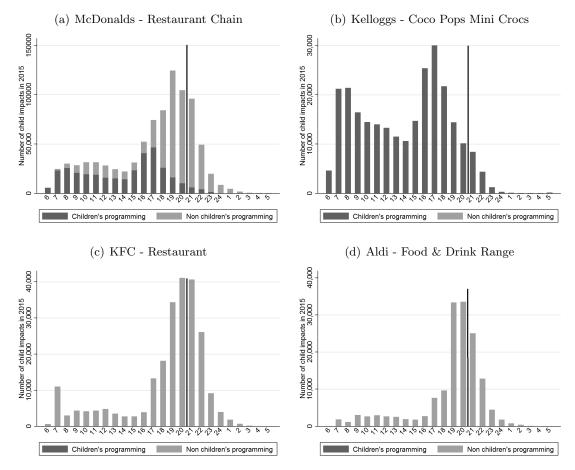
Notes: Column (2) shows the total number of child impacts in 2015 for adverts for each brand, listed in column (1). Column (3) shows the percentage of all child impacts in 2015 for each brand. Column (4) shows the ranking of brands by number of total child impacts.

4.1 Child impacts by brand throughout the day

Figure 4.1 shows the total number of child impacts for adverts for each of the top four brands (ranked based on number of child impacts) in each hour of the day in 2015. The figures also break the impacts down by those that occur during children's programming and those that occur during non children's television.

37% of child impacts for adverts for McDonald's are shown during children's programming. No children's impacts for adverts for KFC or Aldi (food & drink range) are shown during children's programming. However, all the impacts for the adverts for Kellogg's Coco Pops Mini Crocs are shown during children's programming.

Figure 4.1: Child impacts by brand and time of day



Notes: Each bar shows the total child impacts for each hour of the day across 2015 for each of the top brands. The dark portion of the bar shows impacts on children's programming, and the light portion of the bar shows impacts on non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming.

 ${\bf Table\ 4.2:}\ {\it Child\ impacts\ of\ top\ brands\ by\ time\ slot}$

(1) Time slot	(2) Brand	(3) Number of child impacts	(4) % of total brand child impacts
Pre watershed	McDonalds - Restaurant Chain	697,520	79.44
	KFC Kentucky Fried Chicken - Restaurant	151,794	64.78
	Kelloggs - Coco Pops Mini Crocs	244,312	94.33
	Aldi - Food & Drink Rge	107,572	70.30
Between 19.00 and 21.00	McDonalds - Restaurant Chain	228,891	26.07
	KFC Kentucky Fried Chicken - Restaurant	75,402	32.18
	Aldi - Food & Drink Rge	66,935	43.74
	Kelloggs - Coco Pops Mini Crocs	24,614	9.50
Post watershed	McDonalds - Restaurant Chain	180,572	20.56
	KFC Kentucky Fried Chicken - Restaurant	82,539	35.22
	Aldi - Food & Drink Rge	45,448	29.70
	Kelloggs - Coco Pops Mini Crocs	14,684	5.67
Children's programming	McDonalds - Restaurant Chain	332,453	37.86
	KFC Kentucky Fried Chicken - Restaurant	0	0.00
	Aldi - Food & Drink Rge	0	0.00
	Kelloggs - Coco Pops Mini Crocs	258,996	100.00

Notes: Column (3) shows the number of child impacts that occur during the timeslot listed in column (1) for each of the top brands, listed in column (2). Column (4) shows the share of total child impacts for brand (listed in column (2)) during each time slot.

5 Sponsorship

Nielsen collects information on TV sponsorship for 20 channels. Impact data is not collected for sponsorship. Table 5.1 lists all the brands that run sponsorship slots, the TV programme that they sponsor, the number of sponsorship slots and total spending on sponsorship. McCain, Yakult and Kelloggs ran the most sponsorship slots during 2015.

Table 5.1: Sponsorship

(1) Brand	(2) Sponsored TV programme	(3) No. slots	Expenditure (000's £)
Mccain	Emmerdale	6,326	7,145
Aunt Bessies	Chase	2,942	2,222
	Im A Celebrity	1,391	2,043
37.1.14	Total	4,333	4,265
Yakult	Breakfast Time On C4	3,477	153
Kelloggs Maoam	Breakfast On City	3,342	28
Danone Actimel	Big Bang Theory Adventure Mornings On Nickelodeon	3,006 $1,495$	1,046 56
Danone Actimei	Mornings On Pop	884	56
	Total	2,379	112
Rowntrees	9pm Film	2,274	732
Dominos Pizza	Hollyoaks	2,000	1,040
Kelloggs All Bran	Deal Or No Deal	1,348	94
30	Fifteen To One	613	64
	Total	1,961	158
Lucozade Energy	Big Brother	1,186	175
	Celebrity Big Brother	551	125
	Total	1,737	300
Tetley	Movie Time Together	1,707	229
Walls Magnum Mini	9pm Film	1,242	398
Sainsburys	Itv Showcase Drama	971	1,153
Frenchs Hot Dogs	Discovery	917	92
Maxinutrition	Boxing On Sky Sports	767	89
	Boxing On Channel 5	33	3
.	Total	800	92
Fosters	Original Comedy On 4	642	32:
Colmans	Neighbours	607	99
Carling	Characters On Dave	588	176
Jucee	Nickelodeon	587	
Rice Krispies	Breakfast On City	576	200
Fosters Helluva Tour	Comedy On 4	557	298
New Covent Gdn Soup Cheerios	Itv Lon Weekd Cube	$\frac{547}{364}$	253 233
Cheerios	Saturday Night Story	75	80
	Total	439	313
St Helier	Hells Kitchen On Itv2	248	196
50 Hener	Mobo Awards	51	16
	Total	299	21
Casillero Del Diablo Wine	Legendary Films On Sky 1	290	94
Pick Up	Comedy On Sky 1	286	106
Grants Signature	European Qualifiers On Sky Sports	255	84
Napolina	Ginos Italian Escape	250	275
Kelloggs Squares	Celebrity Juice	196	218
Bernard Matthews	Simpsons On 4	193	65
Magners	Bbq Champ	192	104
Fishermans Friend	Science		
	Engineering	164	2:
Ginsters	Football League Tonight	93	15
	Capital One Cup Tonight	21	:
	Total	114	18
Crabbies	Tfi Friday	102	4:
Glens Of Antrim	Lesser Spotted Ul	98	25
Kelloggs Krave	10000 Bc	64	1
Cadbury	Christmas On Itv	64	5:
Smint	Stv	49	21
Irwins Bakery	Rare Breed	45	28
	Paul		
	Nicks Big Fo	2	
M. 0.1.	Total	47	20
Mornflake	Food With A View	38	4
Buchanans Confectionery	Pauk	0.0	1.0
Moy Park	Nicks Big American Food Trip Paul	28	1'
Moy Fark	Nicks Big American Food Trip	28	10
Buchanans Conf	Moviejuice	26	1'
Diet Coke	Pulse	26	;
Spar	Utv At The Show	24	
Walkers	Uefa Champions League	15	
Pepsi Max	Uefa Super Cup	15	
Iceland	Im A Celebrity	13	
Uncle Bens	Transform Whats On She	1	
		1	·
Heineken/gazprom	Champions League	90	55
Heineken/walkers	Uefa Champions League	24	
Heineken/ps4	Champions League	58	2
Heineken/mastercard	Champions Lge	34	3'
Heineken	Champions League	347	219

Notes: Column (1) lists brands, and column (2) lists the TV that they sponsor (either programme, channel, or timeslot). Column (3) lists the total number of sponsorship slots for each brand and column (4) lists the total spending on sponsorship for each brand in 2015. All Heineken sponsorship is listed separately at the bottom of the table as it splits the majority of its advertising with other products (including Walkers who also run their own sponsorship)

Figures 5.1 shows the number of sponsorship slots that occur during each hour of the day in 2015, and breakdown into children's and non children's programming. Table 5.2 summarises this information. 15% of sponsorship impacts occur during children's programming; these are predominantly shown before 11am.

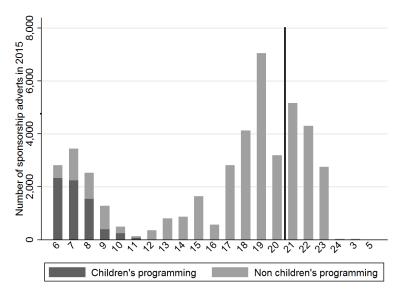


Figure 5.1: Sponsorship slots by hour of day

Notes: Each bar shows the total number of sponsorship slots during each hour of the day across 2015. The dark portion of the bar shows impacts during children's programming, and the light portion of the bar shows impacts during non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming.

(1) (2)(3)% of total Number of Time slot sponsorship slots sponsorship slots Pre watershed 32,150 72.36 Between 19.00 and 21.00 10,240 23.05Post watershed 12,283 27.64Children's programming 6,835 15.38

Table 5.2: Sponsorship slots by time slot

Notes: Notes: Column (1) shows the total number of sponsorship slots in 2015 that occur in each time slot, column (2) shows the percentage of the number of sponsorship slots across 2015 in each time slot. Pre watershed is defined as between 5.30 and 21.00 and post watershed as after 21.00 and prior to 5.30. See Appendix D for definition of children's programming.

Table 5.3 lists the top ten brands (ranked by number of sponsorship slots), and how their slots are distributed across the four time periods. Most sponsorship occurs pre watershed; for example, 99.8% of McCains' sponsorship slots are run in the pre-watershed period. Only two of the top ten brands run sponsorship slots during children's programming; these are Kelloggs and Danone Actimel.

Table 5.3: Sponsorship slots by by top sponsorship brands and time slot

(1)	(2)	(3)	(4)
		Number of	% of total brand
Time slot	Brand	sponsorship slots	sponsorship slots
Pre watershed	Mccain	6,315	99.83
	Aunt Bessies	3,189	73.60
	Yakult	3,477	100.00
	Kelloggs	3,342	100.00
	Maoam	2,137	71.09
	Dominos Pizza	2,000	100.00
	Kelloggs All Bran	1,954	99.64
	Danone Actimel	2,379	100.00
	Lucozade Energy	412	23.72
	Rowntrees	7	0.31
Between 19.00 and 21.00	Mccain	5,624	88.90
	Aunt Bessies	349	8.05
	Yakult	0	0.00
	Kelloggs	0	0.00
	Maoam	1,022	34.00
	Dominos Pizza	764	38.20
	Kelloggs All Bran	78	3.98
	Danone Actimel	0	0.00
	Lucozade Energy	22	1.27
	Rowntrees	6	0.26
Post watershed	Mccain	11	0.17
	Aunt Bessies	1,144	26.40
	Yakult	0	0.00
	Kelloggs	0	0.00
	Dominos Pizza	0	0.00
	Maoam	869	28.91
	Kelloggs All Bran	7	0.36
	Danone Actimel	0	0.00
	Lucozade Energy	1,325	76.28
	Rowntrees	2,267	99.69
Children's programming	Mccain	2	0.03
	Aunt Bessies	0	0.00
	Yakult	0	0.00
	Kelloggs	3,304	98.86
	Dominos Pizza	1	0.05
	Maoam	0	0.00
	Danone Actimel	2,379	100.00
	Kelloggs All Bran	4	0.20
	Lucozade Energy	0	0.00
	Rowntrees	1	0.04

Notes: Column (3) shows the number of child impacts that occur during the timeslot listed in column (1) for each of the top ten brands, listed in column (2). Column (4) shows the share of total child impacts for brand (listed in column (2)) during each time slot.

APPENDIX

TV advertising of food and drink

Rachel Griffith, Martin O'Connell, Kate Smith, and Rebekah Stroud Institute for Fiscal Studies January 15, 2018

A Adverts

Our analysis in the main body of this report is in terms of child impacts. Section A of this appendix reproduces the tables and graphs presented in Sections 2-4 of the document in terms of number of adverts rather than child impacts.

A.1 Adverts by time

Figure A.1 shows the total number of adverts in the 2015 data which occur in each hour of the day, and the share of this which occurs during children's and non-children's programming. Table A.1 shows the total number of adverts that occur during key timeslots: prior to the watershed, after the watershed, between 19.00 and 21.00, and during children's programming.

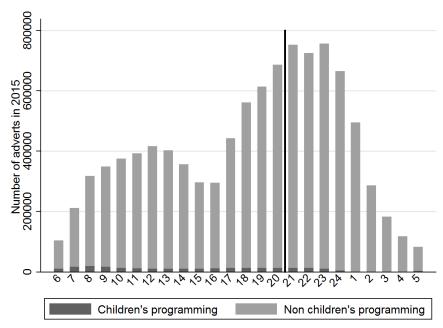


Figure A.1: Adverts by hour of day

Notes: Each bar shows the total number of adverts in each hour of the day across 2015 for all food and drink products. The dark portion of the bar shows adverts during children's programming, and the light portion of the bar shows adverts during non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming.

Table A.1: Advertising by time slot

Time slot	(1) No. Adverts	(2) % of total adverts
Pre watershed Between 19.00 and 21.00 Post watershed	5,854,160 1,300,362 4,033,837	59.20 13.15 40.80
Children's programming	243,036	2.46

Notes: Column (1) shows the total number of adverts in 2015 that fall within each time slot, column (2) shows the percentage of adverts across 2015 in each time slot. Pre watershed is defined as between 5.30 and 21.00 and post watershed as after 21.00 and prior to 5.30. See Appendix D for definition of children's programming.

A.2 Adverts by product category

Table A.2 shows how the number of adverts varies with product category and product subcategory.

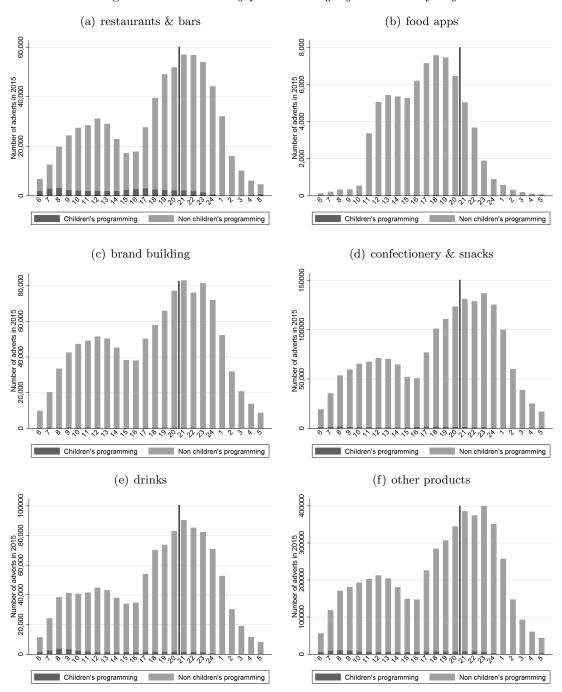
Table A.2: Advertising by product category

(1) Product category	(2) % of total adverts	(3) Product subcategory	(4) % of total adverts	(5) Adverts
Restaurants & Bars	6.96	Fast Food Restaurants Independent Restaurant Chain Restaurants Pubs & Bars	6.11 0.79 0.04 0.01	604,451 78,388 3,998 886
Food Apps	0.75	Hungry House Just Eat	0.49 0.25	$48,551 \\ 25,131$
Brand Building	11.30	Food Brand Building Drink - Brand Building	11.17 0.13	1,104,870 12,949
Confectionery & Snacks	18.07	Chocolate Crisps Other Confectionery & Snacks Sweets	8.74 3.76 3.26 2.31	864,119 371,606 322,390 228,361
Drinks	11.38	Hot Beverages Soft Drinks Sports/energy/health Drinks Fruit Juice & Smoothies Water Squash Milk Drinks Drink - Multi Product Childrens Drinks Iced Tea/iced Coffee	3.87 2.67 1.79 1.09 0.72 0.68 0.24 0.21 0.10	382,941 264,092 176,760 107,675 71,181 67,536 23,950 20,962 10,074 37
Other	51.55	Dairy Other Food Cupboard Frozen Food Alcohol Cereal Cooking Sauces Meat/poultry Bakery Baby & Toddler Food Delicatessen / Chilled Food Ready / Prepared Meals Salad/vegetables Fish Fruit Free From	13.15 7.22 6.84 6.12 4.33 3.02 2.68 2.56 1.48 1.33 1.03 0.81 0.53 0.28 0.18	1,300,386 713,621 676,424 605,312 427,712 298,197 264,507 253,227 146,521 131,854 101,747 80,130 52,054 27,416 17,981

Notes: Column (2) shows the % of all adverts shown in 2015 for each product category, listed in column (1). Column (4) shows the % of adverts in 2015 for each product subcategory, listed in column (3). Column (5) shows the number of adverts on products in each each product subcategory, listed in column (3). See Appendix for explanation of product category and product subcategory variables.

A.2.1 Adverts by product category throughout the day

Figure A.2: Adverts by product category and time of day



Notes: Each bar shows the total adverts during each hour of the day across 2015 for other products. The dark portion of the bar shows adverts during children's programming, and the light portion of the bar shows adverts during non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming. See Appendix C for details of how we have categorised products into product categories.

Table A.3: Adverts by product category in each time slot

(1)	(2)	(3)	(4) % of total
Time slot	Product Category	No. adverts	timeslot adverts
Pre Watershed	Restaurants & Bars	408,562	59.41
	Food Apps	60,914	82.67
	Brand Building	681,569	60.97
	Confectionery & Snacks	1,030,991	57.71
	Drinks	677,971	60.25
	Other	3,003,339	58.92
Between 19.00 and 21.00	Restaurants & Bars	101,056	14.69
	Food Apps	13,903	18.87
	Brand Building	142,972	12.79
	Confectionery & Snacks	234,282	13.11
	Drinks	156,735	13.93
	Other	651,414	12.78
Post Watershed	Restaurants & Bars	279,161	40.59
	Food Apps	12,768	17.33
	Brand Building	436,250	39.03
	Confectionery & Snacks	755,485	42.29
	Drinks	447,237	39.75
	Other	2,093,750	41.08
Children's Programming	Restaurants & Bars	41,710	6.06
	Food Apps	178	0.24
	Brand Building	5,738	0.51
	Confectionery & Snacks	23,629	1.32
	Drinks	34,317	3.05
	Other	137,464	2.70

Notes: Column (2) shows the % of all adverts in 2015 for each product category, listed in column (1). Column (4) shows the % of all adverts in 2015 for each product subcategory, listed in column (3). Column (5) shows the number of adverts for products in each each product subcategory, listed in column (3). See Appendix for explanation of product category and product subcategory variables.

A.3 Adverts by top brands

Table A.4 shows the number of adverts for each of the top 20 brands (brands are ranked in order of the number of adverts). Brand is defined using the Nielsen 'brand' variable.

Table A.4: Adverts by top brands

(1)	(2)	(3)	(4)
Brand	No. Adverts	% of total adverts	Rank
McDonalds - Restaurant Chain	269,793	2.73	1
KFC Kentucky Fried Chicken - Restaurant	164,706	1.67	2
Galaxy - Chocolate	$114,\!526$	1.16	3
Wrigley - Extra Peppermint Sugarfree	105,650	1.07	4
PG Tips - Tea Range	105,559	1.07	5
Snickers - Bar	102,500	1.04	6
Asda - Product Range	100,301	1.01	7
Burger King - Restaurant Chain	93,537	0.95	8
Aldi - Food & Drink Range	80,220	0.81	9
Subway - Restaurant Chain	74,018	0.75	10
Wrigley - Airwaves Menthol & Eucaly	72,689	0.74	11
M&m - Confectionery	72,297	0.73	12
Aldi - Prod Range	71,955	0.73	13
Twix - Bar	70,128	0.71	14
Tesco - Prod Range	65,179	0.66	15
Dolmio - Bolognese Sauce	63,369	0.64	16
Asda - Food Range	58,431	0.59	17
Bertolli - Butter	57,980	0.59	18
Coop - Food Range	56,722	0.57	19
Danone - Activia Fibre Yogurt Range	56,498	0.57	20
Other	8,031,939	81.23	
Of which:			
Hungry House - Website	48,551	0.49	31
Just Eat - Food Delivery	25,131	0.25	88

Notes: Column (2) shows the total number of adverts in 2015 for each brand, listed in column (1). Column (3) shows the percentage of all adverts in 2015 for each brand. Column (4) shows the ranking of brands by number of total child impacts.

A.3.1 Adverts by top brands throughout the day

Figure A.3 shows the total number of adverts for each of the top four brands (ranked based on number of child impacts) in each hour of the day in 2015. The figures also break the adverts down by those that occur during children's programming and those that occur during non children's television. Table 4.2 summarises this information.

(a) McDonalds - Restaurant Chain (b) KFC - Restaurant 15,000 20,000 Number of adverts in 2015 5,000 10,000 15,000 Number of adverts in 2015 5,000 10,000 Children's programming Non children's programming Children's programming Non children's programming (c) Galaxy - Chocolate (d) Wrigley - Extra Peppermint Sugarfree 8,000 8,000 Number of adverts in 2015 2,000 4,000 6,000 Number of adverts in 2015 2,000 4,000 6,000 Non children's programming Non children's programming Children's programming Children's programming

Figure A.3: Adverts by brand and time of day

Notes: Each bar shows the total adverts during each hour of the day across 2015 for each of the top brands. The dark portion of the bar shows adverts during children's programming, and the light portion of the bar shows adverts during non-children's programming. The vertical line denotes the beginning of the watershed. See Appendix D for details of how we have defined children's programming.

Table A.5: $Adverts\ for\ top\ brands\ by\ timeslot$

Time slot	Brand	Number of Adverts	% of total timeslot adverts
Pre watershed	McDonalds - Restaurant Chain	165,157	61.22
	KFC Kentucky Fried Chicken - Restaurant	92,044	55.88
	Galaxy - Chocolate	64,931	56.70
	Wrigley - Extra Peppermint Sugarfree	$65,\!554$	62.05
Between 19.00 and 21.00	McDonalds - Restaurant Chain	36,632	13.58
	KFC Kentucky Fried Chicken - Restaurant	21,542	13.08
	Galaxy - Chocolate	14,724	12.86
	Wrigley - Extra Peppermint Sugarfree	15,922	15.07
Post watershed	McDonalds - Restaurant Chain	104,636	38.78
	KFC Kentucky Fried Chicken - Restaurant	72,662	44.12
	Galaxy - Chocolate	49,595	43.30
	Wrigley - Extra Peppermint Sugarfree	40,096	37.95
Children's programming	McDonalds - Restaurant Chain	34,265	12.70
1 0 0	KFC Kentucky Fried Chicken - Restaurant	43	0.03
	Galaxy - Chocolate	20	0.02
	Wrigley - Extra Peppermint Sugarfree	460	0.44

Notes: Column (3) shows the number of adverts that occur during the timeslot listed in column (1) for each of the top four brands, listed in column (2). Column (4) shows the % of adverts in each time slot that are for the brands listed in column (2).

B Adult and child impacts

In this report we have focused primarily on child impacts. We also have data on impacts for adults aged 16-64. Figure B.1 shows the total number of impacts in 2015 by the hour of the day in which they occurred, and the breakdown between child and adult impacts. Total impacts refers the sum of children (4-15) and adult (16-64) impacts.

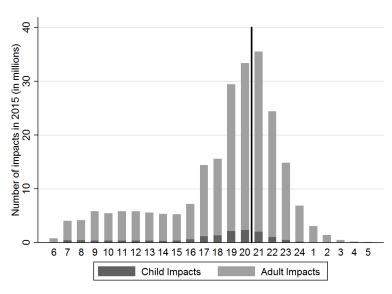


Figure B.1: Total Impacts

Notes: Children are defined as all individuals aged between 4 and 15 years old. Adults are defined as all individuals aged between 16 and 64.

C Defining product categories and product subcategory

In this report we use the classifications: 'product category' and 'product subcategory'. We defined these classifications using the 'Product Mid Category' and 'Product Minor Category' variables provided by Nielsen. Table C.1 provides a breakdown of the how the Nielsen categories fit into our categorisation.

Table C.1: Categorisation of products

Product category	Product subcategory TV	Nielsen Product Mid Category	Nielsen Product Minor Category
Restaurants & Bars	Chain Restaurants Fast Food Restaurants	Restaurants & Bars Restaurants & Bars Restaurants & Bars	Chain Restaurants Fast Food Restaurants - Food Items Fast Food Restaurants - Multi Product
	Independent Restaurant Pubs & Bars	Restaurants & Bars Restaurants & Bars	Independent Restaurants Pubs & Bars
Food Apps	Hungry House Just Eat	Restaurants & Bars Restaurants & Bars	Independent Restaurants Independent Restaurants
Brand Building	Drink - Brand Building	Drink - Brand Building Drink - Brand Building	Alcoholic Drink - Other Sponsorship Alcoholic Drink - Sports Sponsorship
	Food Brand Building	Food Brand Building Food Brand Building Food Brand Building	Food & Drink - Multi Product Food - Brand Building Food - Multi Product
Confectionery & Snacks	Chocolate	Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks	Chocolate - Boxed/tinned Chocolate - Countlines Chocolate - Large Bars Chocolate - Large/share Bags Chocolate - Multi Pack
	Crisps	Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks	Chocolate - Multi Product Crackers/crisp Breads Crisps/snacks - Countlines Crisps/snacks - Large/share Bags Crisps/snacks - Multi Packs
	Other Confectionery & Snacks	Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks Confectionery & Snacks	Crisps/snacks - Multi Product Biscuits Chewing/bubble Gum Confectionery/snacks - Multi Product Mints
	Sweets	Confectionery & Snacks	Sweets - Countlines Sweets - Large/share Bags Sweets - Multi Pack Sweets - Multi Product
Drinks	Childrens Drinks	Soft Drinks	Childrens Drinks
	Drink - Multi Product	Drink - Multi Product Drink - Multi Product	Alcohol & Non Alcohol - Multi Product Alcohol - Multi Product
	Fruit Juice & Smoothies	Soft Drinks Soft Drinks	Chilled Fruit Juice Smoothies
	Hot Beverages	Hot Beverages Hot Beverages Hot Beverages Hot Beverages Hot Beverages	Coffee Filtered/ground Coffee Instant Coffee Machine Pods Hot Beverages - Multi Product Tea Bags
	Iced Tea/iced Coffee Milk Drinks Soft Drinks	Hot Beverages Soft Drinks Soft Drinks Soft Drinks Soft Drinks Soft Drinks	Tea Loose/leaf Iced Tea/iced Coffee Milk Drinks Carbonated - Bottles Carbonated - Cans Soft Drinks - Multi Product
	Sports/energy/health Drinks	Sports/energy/health Drinks Sports/energy/health Drinks Sports/energy/health Drinks Sports/energy/health Drinks	Energy Drinks Pro Biotics & Cholesterol Reducing Drink Sports Drinks Stimulation Drinks
	Squash Water	Sports/energy/nearth Drinks Soft Drinks Soft Drinks Soft Drinks Soft Drinks	Stumulation Drinks Squash Water - Flavoured Water - Still Water - Still

Notes: The 'Other' product category includes all other Nielsen product mid and minor categories. The Neilsen product mid categories that fall into our 'Other' product category are: Baby & Toddler Food, Bakery, Beer Lager & Cider, Dairy, Delicatessen/Chilled Food, Fish, Food Cupboard/Grocery, Free From, Frozen Food, Fruit, Meat/Poultry, Ready/Prepared Meals, Salad/vegetables, Spirits & Liqueurs, Wine

D Defining children's programming

D.1 Regulation

CAP Code 32.5.1 The following may not be advertised in or adjacent to childrens programmes or programmes commissioned for, principally directed at or likely to appeal particularly to audiences below the age of 16: food or drink products that are assessed as high in fat, salt or sugar (HFSS) in accordance with the nutrient profiling scheme published by the Food Standards Agency (FSA) on 6 December 2005.

These limitations have been in place since 2007, with the code having been written by the Committee of Advertising Practice (CAP) and enforced by the ASA (Advertising Standards Authority).

The ASA website explains this requirement as meaning that such ads do not appear in 'children's media' (i.e. where under 16s are the main target audience) or other media where under-16s make up more than 25% of the audience. It also states that marketers are expected to hold evidence to support their placement choices.

D.2 Data

The data provided by Nielsen specify the programmes that were shown before and after the advert, and the channel that they are shown on. They also provide a classification of the genre of the programme shown *before* the advert (but not after). We use this, along with the impacts data, to classify programmes and channels that are likely to be subject to the regulation as described above.

There are seven genres provided by Nielsen that we aggregate into one 'Children' category. We group channels into 7 categories: ITV, Channel 4, Channel 5, Cable: Children, Cable: Sports, Cable: Movies, Cable: Other. 'Cable: Children' are channels for which more than 70% of total impacts are during children's programmes (defined using genre, described above).

The impacts data record the number of pairs of eyes that view an advert. Although we do not have data on the audience figures of the TV programmes directly, we can use information on the composition of the audience that see the adverts shown before or during the programmes. We have information on the impacts separately by children (aged 4-16) and adults (aged 16-64). We do not have information on the impacts for people aged 65 and above.

Using the genre and channel definition we define children's programmes as those that either (i) are in the genre category 'Children' or (ii) are shown on channels in the channel group 'Cable: Children'. These are programmes for which we think is likely that the restrictions around advertising HFSS apply.

We verify this by looking at the share of total impacts for programme-channel pairs that are made up of children's impacts. The regulation states that if the audience is greater than 25% children, then HFSS foods cannot be advertised. We use the impact

share of children to proxy for this. This is not precisely the measure used by the advertising authorities because (i) we do not measure impacts for people aged over 65, (ii) our measure aggregates impacts over the whole year, and (iii) we are looking at impacts of adverts shown during or before the programmes, not impacts of the programmes themselves.

However, it should give a fairly good indication of whether we have defined a set of programmes for which the advertising restrictions are likely to apply. Table D.1 shows that only 0.75% of total impacts during children's programming occur during programme-channel pairs that have a children impact share below 25%; conversely, only 0.43% of total impacts during non children's programming occur during programme-channel pairs that have a children impact share above 25%.

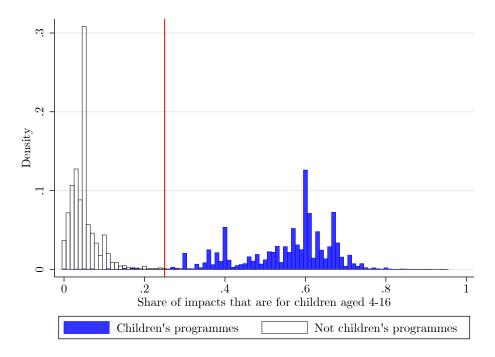
Table D.1: Impact shares and children's programming

	Share of total impacts on programme-channel pairs for which the children impact share is:	
	Below 25%	Above 25%
Children's programmes Not children's programmes	0.75 99.57	99.25 0.43

Notes: We define children's programmes as those that either (i) are in the genre category 'Children'or (ii) are shown on channels in the channel group 'Cable: Children'. For each programme-channel pair we calculate the share of total (for people aged between 4 and 64) impacts that are made up by children (aged 4-16). We define an indicator equal to 1 if this share is above 25%. The numbers show the share of total impacts for children's programmes (row 1) and not children's programmes (row 2) that occur during programme-channel in which this indicator is equal to 1 or not.

We also show the impact weighted distribution of children impact shares across programme-channels, by children's and not children's programmes, respectively, see Figure D.1. The figure shows that the two distributions of children impact shares across the two sets of programmes are almost disjoint, with very few child impact shares below 0.25 for children's programmes and very few child impact shares above 0.25 for not children's programmes.

 $\label{eq:continuous} \begin{tabular}{ll} Figure D.1: Impact weighted distribution of children impact shares across programme-channels \\ \end{tabular}$



Notes: For each programme-channel pair we calculate the share of total (for people aged between 4 and 64) impacts that are made up by children (aged 4-15). The figure shows the share of impacts across programme-channels that fall into 0.01 width bins of this measure, drawn separately for children's programmes and not children's programmes. We define children's programmes as those that either (i) are in the genre category 'Children'or (ii) are shown on channels in the channel group 'Cable: Children'. The red line is at 0.25.