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Following in the footsteps of tobacco and alcohol? Stakeholder discourse in UK newspaper coverage of the Soft Drinks Industry Levy

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SC is a Trustee for Heart of Mersey, UK Faculty of Public Health and UK Health Forum and provides unpaid advice to Action on Sugar.

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Authorship

SH: Conceptualisation, study design, funding acquisition, supervision, data interpretation, manuscript writing, review and editing.

CB: Study design, project administration, investigation, data collection, data analysis, data interpretation, manuscript writing, review and editing.

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Ethical standards disclosure

None required.

1 **Following in the footsteps of tobacco and alcohol? Stakeholder discourse in UK**
2 **newspaper coverage of the Soft Drinks Industry Levy**

3
4 **Abstract**

5 *Objective:* In politically-contested health debates stakeholders on both sides present arguments and
6 evidence in order to influence public opinion and the political agenda. The aim of this study was to
7 examine whether stakeholders in the soft drinks industry levy (SDIL) debate sought to establish or
8 undermine the acceptability of this policy through the news media and how this compared to similar
9 policy debates in relation to tobacco and alcohol industries.

10 *Design:* Quantitative and qualitative content analysis of newspaper articles discussing sugar-
11 sweetened beverage (SSB) taxation published in 11 UK newspapers between 1 April 2015 and 30
12 November 2016, identified through the Nexis database. Direct stakeholder citations were entered
13 into NVivo to allow inductive thematic analysis and comparison with an established typology of
14 industry stakeholder arguments used by the alcohol and tobacco industries.

15 *Setting:* UK newspapers.

16 *Subjects:* Proponents and opponents of SSB tax/SDIL cited in UK newspapers.

17 *Results:* 491 newspaper articles cited stakeholders' (n=287) arguments in relation to SSB taxation
18 (n=1,761: 65% supportive and 35% opposing). Stakeholders' positions broadly reflected their vested
19 interests. Inconsistencies arose from: changes in ideological position; insufficient clarity on the
20 nature of the problem to be solved; policy priorities; consistency with academic rigour. Both
21 opposing and supportive themes were comparable with the alcohol and tobacco industry typology.

22 *Conclusions:* Public health advocates were particularly prominent in the UK newspaper debate
23 surrounding the SDIL. Advocates in future policy debates might benefit from seeking a similar level
24 of prominence and avoiding inconsistencies by being clearer about the policy objective and
25 mechanisms.

26
27 **Keywords:** *Sugar-sweetened beverage taxation; SSB tax; soft drinks industry levy; SDIL; public*
28 *health policy; media content analysis; unhealthy commodity industries, UCIs.*

29 Introduction

30 Consumption of free sugars by UK adults accounts for 16-17% of their total energy intake⁽¹⁾,
31 more than triple the 5% maximum recommended by the World Health Organisation (WHO)⁽²⁾. An
32 econometric analysis of repeated cross-sectional data on diabetes and nutritional components of food
33 from 175 countries found that sugar availability is a statistically significant determinant of diabetes
34 prevalence rates worldwide⁽³⁾. Briggs et al. estimated that a 20% tax on sugar-sweetened beverages
35 (SSBs) might result in a 15% reduction in sugar consumption, potentially preventing approximately
36 180,000 people in the UK from becoming obese each year⁽⁴⁾. Evidence from countries such as
37 Mexico^(5; 6), Denmark⁽⁷⁾ and parts of the USA⁽⁸⁾ likewise suggest that SSB taxation might be an
38 effective policy in tackling obesity, particularly as part of a multipronged approach^(9; 10).

39 In March 2016, the UK Government announced a Soft Drinks Industry Levy (SDIL), which
40 came into force in April 2018^(11; 12). As anticipated, the SDIL led the soft drinks industry to
41 reformulate their products to contain less sugar in order to reduce their liability to pay the levy^{(13;}
42 ¹⁴⁾. The SDIL represents an important part of the Government's plan to reduce obesity⁽¹⁵⁾ and dental
43 decay in children^(16; 17), and also prevent non-communicable diseases (NCDs) associated with excess
44 sugar consumption^(18; 19; 20; 21; 22; 23). As such, the SDIL has been deemed particularly beneficial to
45 young people and low income populations who suffer the highest burden of diseases associated with
46 excess sugar consumption^(16; 17). The SDIL might thus also reduce health inequalities^(24; 25).

47 Regulatory attempts to reduce consumption of harmful commodities are often met with
48 opposition from producers and marketers of those commodities, and those stakeholders have been
49 shown to use common strategies in resisting the introduction of such upstream regulation. For
50 example, Mialon et al's recent systematic review of tactics used by the processed food industry in
51 Australia identified similarities to anti-regulation strategies used by the tobacco and alcohol
52 industries⁽²⁶⁾. Like other so-called unhealthy commodity industries (UCIs) they used front groups,
53 lobbying and industry-funded research: to emphasise industry responsibility and the effectiveness
54 of self-regulation; to question the effectiveness of statutory regulation; and frame excessive
55 consumption as the responsibility of individuals, rather than the state^(27; 28; 29; 30). More recently
56 Petticrew et al suggested that the arguments and language used by the alcohol, food, soda and
57 gambling industries may reflect the existence of a cross-industry 'playbook', whose use results in
58 the undermining of effective public health policies⁽³¹⁾. In contrast, there is less evidence of public
59 health advocates using similar tactics to gain support for potentially effective regulation of harmful
60 industry activities. Indeed, such advocates face considerable barriers to effectively influencing
61 policy change, including limited resources, time and appropriate skills⁽³²⁾. In the case of minimum
62 unit pricing for alcohol, Katikireddi et al found that public health advocates worked hard to redefine
63 the policy issue by deliberately presenting a consistent alternative framing of alcohol policy as a

64 broad, multi-sectoral, public health issue necessitating a whole-population approach⁽³³⁾. The authors
65 considered that reframing as vital in enabling policymakers to seriously consider the policy⁽³³⁾. The
66 effectiveness with which stakeholders in a policy debate communicate their arguments is crucial in
67 gaining support for their preferred policy option.

68 Walton suggests that arguments presented in the media are often used as rhetorically effective
69 techniques to persuade a mass audience⁽³⁴⁾. The news media is thus a potentially important channel
70 for stakeholders on both sides of any policy debate to promulgate their message. The way that health
71 problems are defined in the news media (ie: the nature of the problem, its drivers, causal agendas,
72 effects, and potential solutions), known as **framing**, thus plays a potentially very important role in
73 influencing public and decision-makers' interpretations of health issues^(35; 36; 37). Public acceptance
74 of a specific policy solution is often a prerequisite for decision-makers to implement an evidence-
75 based health policy^(38; 39) and media framing of problems and solutions can therefore play a key role
76 in determining that acceptability ^(40; 41; 42), as well as shaping social norms ^(43; 44; 45).

77 Systematic reviews of the tactics employed by the alcohol and tobacco industries in attempting
78 to influence marketing regulation have identified a common typology of frames used to argue against
79 such regulation. Namely *'increased regulation: (1) is unnecessary, (2) is not backed up by sufficient
80 evidence, (3) will lead to unintended negative consequences, and (4) faces legal barriers to
81 implementation; all underpinned by the message that (5) the industry consists of socially responsible
82 companies working toward reducing harmful consumption'*^(27; 28; 29). While there are subtle
83 differences in different industries' argumentation, possibly due to their relative positions in the
84 regulatory hierarchy⁽²⁹⁾, the literature broadly supports the idea that UCIs use a cross-industry
85 'playbook' to undermine effective public health policies⁽³¹⁾.

86 The aim of this study was therefore to: (i) identify stakeholder arguments used on each side
87 of the SDIL debate in UK newspaper coverage of SSB taxation and compare them with the frames
88 used to resist increased regulation by the alcohol and tobacco industries⁽²⁹⁾; and (ii) generate insights
89 into how anti-SDIL arguments may be countered, to inform future public health advocacy on this
90 and other fiscal policies - both in the UK and world-wide, where there is still considerable resistance
91 to such measures, for example in the USA^(46; 47) and Australia⁽⁴⁸⁾.

92

93 **Methods**

94 We used quantitative and qualitative content analysis methods. Firstly, we identified citations
95 of relevant stakeholders in newspapers, their overall presented position as proponents or opponents
96 in the SDIL debate, and the specific arguments in support of or opposing SSB tax attributed to them.
97 Secondly, we conducted inductive thematic analysis of cited arguments to identify key themes that
98 emerged from the data, and compared these with the established typology of industry frames⁽²⁹⁾.

99

100 *Newspaper search and article selection*

101 We employed newsprint content analysis based on methods developed by Hilton and
 102 colleagues at the University of Glasgow's Social and Public Health Sciences Unit^(49; 50; 51; 52). Eleven
 103 UK national newspapers with high circulation figures⁽⁵³⁾ were selected, along with their Sunday
 104 counterparts, to represent three genres: 'broadsheet', 'middle-market' and 'tabloid'. This typology
 105 represents a range of readership profiles diverse in terms of age, social class and political
 106 alignment^(53; 54). The time period of 1 April 2015 to 30 November 2016 was chosen to include
 107 coverage triggered by: the publication of reports from the World Health Organisation (WHO)⁽²⁾,
 108 Scientific Advisory Committee on Nutrition (SACN)⁽¹⁶⁾ and Public Health England (PHE)⁽¹⁰⁾; the
 109 announcement of the UK SDIL (March 2016) and the UK Government's consultation on the
 110 proposed SDIL^(55; 56).

111 The Nexis database⁽⁵⁷⁾ was searched for all articles published within the selected publications
 112 during the relevant date range that discussed the issue of SSB consumption and taxation. To identify
 113 relevant articles, a search string was developed for 'sugar*' and one or more of the following terms:
 114 'beverage*', 'soft drink*', 'fizz*', 'soda', 'tax*' and 'levy' occurring anywhere in the text three or
 115 more times. The search returned 3,127 articles. While the specific policy debate of interest was the
 116 SDIL, many stakeholders used the more generic term of SSB tax or sugar tax when discussing fiscal
 117 measures aimed at reducing excess sugar consumption, therefore articles in which stakeholders used
 118 any of these terms were included. Hereafter we use the term SSB tax unless stakeholders specifically
 119 refer to the SDIL.

120 Articles were excluded if they: 1) did not directly cite stakeholders' arguments for or against
 121 SSB tax or the SDIL; 2) were short lead-ins to a main story elsewhere in the same edition; 3)
 122 appeared exclusively in an Eire edition; 4) appeared in non-news sections of newspapers, including
 123 letters, advice, TV guide, sport, weather, obituaries or review sections. Letters are routinely excluded
 124 from media analysis as they represent the views of individual members of the public rather than
 125 stakeholders in the debate. Where a stakeholder provided an opinion piece for a newspaper, this was
 126 included in the analysis as a direct citation. After applying the exclusion criteria 2,636 articles were
 127 removed, leaving 491 for in-depth analysis.

128

129 *Article coding and stakeholder position analysis*

130 All articles were read in detail by one researcher (R1) to identify and capture the text of direct
 131 citations of stakeholder individuals and organisations. Each piece of text was coded for newspaper
 132 title, date, individual and/or organisation cited, and whether the argument was in support of, or
 133 opposition to, SSB taxation. Where stakeholders used evidence to back up their argument, the type

134 of evidence used was coded. The quantitative coding frame is provided in supplementary
135 information (File S1). A random subsample of 25% of the articles were double-coded by R2 to
136 ensure coding consistency. Data were imported into IBM SPSS version 24 to calculate inter-rater
137 agreement using Cohen's kappa coefficient⁽⁵⁸⁾. 65% of codes returned a kappa score >0.4, which is
138 typically interpreted as moderate agreement or better⁽⁵⁹⁾. Where less than substantial agreement was
139 identified (kappa <0.61), code definitions were discussed within the research team and the coding
140 frame and descriptor document were revised as required.

141 An overview of the slant of opinion by stakeholder was calculated based on an index
142 developed by Patterson et al⁽⁵²⁾. The index expresses the proportion of all supportive and
143 oppositional statements associated with a stakeholder as a value on a scale from +100% (all
144 supportive) to -100% (all opposed). Cited stakeholders were grouped into six categories according
145 to their organisational affiliations: politicians and political organisations; public health organisations
146 and professional bodies; industry representatives, manufacturers and retailers; non-governmental
147 organisations (NGOs), health charities and campaigners; academics and evidence producers; and
148 think-tanks and other analysts. These categories were constructed based on the need to structure the
149 analysis by grouping stakeholders with likely shared values, and were chosen in line with the
150 research team's prior experience of researching public health policy debates. Individuals and
151 organisations allocated to each group are listed in the supplementary information (File S2). For each
152 stakeholder, the degree of support was then plotted against the total number of times that stakeholder
153 was cited to provide a graphical representation of the most vocal supportive and oppositional groups.

154

155 *Analysis of arguments in support of and in opposition to SSB tax/SDIL*

156 Direct citations were imported into NVivo 11 for inductive thematic analysis. Each piece of
157 text was coded to two separate nodes; stakeholder and theme raised. Individual stakeholder nodes
158 were nested under stakeholder categories, as described above, and thematic nodes were nested under
159 supportive and oppositional categories of argument.

160 The themes identified were compared with the established typology of industry arguments
161 identified through systematic reviews of research on the alcohol and tobacco industries^(27; 28; 29). In
162 order to compare arguments used by both sides of the SSB tax debate with arguments relating to the
163 regulation of other UCIs we developed a policy-neutral form of this typology (neither opposition
164 nor support for SSB tax) i.e.: relevance of proposed regulation; evidence; unintended consequences
165 and other benefits; legal and corporate social responsibility.

166

167 **Results**

168 *Overview*

169 Between 1st April 2015 and 30th November 2016, 491 newspaper articles were identified in
 170 which stakeholders were cited as presenting arguments and evidence in the SSB tax debate (Table
 171 1). Most articles were published in UK-wide newspapers (89%) and 74% appeared in ‘broadsheet’
 172 newspapers.

173 A wide range of stakeholders (n=287: 34% organisations / 66% individuals), were cited in
 174 newspaper articles presenting views on SSB tax (n=1,761). A full list of all stakeholder organisations
 175 and named individuals is supplied in the supplementary information (File S2). 65% of arguments
 176 were in support of some form of SSB tax and 35% in opposition. Stakeholders infrequently cited
 177 evidence in support of their arguments (12% of the time) and the type of evidence used fell into 5
 178 categories: academic (citation of a specific academic study), lay opinion, expert opinion, anecdotal
 179 and financial (Table 2). The most frequently used type of evidence was anecdotal (44%) which was
 180 employed by both supporters and opponents of SSB tax. Supporters were more likely to cite a
 181 specific academic study or an expert opinion than opponents.

182

183 *Overall stance on SSB taxation*

184 Plotting the aggregate stance of each stakeholder group against frequency of citations revealed
 185 that public health organisations and professional medical associations (the most frequently cited
 186 stakeholder group with 25% of arguments) were most often cited as proponents of SSB tax, as were
 187 NGOs, charities, campaigners and academics (Fig1). Groups more frequently cited as opposing the
 188 measure included industry representatives and manufacturers (18% of arguments), think-tanks and
 189 economic research organisations. Most stakeholders were cited with consistent arguments, but a
 190 minority were cited as making both supportive and oppositional arguments, leaving their degree of
 191 support for SSB tax ambiguous and open to interpretation (File S2). Inconsistencies arose from:
 192 changes in ideological position (politicians and government representatives); insufficient clarity on
 193 the nature of the problem to be solved, excess sugar consumption vs obesity, and policy priorities
 194 (public health agencies); and consistency with academic rigour (academics). The group comprising
 195 politicians and political organisations were most diverse in their opinions, in line with the ideological
 196 positions held by its constituent stakeholders, with 68% of arguments in support of taxation and 32%
 197 opposing (Fig 1). Key individuals in this group (David Cameron, then Prime Minister, and Jeremy
 198 Hunt, then Health Secretary) were associated with initial oppositional positions and subsequent
 199 supporting positions as the debate developed.

200

201 *Thematic analysis and comparison with alcohol and tobacco frames*

202 The themes that arose from the qualitative analysis of stakeholder arguments could be readily
 203 classified into the frame/sub-frame structure developed by researchers studying the alcohol and

204 tobacco industries (Table 3). Table 3 presents summaries of typical arguments attributed to
205 stakeholders within articles, organised by stance and frame/sub-frame. Most arguments fell into the
206 evidence (40%) and regulation frames (31%), followed by the unintended consequences and other
207 benefits frame (24%), the corporate social responsibility frame (4%) and the legal frame (1%).

208

209 *Appropriateness of regulation:*

210 The arguments falling into the regulation frame focused on whether or not taxation was an
211 appropriate solution to the problem of obesity. Opponents from the food and drink industry argued
212 that the government should not intervene in the market, and that taxation would not prompt
213 behaviour change. For example, the Food and Drink Federation was quoted as stating that:
214 *'Demonising one nutrient is not a healthy way to proceed. Consumer choice is the best way to go*
215 *because government intervention simply doesn't work.'* (Independent, 28 August 2015). Some public
216 health agencies opposed the measure because they felt other regulatory mechanisms were of greater
217 priority such as: enforced reformulation and product labelling; control of marketing and promotions;
218 and positive price instruments on healthy products. For example, the President of the Academy of
219 Medical Royal Colleges was quoted as stating that: *'a sugar tax is probably not top of the list of*
220 *steps that need to be taken... Higher up would be reformulation of food, and we should curtail*
221 *marketing of overly sweetened drinks and food like breakfast cereals to children.'* (Guardian, 25
222 October 2015).

223 Supporters of SSB taxation emphasised the scale of the problem and the urgent need for
224 government action as part of a package of measures, with an emphasis on protecting young people.
225 For example, the National Obesity Forum and Faculty of Public Health made mutually supportive
226 statements: *'Sugar is indeed the new tobacco. We know it is very harmful to health and we know we*
227 *can use the same effective strategies that we used in tobacco control.'* And *'A little gentle pressure*
228 *from sugar taxes and other Government policies will help bring home the message'* (Daily Mirror,
229 2 November 2016).

230 Very few supporters highlighted the argument that the SDIL could be seen as a win-win
231 solution. This position contends that the measure will either reduce sugar consumption (by
232 discouraging consumer purchasing and/or encouraging manufacturer reformulation) and raise public
233 revenue that can be reinvested in public health initiatives. The win-win concept was alluded to in
234 the 2016 Chancellor's budget statement: *'he wanted to save the nation from an obesity crisis with a*
235 *tax on fizzy drinks. He said he was convinced that his levy of up to 24p on a litre of fizzy pop would*
236 *reduce consumption and reap a tax dividend for the exchequer'* (The Observer, 19 March 2016).
237 Supportive stakeholders' limited invocation of the win-win concept was potentially a missed
238 opportunity to counter opponents' arguments that sought to position reformulation as a failure of the

239 policy. For example, Investec were associated with that argument: *'Analysts at Investec said soft*
 240 *drinks makers would reformulate their products to avoid the tax, thereby reducing revenue for the*
 241 *chancellor.'* (Sunday Times, 20 March 2016).

242

243 *Evidence of effectiveness (or lack thereof...):*

244 The debate over the evidence bases for supporting or opposing SSB tax centred on the
 245 definition of the policy target; that is reducing sugar consumption vs tackling obesity. Opposing
 246 arguments hinged on the likely ineffectiveness of SSB tax in solving the long-term 'obesity
 247 epidemic', positioning the problem as too complex to solved by a fiscal measure. The Food and
 248 Drink Federation were cited as arguing that: *'Additional burdensome taxes on foods or drinks are*
 249 *rejected by the public. This complex challenge needs a complex solution, one which involves and*
 250 *empowers people, not taxes them.'* (Guardian, 4 September 2015). Other opposing arguments
 251 included observing that SSB consumption was already in decline, but obesity continues to rise, and
 252 arguing that SSBs are a sufficiently small source of dietary calories that, even if consumption was
 253 reduced, it would have little or no impact on obesity and related NCDs. For example, the Institute
 254 of Economic Affairs was cited as saying: *'Since soft drink taxes have only a modest effect on the*
 255 *consumption of this relatively minor source of calories, it should not be surprising that there is*
 256 *virtually no evidence sugary drink taxes have reduced obesity or improved health anywhere in the*
 257 *world.'* (Times, 13 January 2016).

258 Conversely, supporting arguments focused on the importance of reducing SSB purchases and
 259 thus sugar consumption in the short term, emphasising the impact on specific health concerns such
 260 as type-2 diabetes and dental decay in children. Supporters made extensive use of modelling studies
 261 and evidence emerging from Mexico to back up their claims. For example, Public Health England
 262 was quoted as stating that: *'The review highlights evidence from Mexico, where a soft drinks tax has*
 263 *led to a six per cent reduction in purchases. The point of the tax is to nudge people away from*
 264 *purchasing these things towards purchasing things that are more consistent with a healthy balanced*
 265 *diet.'* (Independent, 20 October 2015)

266 Three key pieces of evidence were used by stakeholders to support both supportive and
 267 oppositional arguments: The McKinsey report entitled *Overcoming obesity: An initial economic*
 268 *analysis*⁽⁹⁾, the PHE report *Sugar Reduction: The Evidence for Action*⁽¹⁰⁾ and a study published in
 269 the BMJ evaluating of the impact of the SSB tax in Mexico⁽⁵⁾ (Table 4).

270

271 *Unintended consequences and other benefits – both economic and public health:*

272 Arguments highlighting unintended consequences and other benefits tended to focus
 273 specifically on the SDIL rather than SSB taxation more generally. Opponents argued that the SDIL

274 would create negative economic impacts for soft drinks manufacturers, associated industries, the
275 wider economy and consumers, particularly those in lower income groups. Opposing arguments
276 characterised the measure as: regressive; costly to implement; inflationary and likely to cause job
277 losses. For example, the British Soft Drinks Association was quoted as explaining that: *'Given the*
278 *economic uncertainty our country now faces, we're disappointed the Government wishes to proceed*
279 *with a measure that analysis suggests will cause thousands of job losses.'* (Independent, 18 August
280 2016). Opponents also asserted that the levy would fail to raise the anticipated public revenue as
281 manufacturers would reformulate their products to avoid paying it, positioning this as a negative
282 outcome rather than the positive one suggested in the "win-win" solution.

283 Opposing arguments also emphasised the potential negative health consequences of
284 consumers replacing SSBs with other sources of sugar or artificially-sweetened beverages (ASBs),
285 suggesting that sugar is addictive and ASBs are no better for health than SSBs. The Institute for
286 Fiscal Studies was quoted as reasoning that: *'If people have a strong taste for sugar, although they*
287 *may respond to the increase in prices by switching away from sugary soft drinks, it's entirely possible*
288 *and quite likely they might switch towards other high sugar products.'* (Daily Mail, 18 March 2016).

289 In contrast, supporters of the tax argued that there would be no adverse economic impact for
290 industry or consumers, as the design of the SDIL allowed industry two years to reformulate their
291 products with less sugar and that consumers could choose from many alternatives to SSBs and thus
292 avoid the levy entirely. Additional benefits of the SDIL were highlighted in terms of: the potential
293 for reinvestment of revenue raised into health improvement programmes and subsidies for
294 "healthy" foods; the positive long-term impact of reduced NCDs on increased productivity and a
295 reduced burden on the NHS; and sending a strong message to industry and consumers about the
296 health impacts of excess sugar consumption. For example, the WHO was quoted as suggesting that:
297 *'Fiscal policies may encourage this group of consumers to make healthier choices (provided*
298 *healthier alternatives are made available) as well as providing an indirect educational and public*
299 *health signal to the whole population.'* (The Herald, 26 January 2016).

300

301 *Legality issues:*

302 Unsurprisingly, only opponents of SSB tax were cited as making arguments highlighting the
303 legality and potentially anti-competitive nature of the measure. For example, the British Soft Drinks
304 Association stated: *'It's fair to say we are more than just considering legal action. This has been*
305 *rushed through without warning'* (Sunday Times, 20 Mar 2016). However, this line of argument
306 was transient, surfacing only briefly at the time of the SDIL announcement in early March 2016,
307 and disappearing by the end of that month. The Telegraph (30 March 2016) quoted AG Barr as
308 saying: *'[we are] fully committed to working with the Treasury on a full consultation that will have*

309 *an outcome that benefits consumers, shareholders and other stakeholders.*’, and added that ‘*Mr*
 310 *White said that a legal challenge to the sugar tax was not being considered.*’. This was in contrast
 311 to the response of the alcohol industry to the announcement of minimum unit pricing for alcohol in
 312 Scotland, where a legal challenge significantly delayed implementation.

313

314 *The role of corporate social responsibility:*

315 The final frame represents a line of argument again primarily espoused by opponents of SSB
 316 tax: that the soft drinks industry has a positive role to play in promoting public health and that they
 317 are voluntarily reformulating their products to be healthier in response to consumer demand, without
 318 the need for taxation or other regulation. For example, one soft drinks manufacturer was quoted as
 319 stating that: ‘*Our job is to understand and have relationships with our customers, which we have*
 320 *had for over 100 years, making sure we offer them choices. In stark contrast to other food and drink*
 321 *categories, we have been reducing sugar content and have a strong [commitment] to do so.*’
 322 (Guardian, 29 March 2016). Conversely, supporters of the measure questioned whether or not
 323 working in partnership with industry and relying on voluntary action had worked, pointing out the
 324 failure of the Public Health Responsibility Deal⁽⁶⁰⁾. For example, a Liberal Democrat MP was quoted
 325 as stating that: ‘*The whole approach has been based on voluntary action. The question is whether*
 326 *that has succeeded. I don't think anything fundamentally has changed. We need to rethink our*
 327 *approach and ask if it has led to too cosy a relationship with the food industry.*’ (Daily Mail, 24
 328 October 2015).

329

330 **Discussion**

331 Our media content analysis revealed 1,761 arguments made by 287 stakeholders in the debate
 332 about SSB tax across 491 UK national newspaper articles, which is comparable with similar public
 333 debates on other policy measures such as e-cigarette regulation⁽⁵²⁾ and minimum unit pricing for
 334 alcohol^(61; 62). Supportive statements outnumbered opposing ones by almost 2:1. The most frequently
 335 cited supporters of SSB tax were public health organisations and professional medical associations,
 336 while the most frequently cited opponents were soft drinks industry representatives. Both supportive
 337 and opposing arguments aligned with a typology framework developed for studying the alcohol and
 338 tobacco industries^(27; 28; 29).

339 Stakeholders on each side of the debate sought to use evidence to support their arguments;
 340 however, opponents were less likely to refer to specific academic studies and more likely to use
 341 anecdotal evidence. Interestingly, the same reports were sometimes invoked by both proponents and
 342 opponents to support their differing arguments, but using subtly different framings. The effective
 343 use of evidence is a potentially important factor in influencing public support for proposed policy

344 interventions^(38; 63). However, a systematic review by Orton and colleagues found that, policy
345 makers' sceptical view of research evidence can create a key barrier to its use⁽⁶⁴⁾. Our findings on
346 how evidence was used by stakeholders in the SDIL debate reinforce the importance of
347 trustworthiness and reliability in the way research is represented, and then used or dismissed.

348 The use of taxation as an intervention to influence consumer behaviour and reduce
349 consumption of unhealthy commodities is a well-established public health policy that has been used
350 effectively in relation to both tobacco and alcohol^(65; 66). However, a recent systematic review by
351 Wright and colleagues highlighted the importance for policy actors to be clear about the primary
352 objective of any health tax, be it for fiscal or health purposes, and to frame the tax accordingly⁽⁶⁷⁾.
353 Failure to do so leaves a proposed tax vulnerable to hostile lobbying⁽⁶⁷⁾. Our study identified
354 inconsistencies in argumentation from three possible sources: changes in ideological position
355 (politicians and government representatives); insufficient clarity on the nature of the problem to be
356 solved and policy priorities (public health agencies); and consistency with academic rigour
357 (academics). Whether a policy is anticipated to produce single or multiple outcomes, proponents
358 need to identify the outcome or outcomes clearly and consistently. More clearly positioning the
359 SDIL as a 'win-win solution', both lowering sugar consumption and raising revenues that can be
360 reinvested in health service funding, could have been a useful, pragmatic approach to pre-empt
361 opposing arguments. The limited invocation of that perspective may perhaps represent a missed
362 opportunity for proponents of the policy.

363 A key strategy employed by other UCIs to oppose upstream regulation is the complexity
364 argument, which Petticrew et al characterise as '*Nothing can be done until everything is done*'⁽³¹⁾.
365 Opponents of SSB tax employed this tactic by emphasising the complexity of the obesity problem,
366 and therefore the inappropriateness of discrete legislative measures. Proponents apparently
367 countered this by strategic simplification; that is by focusing on the specific health harming effects
368 of excess sugar consumption, particularly from SSBs for young people. They further emphasised
369 that the SDIL was not intended to be a 'silver bullet' to tackle obesity, but a small and important
370 first step focussing on a commodity with negligible nutritional value. Similar, apparently deliberate,
371 attempts to reframe policy debates were previously used by public health advocates in the case of
372 minimum unit pricing for alcohol⁽³³⁾, and by supporters of legislation to prohibit smoking in private
373 vehicles carrying children⁽⁶⁸⁾.

374 Advocates clearly need to continue to use effective arguments and embrace the persuasive
375 power of framing. However, public health advocates and academics should also be aware of the
376 potential for their over-critical analyses of nuanced aspects of policy measures to result in 'mixed
377 messages' when filtered through media gatekeepers. Nuance is a strength of academia, and many
378 academics are understandably wary of media commentators championing public health policies.

379 However, complex messages have the potential to create public confusion and actually undermine
380 the intended public health objectives. Academics readily acknowledge uncertainty, but uncertainty
381 rarely has a place in clear public communication⁽⁶⁹⁾. Researchers lacking media skills can thus find
382 themselves uncomfortably positioned in complicated moral and affective landscapes, toiling to
383 represent the nuance of their research⁽⁷⁰⁾. The challenge is to communicate the core truth simply, but
384 without dumbing down the message into simplistic dichotomy. The mass media lens may depict
385 rigorous academic circumspection as fragility of position, while industry representatives opposing
386 regulation are unlikely to concede any uncertainty⁽⁶⁹⁾.

387 We suggest that, in a bid to downplay the contribution of SSBs to NCDs, the soft drinks
388 industry employed tactics previously used by other UCIs by ‘directly lobbying’ the public and
389 policy-makers, shifting blame for obesity to complexity and optimistically trying to characterise the
390 soft drinks industry as promoting healthy lifestyles⁽⁷¹⁾. Our study also supports the findings of the
391 systematic review by Mialon et al; that information and messaging is one of the most prominent
392 corporate political activities employed by food industry actors⁽²⁶⁾.

393 Our study has relevance beyond debates about SSB tax. These data add to a growing body of
394 research demonstrating the similarities in frames promoted by different harmful commodity
395 industries across public health policy debates^(27; 28; 30; 31). Our research may therefore help to inform
396 future media strategies by advocates of upstream legislative public health measures targeting a range
397 of harmful products, including sugar, tobacco⁽⁷²⁾ and alcohol⁽⁷³⁾. In particular, it may be helpful for
398 public health proponents to support arguments with high-quality evidence, to communicate the
399 subtleties of health policy development without undermining key objectives, and to be aware of the
400 apparent shared UCI ‘playbook’⁽³¹⁾.

401 Our research strengths include a rigorous approach which offers a robust examination of the
402 newspaper debate around SSB tax. By coding and analysing direct quotations of stakeholders, we
403 sought to minimise the impact of editorial gatekeepers and achieve greater fidelity than the more
404 commonplace approach of analysing entire news articles. Our study is subject to the limitations
405 which are intrinsic to media content analysis. Firstly, these data do not necessarily represent
406 stakeholders’ intended positions, rather a collaboration between stakeholders and media
407 gatekeepers, whereby those positions have been mediated, interpreted, filtered and contextualised
408 by journalists and editors. However our exclusive use of quotes from individuals and directly
409 attributable citations partly mitigates against this. Secondly, newspapers represent only one forum
410 in which policy debates play out. Our analysis therefore omits the parliamentary arena, the judicial
411 arena, social media and any non-public discussions that take place ‘behind closed doors’. However,
412 understanding public debate in the media arena still offers a useful ‘*door opener to the backstage of*
413 *politics*’, as Wodak and Meyer argue⁽⁷⁴⁾. A more comprehensive understanding of stakeholders’

414 strategies might be triangulated from studying other forms of media, policy documents, or
415 consultation responses, and conducting interviews with stakeholders. Thirdly, this form of
416 representational content analysis cannot (and does not seek to) assess the effectiveness of
417 stakeholder media communication strategies, only their implied intention. Further research on public
418 perceptions of media messaging and stakeholder intention might usefully help to complete the
419 picture.

420

421 **Conclusion**

422 Public health advocates were particularly prominent in the debate surrounding the SDIL in
423 UK newspapers. Mass media engagement can be used to influence how the public and policymakers
424 understand health problems and their solutions and thus the acceptability of specific policies^(35; 75).
425 Research into how public health policy debates unfold in the media may help to inform improved
426 media advocacy strategies⁽⁷⁶⁾. Opponents' arguments resembled those used by the alcohol and
427 tobacco industries in prior policy debates. Advocates in future policy debates could benefit from
428 seeking a similar level of prominence and avoid inconsistencies by being clearer about the policy
429 objective and mechanisms.

430

431

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628 **Tables**

629

630 **Table 1** Number of newspaper articles included in the final sample by region,

631 genre and newspaper title

Region, genre and title	Total articles	
	n	%
United Kingdom		
<i>'Broadsheet'</i>		
Guardian / Observer	88	18
Independent /i-Independent	84	17
Times / Sunday Times	90	18
Daily Telegraph / Sunday Telegraph	58	12
<i>Middle Market</i>		
Daily Mail / Mail on Sunday	33	7
Express / Sunday Express	19	4
<i>Tabloid</i>		
The Sun / Sunday Sun	50	10
Mirror / Sunday Mirror	13	3
Scotland		
<i>'Broadsheet'</i>		
Scotsman / Scotland on Sunday	18	4
The Herald / Sunday Herald	27	5
<i>Tabloid</i>		
Daily Record / Sunday Mail	11	2
Total	491	100

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640 **Table 2** Frequency of use of evidence cited in support of and opposition to SSB tax
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		Citations in support of SSB tax (n=155)	Citations in opposition to SSB tax (n=66)
Anecdotal (n=98)	n	58	40
	%	37	61
Academic (n=43)	n	36	7
	%	23	11
Financial (n=39)	n	31	8
	%	20	12
Expert (n=30)	n	23	7
	%	15	11
Opinion (n=11)	n	7	4
	%	5	6

643 **Table 3. Summary of frames, sub-frames and key arguments made by opponents and proponents of SDIL. (Frame adapted from Savell et**
 644 **al.^(27; 28) and Martino et al.⁽²⁹⁾**

Frame	Sub frame(s)	Arguments opposing SSB tax	Arguments in support of SSB tax	
Regulation Opp 35% / Prop 65%		<ul style="list-style-type: none"> – Other regulation would be more effective in tackling obesity – Positive price instruments are needed – Taxation is an inappropriate mechanism for behaviour change – Sugar cannot be regulated like alcohol and tobacco – Obesity too complex a problem to solve with fiscal measures – Additional taxation is un-conservative and unpopular – nanny statist – Focus should be on solving inequalities 	<ul style="list-style-type: none"> – No silver bullet / a useful start as part of a package of measures – Will prompt reformulation to avoid the levy / health by stealth – Reluctant to impose new taxes but have to start dealing with obesity somewhere / nothing else is working – Sugar is the new tobacco and should be regulated as such – Relatively quick and easy to implement – a quick win – Public are in favour of decisive government action / even taxation – SSB consumption is a particular issue for young people, therefore an appropriate target for Government intervention 	
		35%	65%	
Evidence Opp 31% / Prop 69%		<ul style="list-style-type: none"> – No evidence of effectiveness anywhere in world – Those who buy SSBs are not price sensitive – Won't reduce calorie intake therefore no effect on obesity – SSB consumption is declining anyway – no effect on obesity 	<ul style="list-style-type: none"> – Evidence shows that SSB tax reduces purchases – Will reduce tooth decay, obesity and related NCDs 	
		31%	69%	
Unintended consequences/ other benefits Opp 38% / Prop 62%	Economic Opp 37% / Prop 63%	Manufacturers	<ul style="list-style-type: none"> – Will lead to industry failure, job losses and reduced innovation – The SDIL is complex, confusing and difficult/costly to implement 	– No adverse economic impact as industry has 2 years to reformulate
		40%	60%	
		Associated Industries	– The SDIL will cost jobs across the UK in associated industries	
		100%	0%	
	Public revenue	<ul style="list-style-type: none"> – The levy will not raise the anticipated revenue – Increased taxation will cause inflation / decline in output 	<ul style="list-style-type: none"> – Revenue raised can be used to fund health improvement programmes and/or subsidise 'healthy' foods – Reduced loss of productivity from NCDs will benefit economy – Revenue for NHS to offset costs of obesity / reduced long-term costs 	
19%	81%			
Consumers	– Tax is regressive / will impact lower income groups disproportionately	– There are many alternatives to SSBs / no-one needs to drink SSBs and pay the levy		
85%	15%			
	Public Health Opp 46% / Prop 54%	<ul style="list-style-type: none"> – People will switch to other sugar sources / unhealthy drinks – ASBs are no more healthy 	<ul style="list-style-type: none"> – Sends a clear message that sugar is bad for health – Will nudge people to choose low/no sugar options – Low income groups will see the greatest health benefits 	
		46%	54%	
Legal Opp 100% / Prop 0%		– SDIL is illegal / anti-competitive		
		100%	0%	
Corporate social responsibility Opp 66% / Prop 34%		<ul style="list-style-type: none"> – Industry is reformulating anyway in response to consumer demand – SDI plays an active role in promoting healthy lifestyles 	– The Public Responsibility Deal has failed	
		66%	34%	

645 **Table 4: Use of evidence to support stakeholder arguments**

646

Report/Study	Use in opposing arguments	Use in supportive arguments
Overcoming obesity: An initial economic analysis (2014) Dobbs et al. ⁽⁹⁾	<i>'But we want to see action based on evidence of what works. Taxes did not make the top 10 most effective interventions to reduce obesity in the McKinsey Global Institute's obesity report.'</i> Soft drink manufacturer (Telegraph 26 May 2016)	[Calling for SSB tax and citing the McKinsey report] <i>'The total economic loss from obesity to the UK was calculated at £49bn in 2012.'</i> Cancer Research UK/UK Health Forum (Guardian 19 February 2016)
Sugar reduction: The Evidence for Action (2015) Public Health England ⁽¹⁰⁾	<i>'It may also be possible, by negotiation, to improve the definition of 'high sugar foods' as the [PHE] report suggests. However, we do not agree that the international evidence supports the introduction of a sugar tax.'</i> Food & Drink Federation (Guardian 29 October 2015)	<i>'We welcome this [PHE] report, and the contribution this will make to reduce obesity levels, particularly among children. Hard-hitting action is necessary on pricing, reformulation and promotion of high-sugar products.'</i> Professional Association (Guardian 22 October 2015)
Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study (2016) Colchero et al. ⁽⁵⁾	<i>'The Mexican reductions were equivalent to one less sugar cube a day per person, which was a drop in the calorific ocean.'</i> Academic (Guardian, 7 January 2016)	<i>'Unequivocal evidence from other countries [Mexico] has shown that a sugar tax duty on soft drinks will reduce sales of sugar-sweetened soft drinks, particularly among the more socially deprived.'</i> Health organisations statement (Guardian 24 June 2016)

648 **Figure legends**

649 **Fig 1.** Frequency of citations by stakeholder group and their aggregate stance towards SSB
650 tax/SDIL

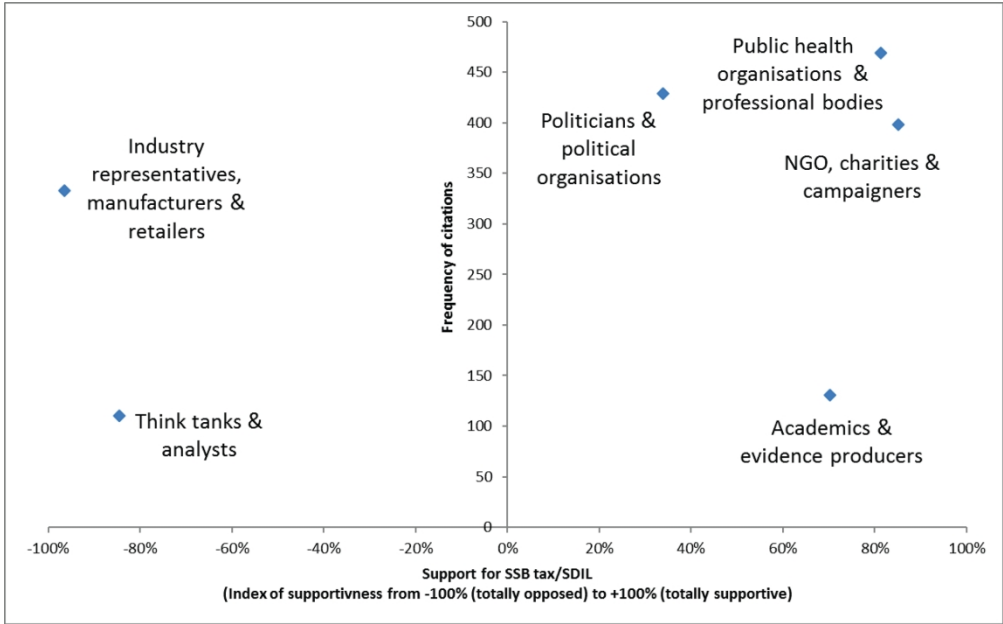
651

652 **Supplementary information**

653 **File S1.** Quantitative coding frame

654 **File S2.** Full list of stakeholder organisations, named individuals, allocation to stakeholder groups.

655



Frequency of citations by stakeholder group and their aggregate stance towards SSB tax/SDIL

186x115mm (300 x 300 DPI)

Coding frame used to analyse final sample of newspaper articles

coder initials SSB coding frame v14.0 24_04_17

To be completed if the article specifically mentions SSB taxation/"sugar tax" or the Soft Drinks Industry Levy

1 Article ID					
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

15 Description of taxation	YES	NO
15.1 "Sugar tax"	1	2
15.2 SSB taxation	1	2
15.3 Soft Drinks Industry Levy	1	2

16 Specifically in relation to SSB taxation/"sugar tax" or the Soft Drinks Industry Levy...	YES	NO
16.1 Arguments for taxation...		
16.1.1 Positive impact on consumption / purchases (ie: will help to change behaviour / reduce consumption of sugar/SSBs)	1	2
16.1.2 Positive health impact (ie: will help to reduce obesity/diabetes/other NCDs/mortality)	1	2
16.1.3 Positive financial impact (eg: funding for NHS/ schools/ physical education/ PH education / subsidies for F&V etc)	1	2
16.1.4 Sends clear message (eg: to industry to change behaviour / reformulate and to parents to and children about importance of reducing consumption / to government to take action)	1	2
16.1.5 Proposed tax should be more extreme (ie: needs to be tougher / extend to other sugar containing products / extend to other 'unhealthy' products eg: high fat / needs to happen sooner)	1	2
16.1.6 Proposed tax could be an important first step (can be done quickly and relatively easily) (ie: needs to be one of a range of legislative measures / taxation not enough on its own)	1	2
16.2 Evidence for taxation...		
16.2.1 Specific evidence provided - Source: _____ (ie: specify what type & source - academic / opinion / expert / anecdotal / financial)	1	2
16.2.2 Evidence of success (eg: red. SSB/sugar consumption / purchases / health outcomes / inc. reformulation)	1	2
16.2.3 Evidence from other countries / contexts (ie: effect in other countries that have introduced such a tax eg: Mexico)	1	2
16.3 Arguments against taxation...		
16.3.1 Negative financial impact (eg: company profits / job losses / consumer confidence / wider economy / inflation / shopping bills)	1	2
16.3.2 Impact on lower socio-economic groups (ie: disproportionate impact)	1	2
16.3.3 Food & drinks taxes already exist (eg: 20% VAT)	1	2
16.3.4 Taxation unfair on SSB industry - anticompetitive / discriminatory (eg: SSB companies being made a scapegoat / punitive / disappointing / should also apply to other industries and/or sugar producers)	1	2
16.3.5 Unintended negative health consequences (eg: substitution for other 'unhealthy' products / switch to other low cost options)	1	2
16.3.6 Demonisation of sugar (ie: sugars can be enjoyed in moderation/ focusing on one nutrient won't solve obesity)	1	2
16.3.7 SSB taxation not the answer - consumption of sugar in SSBs is actually falling (eg: not the most significant source of sugar / other nutrients more/equally damaging eg: high fat / needs a comprehensive set of actions)	1	2
16.3.8 Taxation as a mechanism not the answer (ie: not an effective way of changing behaviour / need positive price mechanisms)	1	2
16.3.9 Consumer / brand loyalty (ie: consumers will continue to buy regardless eg: Irn Bru at the heart of being Scottish / price inelasticity of 'sin' products)	1	2
16.3.10 Other legislation might be better / is needed	1	2

(eg: warning labels / legal max levels / bans on food & drinks / greater advertising controls)		
16.3.11 Nanny state - autocratic / government intervention doesn't work (ie: loss of freedom of choice for individual / won't be supported by public)	1	2
16.3.12 Existing voluntary action is enough / could be extended (ie: SSB industry already doing / planning to do its bit eg: reformulation / advertising controls / portion sizes /calorie caps / banning products in supermarkets / better labelling)	1	2
16.3.13 Implementation issues (will take too long / distraction from Brexit) (eg: unworkable / high cost of implementation / which SSBs included/excluded)	1	2
16.4 Evidence against taxation...		
16.4.1 Specific evidence provided - Source: _____ (ie: specify what type & source - academic / opinion / expert / anecdotal / financial)	1	2
16.4.2 Evidence of failure (eg: no change in SSB/sugar consumption / health outcomes / calorie intake)	1	2
16.4.3 Evidence from other countries / contexts (ie: other countries that have introduced such a tax eg: Mexico)	1	2
16.4.4 Lack of evidence to support taxation (ie: states that no evidence exists / doesn't believe the evidence)	1	2
16.5 Other points for debate		
16.5.1 Headline position statement (ie: makes a clear headline statement for or against SSB taxation)	1	2
16.5.2 Comparison with other legalisation (eg: alcohol / tobacco / salt)	1	2
16.5.3 Clarifies what the tax is (ie: is a levy on the SD industry - NOT a sugar tax / does not have to be passed on the consumer)	1	2
16.5.4 Legal challenge (ie: suggests a legal challenge to the government)	1	2
16.5.5 Evaluation (ie: need to be able to evaluate and withdraw if not working)	1	2
16.5.6 Government response (ie: Government is unlikely to support a sugar tax / delaying tactics)	1	2

17 Who are the key actors in the debate and what arguments to do they make?

17.1 Stakeholders: Government representatives / organisation

17.2 Stakeholders: Public health organisation / advocates / professional body

17.3 Stakeholders: Industry representatives / producers / retailers

17.4 Stakeholders: NGO / Charity

17.5 Stakeholders: Academics / Evidence producers

17.6 Stakeholders: Others (eg: Individuals)

S2 Supplementary information: Full list of stakeholder organisations, named individuals, allocation to stakeholder groups

Political representatives / organisations	Proponents	Opponents	Mixed messages
<i>UK Government (CON)</i>	George Freeman (PUSS for Life Sciences Minister), Dan Poulter (former Health Secretary), Nick Herbert (MP), Nicola Blackwood (Public Health Minister), Jane Ellison (ex-PH Minister), Flick Drummond (MP)	<i>UK Government (CON)</i> Prime Minister's spokesperson, Jacob Rees-Mogg (MP), Philip Davies (MP), Will Quince (MP)	<i>UK Government (CON)</i> David Cameron (Prime Minister), Jeremy Hunt (Health Secretary), Boris Johnson (Mayor of London)
<i>Department of Health</i>	Sir Liam Donaldson (former CMO), Prof Susan Jebb, (Chair Food Responsibility Network)	<i>Department of Health</i>	<i>Department of Health</i> Dame Sally Davies (Chief Medical Officer)
<i>Treasury</i>	Jane Ellison (Financial secretary to HMT)	<i>Treasury</i>	<i>Treasury</i> George Osborne (Chancellor)
<i>Health Select Committee (Cross party)</i>	Dr Sara Wollaston – Chair (CON),	<i>Health Select Committee (Cross party)</i> Andrea Jenkyns (CON), Andrew Percy (CON)	
<i>Other UK parties</i>	Jeremy Corbyn (LAB), Helen Jones (LAB), Sadiq Khan (LAB – Mayoral candidate), Norman Lamb (LD),		
<i>Scottish Politicians</i>	Catherine Calderwood (CMO), John Swinney (Finance Minister SNP), Scottish Labour Party, Kezia Dugdale (SLAB Leader), Scottish Liberal Democrats, Alex Cole-Hamilton (SLD MSP), Jim Hulme (SLD MSP)	<i>Scottish Politicians</i> Scottish Conservative Party, Aileen Campbell (Public Health Minister SNP), Maureen Watt (former Public Health Minister SNP), Patricia Gibson (SNP MSP)	<i>Scottish Politicians</i> Scottish Government (SNP), Dr Steve Simpson (SLAB MSP)
<i>Welsh Politicians</i>	Welsh Nationalist Party (WNP)	<i>Welsh Politicians</i> Welsh Government (WLAB)	
<i>Mexican politicians</i>			Mexican politicians
PH orgs / experts / professional bodies	Proponents	Opponents	Mixed messages
<i>Public Health agencies</i>	Duncan Selbie (Chief Exec. PHE), Association of Directors of Public Health, Royal Society for Public Health: Dame Shirley Cramer (Chief Exec), UK Faculty of Public Health: Prof John Ashton (President); Prof Simon Capewell (VP for Policy), UK Health Forum: Jane Landon (Dep Chief Exec); Dr Laura Webber (Dir PH Modelling), Overseas Development Institute: Steve Wiggins, World Health Organisation: Margaret Chen (Head), Michael Bloomberg (Global Ambassador for NCDs), Dr Douglas Bettcher (Dir Dept for Prevention of NCDs), Dr Francesco Branca (Nutrition Director), Joao Breda (European PM for Nutrition), World Obesity Federation: Tim Lonstein (Head of Policy), Mexican National Institute of Public Health and PH advocates	<i>Public Health agencies</i>	<i>Public Health agencies</i> Public Health England, Dr Alison Tedstone (Chief Nutritionist, PHE)
<i>Medical Associations & health experts</i>	NHS England, Stephen Dorrell (Chair NHS Confederation of Health Service Managers), British Medical Association: Dr Richard Vautrey (Dep Chair BMA GPs Committee), Dr Sheila Hollins (Chair BMA	<i>Medical Associations & health experts</i> Catherine Collins (British Dental Health Foundation), Steve Lumb (GP)	<i>Medical Associations & health experts</i> Simon Stevens (Chief Exec NHS England), Prof Dame Sue Bailey (President, Academy of Medical Royal Colleges), "health

Board of Science), Academy of Medical Royal Colleges, British Dental Association: Henrik Overgaard Neilson (Chair BDA General Dental Practice Committee), Prof Walmsley (Scientific Advisor), British Dental Health Foundation: Dr Nigel Carter (Chief Exec), Royal College of Paediatrics and Child Health: Prof Neena Modi (President), Royal College of Physicians: Prof John Wass (Academic Vice President), Royal College of Physicians and Surgeons Scotland: Prof Derek Bell (President), Royal College of Surgeons: Prof Hunt (Dean of Dental Surgery), Dr Alice Hodgkinson (GP), Dr Hema Gore (GP), Dr A Malhotra (Consultant Cardiologist)

experts”

Food and nutrition experts

Food and nutrition experts

Food and nutrition experts

Scientific Advisory Committee on Nutrition: Prof Ian Macdonald (Chair Working Group on Carbohydrates and Health), Elspeth Macdonald (Dep Chief Exec FSS), London Food Board: Rosie Boycott (Chair)

Food Standards Scotland

Industry reps / producers / retailers

Proponents

Opponents

Mixed messages

Industry associations & representatives

“The industry”, British Soft Drink Association (BSDA): Gavin Partington (Director General), Peter Harding (President), UK Food & Drink Federation(UKFDF): Ian Wright (Director General), Tim Rycroft (Dir of Corporate Affairs), UK Sugar Bureau, American Beverage Association, Scotland Food & Drink: James Withers (Chief Exec), Scottish Food & Drink Federation: David Thomson (Chief Executive Officer), Scottish Grocers Federation: Pete Cheema (Chief Executive Officer), Industry bodies and retailers in Mexico

Manufacturers & producers

AG Barr: Roger White (Chief Exec), Coca-Cola: Leendert Den Hollander (VP and GM at European Partners), Jon Woods (General Manager Great Britain), Britvic: Simon Litherland (Chief Executive), Paul Graham (Managing Director UK), Peter Harding (Chief Operating Officer, LRS), Mamie Millart (Chief Executive, Vimto), Mary Barnard (Head of UK Division, Cadbury), Peraldo Oldano (UK Chief Exec, Ferrero Rocher), Unilever: Paul Polman (Chief Executive Officer), AB Sugar, Association British Foods: George Weston (Chief Exec), Paul Kenward (MD British Sugar)

Retailers & restaurateurs

John Vincent (Chief Executive Officer & Co-founder of Leon restaurants)

Retailers & restaurateurs

Wetherspoons: Tim Martin (Chairman), Starbucks: Sarah Bruce-Goodwin (Vice President for R&D), Ramesh Pabari (sweet shop owner) Sainsburys: Mike Coupe (Chief Exec), Tesco, Waitrose, “supermarket boss”

NGOs / charities / campaigners

Proponents

Opponents

Mixed messages

Charities and NGOs

Action on Sugar: Prof Graham MacGregor (Chairman), Katharine Jenner (Campaign Director), Jenny Rosborough (Nutritionist & Campaign Manager), Kawther Hashem (Nutritionist & Researcher), Cancer Research UK: Alison Cox (Dir of Cancer Prevention), Prof

Charities and NGOs

Charities and NGOs

Tam Fry (Head Spokesperson, National Obesity Forum)

Linda Bauld (Cancer Prevention Champion), Gregor McNie (Public Affairs Manager, Scotland), Diabetes UK: Chris Askew (Chief Exec), Louise Ansari (Dir of Prevention), Prof Alan Sinclair (Dir Diabetes Frail Project), National Obesity Forum: Prof David Haslam (Chair), National Obesity Forum, Obesity Action Scotland: Lorraine Tulloch (Programme Lead), Dr Emilia Crighton (member), Sustain: Kath Dalmeny (Chief Executive), Ben Reynolds (Deputy Chief Executive), Malcolm Clark (Co-ordinator Children's Food Campaign & spokesperson), Obesity Health Alliance, Nutritional Health Alliance, Health Equalities Group: Rob Ireland (Chief Exec)

Campaigners

Jamie Oliver (chef), James Cracknell (athlete), Paul Hollywood (TV presenter), David Gandy (model), Andrew Fairlie (chef), "campaigners"

Campaigners

Heston Blumenthal (chef)

Academics / evidence producers

Proponents

Opponents

Mixed messages

UK Academics and academic institutions

British Medical Journal study, Prof Simon Capewell (University of Liverpool), Prof Graham MacGregor (Wolfson Institute of Preventative Medicine), Kawther Hashem (Queen Mary University London), Professor Mike Rayner (Nuffield Dept of Population Health), Prof Francesco Cappuccio (University of Warwick), Dr Richard Hoffman (University of Hertfordshire), Prof Leigh Sparks (Stirling University), Prof M Ezzati (Imperial College London), Brighton University, University of Oxford,

Academics and academic institutions

Dr Boyka Bratanova (St Andrews University), Prof JT Winkler (London Metropolitan University), Tom Sanders (King's College London), University of Cambridge, Centre for Diet and Activity Research

Academics and academic institutions

Prof Naveed Sattar (University of Glasgow), Prof Susan Jebb, University of Oxford, Prof Mike Lean (University of Glasgow)

International academics and academic institutions

Prof Sirpa Sarlio Lahteenkorva (Finnish Expert), Mary Gorski (Harvard University), Christina Roberto (University of Pennsylvania), Prof Robert Lustig (University of California), University of North Carolina

Think tanks and other analysts

Proponents

Opponents

Mixed messages

Think tanks

Policy Exchange, Ben Thomson (Chair Reform Scotland)

Think tanks

TaxPayer's Alliance, Institute of Economic Affairs (IEA),

Other analysts

Credit Suisse, Organisation for Economic Co-operation and Development (OECD): Franco Sassi (Head of Public Health)

Other analysts

McKinsey Global Institute, Institute for Fiscal Studies (IFS), Oxford Economics, Office of Budget Responsibility (OBR), DWF, ERSNT & Young, Investec, Numis, Shore Capital "Analysts"

Other

Proponents

Opponents

Mixed messages

Soil Association, other named individuals

Brighton Students against Sugar Tax, "Right wing group", YouGov Survey, other named individuals

ComRes survey
